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Dance for your life! : TangoFlow!® technique and implications in the treatment of trauma : a mixed-methods empirical study

Catherine A. Salmons

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Catherine A. Salmons Dance for
your Life! TangoFlow!®
Technique and Implications in
the Treatment of Trauma

ABSTRACT

This thesis is a mixed-method, empirical study exploring the possible efficacy of TangoFlow!®—an original dance-conditioning technique based in Argentine tango, which I developed and trademarked in 2010—in reducing symptoms of trauma. Research employed both quantitative and qualitative measures to determine whether or not an eight-week intervention had any effect on type and severity of symptoms, as reported by participants.

The sample (N=13) consisted of volunteer participants who self-identified as having a history of trauma. No specific information about their trauma history was solicited; rather, trauma symptoms were assessed through a pre-interview using a published testing instrument, the Trauma Symptom Inventory-2™, as the measure. Participants then received an intervention consisting of one TangoFlow!® class per week for eight weeks, after which they were again assessed for trauma symptoms using the TSI-2.

Quantitative results were calculated by applying paired t-tests to the pre/post scores, both for the overall scores and for three sub-scales (i.e., symptoms of anger, depression and somatic complaints). Each of these tests showed dramatic reduction in symptom levels, such that TangoFlow!® was statistically significant, despite the small sample size: In the measure of overall TSI-2 scores, pre- and post-, TangoFlow!® had significance at the .001 level. Qualitative results were obtained by conducting a Focus Group with participants.

DANCE FOR YOUR LIFE!

TangoFlow!® Technique and Implications in the Treatment of Trauma

A mixed-methods empirical study based upon independent investigation, submitted in partial fulfillment of the requirements for the degree of Master of Social Work

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2014

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This project has been a profound and often humbling journey, exploring the borders and boundaries of TangoFlow!®—my passion, my creation and my life’s work. I am forever grateful to the following individuals, without whom this thesis would never have been possible. I thank you all from my heart of hearts, and I wish you continued Joy in movement!

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	ii
TABLE OF CONTENTS.....	iii
LIST OF TABLES	iv
CHAPTER	
I INTRODUCTION.....	1
II LITERATURE REVIEW.....	6
III METHODOLOGY.....	21
IV FINDINGS	36
V DISCUSSION.....	69
REFERENCES	75
APPENDICES	
Appendix A: HSR Approval Letter.....	79
Appendix B: Informed Consent Document	80
Appendix C: Recruitment Flyer.....	84
Appendix D: Testing Instrument and Focus Group Questions.....	85
Appendix E: Researcher Bio/TangoFlow!® History.....	86
Appendix F: Syllabus and Resources.....	88
Appendix G: Sample Lesson Plan.....	90
Appendix H: The Technique: History of Argentine Tango & The 27 Principles of TangoFlow!®.....	93

LIST OF TABLES

Table

1.	Results of paired t-test for TSI-2 pre/post overall scores	40
2.	Sample questions from TSI-2 symptom categories	42
3.	Results of paired t-test for specific TSI-2 symptom categories	43

CHAPTER I

Introduction

It is widely acknowledged, in the field of trauma research, that body and mind suffer equally in the struggle to recover from traumatic events. For many survivors, the trauma is always present: It casts its shadow upon waking hours and sleep; haunts dreams, and weaves itself stubbornly into the emotions' fragile web. Reminders of the trauma are avoided at all costs; some victims may startle at the slightest noise, as if constantly hearing ghosts. The narrative runs deep, through tissues and cells: It is written in cortisol levels, adrenal stress and hair-trigger "fight-flight" response; it can re-define postural patterns and shape new engrams, "memories" in the muscles themselves. As legendary movement theorist Mabel Todd (1937) wrote, "man's whole body records his emotional thinking" (Todd, p. 1); expressed another way, by Van der Kolk (1994), in the title of his seminal article on trauma: "The body keeps the score."

Given the growing body of evidence that somatic symptoms of trauma can be resistant to traditional talk therapy, there is more and more interest in interventions that involve the whole body in treatment. Peter Levine's work with Somatic Experiencing® is now recognized as a highly effective method; Levine and Cope have collaborated with van der Kolk and others in pioneering research on yoga as a trauma treatment—as evidenced by their collaboration with authors Emerson and Hopper, in the book *Overcoming Trauma through Yoga* (2011). Good results have been obtained with such treatments as Eye Movement Desensitization and Reprocessing (EMDR) and "Body Mapping" (Crawford, 2010, pp. 710-719), and their

proponents extol the ways in which these somatic therapies can help bring repressed material to consciousness, without re-traumatizing the client (Crawford, pp. 715-719). Throughout the literature in neuroscience, psychology/mental health, dance/movement therapy and social work, research confirms the efficacy of body-based approaches to trauma treatment, and there is urgent call for further study in the field. The study presented here is one such investigation: An exploration of whether TangoFlow!®—an original dance-conditioning system which emphasizes mindfulness, dynamic alignment and spiral movement around a central axis—may have utility as a somatic treatment for trauma.

TangoFlow!® is a specific program of dance-movement exercises, which I developed through years of practice, and which received its official trademark from the U.S. Patent Office in September, 2010. Although conceived as a system of physical conditioning using precise techniques from Argentine Tango, ballet and modern dance, TangoFlow!® is informed by my many years of professional work and training in the areas of body awareness and dance anatomy. It incorporates elements of mindfulness, “connectedness,” re-patterning and body-imaging techniques—all of which, participants report, help facilitate systemic movement along the vertical axis, thereby restoring lost sensation, and supporting body-mind integration.

In terms of its functional mechanism, anatomically, TangoFlow!® works by targeting intrinsic muscle groups thought to be involved in “body-memory,” and which can be hard to access by other means. These include intrinsic spinal muscles (erector spinae and rotatores); iliopsoas; internal and external rotator muscles of the hip (gemelli, piriformis, obturators, adductors, pectineus); inner thigh muscles (gracilis, sartorius); all the muscles of contra-lateral rotation through the core (quadratus lumborum, obliques, serratus), and the muscles of the pelvic floor. Most of these are “deep” muscles, close to the bone; they are also muscles of rotation,

which tend to be weak in our culture, based on the sedentary lifestyle and largely bi-lateral nature of our movements. It is my belief that these intrinsic, rotator muscles are a common site of emotional “holding”—places where trauma is stored, and where the body thus becomes “frozen” and loses sensation. So-called muscle-memory is laid down in the form of “engrams” (Olsen, 1998, p. 71)—habitual patterns of muscle contraction based on response to a stimulus or event. This is one way the body “keeps the score:” If the stimulus is a trauma, a muscle may tighten and stay tight. As Olsen writes, “tight muscles can’t feel” (p. 33); this loss of sensation—especially in intrinsic, hard-to-reach places—may compromise the body’s ability to recover from a trauma. By targeting these intrinsic muscle groups, close to the spinal column and central nervous system, TangoFlow!® may help to restore sensation to the areas most affected by the trauma. By teaching fluid, repetitive movements, the work may also help to create new engrams in those same areas—allowing the body not only to *feel* where it once was numb, but to feel energized, strong and soothed.

TangoFlow!® also draws heavily from the principle of ideokinesis—the practice of using an idea or image to initiate body movement, creating a clear channel of communication between body and mind, and thus allowing for change throughout the system. First articulated by movement pioneer Mabel Todd in the 1930s, in her renowned book *The Thinking Body*, these ideas passed to her students, Dr. Lulu Sweigard and Barbara Clark, and finally Andre Bernard, who famously used this principle with dance students at NYU and Juilliard, where it remains a part of core curriculum (Bernard, Steinmuller & Stricker, 2006, pp. 3-9). The “critical point” of this work (Bernard et al., p.6) is that the central nervous system “organizes muscle patterns on a level below consciousness.” However, if we can become aware of the postural/neuromuscular habits that impede our alignment and functioning, we can create real change by “re-thinking the

movement” (p. 6) using a conscious image. Bernard referred to this process not as therapy but “psychophysical education”—“a way of learning with body and mind” (p. ix). Both Todd and Bernard emphasized the importance of imaging postural alignment as organization of “all parts of the structure in relation to the central axis” (Bernard et al., 2006, p. 21). The central axis is the key to healing, in that improvement in alignment around the axis affects Central Nervous System function, which in turn affects how we think and feel (p. 21). TangoFlow!® aims to make exactly this connection, using imagery and the sensual, spiral movements of Argentine Tango to bring awareness to the central axis and thus promote systemic change.

In this mixed-methods study, I have attempted to question empirically whether or not these principles of TangoFlow!® yield beneficial results in actual practice with trauma survivors. Even if TangoFlow!® could be shown to provide some partial, short-term relief from the physical and emotional pain of trauma symptoms, its efficacy as part of a combined approach to trauma treatment would be clear. Implications for Social Work practice would be that clinicians would have a new alternative to consider, in working with trauma survivors—a potential new tool in the toolbox; perhaps a fun and expressive way to bring mindfulness and body-based work into treatment planning, for those clients who need and respond well to such an approach. TangoFlow!® works across differences of culture, class, race, and gender, and can be used as an adjunct to treatment planning based on talk therapy and evidence-based practice. TangoFlow!® Teacher Training Curriculum already exists, so that interested clinicians could learn to use TangoFlow!® techniques in their own practice (in fact, one of the first certified TangoFlow!® trainees is a licensed clinical social worker). The only foreseeable limitations in practice could be that the exercises may need to be adapted, for use with clients with disabilities, and that some religious traditions may restrict the freedom of movement associated with TangoFlow!®.

Such was the thinking behind the research design, as this thesis project developed. The results presented here detail the outcome of a journey which both confirmed some expectations and surprised me with findings I had never considered. The experiment was envisioned as an eight-week intervention with a “wait-list control.” Recruiting yielded a total N of 34 (although nine dropped out prior to the interviews, leaving N=25 at completion of pre-interviews). All participants self-identified as trauma survivors, and their symptoms were quantified using the “Trauma Symptom Inventory-2” testing instrument, administered by phone. Participants then received eight weeks of TangoFlow!® classes, at one class per week, after which their symptoms were re-assessed. It should be noted that we lost nearly half our sample to attrition—some even before the first class, and due in large part to constant battering by one of the most severe New England winters on record. In the end, 13 participants completed all eight weeks of class, plus pre- and post-interviews; we thus chose to consider these 13 as one sample group, dropping the “wait list control” component of our design—a good lesson, in itself, as to the researcher’s need to adjust to changing conditions!

For these 13 devoted participants who completed all aspects of the project, changes in symptom patterns were assessed both quantitatively, using paired t-test of pre- and post-TSI-2 scores, and through a “focus group” convened at the conclusion of the study. Quantitative analysis revealed that overall changes in trauma symptoms from pre- to post-assessment showed significance at .001 level. Subjective findings proved a rich source of information, as participants drew their own connections between their experiences in class and the movement habits they came in with, based on trauma sequelae. Essentially, each participant discovered that her own body was her most reliable teacher/healer—and in turn, they all became my “teachers,” by sharing their process with me.

CHAPTER II

Literature Review

The literature in both Dance/Movement Therapy and Trauma research is rich in theoretical and empirical evidence that the symptoms of trauma are largely body-based, and that effective interventions should concentrate on the intersections of emotional and somatic memory of traumatic events. There is an insidious, liminal quality to trauma—a way in which it hovers at the borders of body and mind, threatening to sever the precious connection that defines our very integrity of being (Damasio, 1999). Whether viewed in contemporary medical terms, or through the lens of ancient healing rituals from around the world, trauma is most often portrayed as a force that destroys inner harmony and balance. We can talk about hypervigilance, neuro-endocrine levels and the “startle response”—or we can talk about “soul loss.” We can talk about ritual enactment of collective memory through theater and tribal dance...or we can conjure solutions in the quasi-poetic language of psycho-pharmacology. Either way, it is clear in the literature: Most effective trauma therapies in current use address body and mind in equal measure. And expressive dance-movement has long been a vital part of the discussion.

No review of body-based writings on trauma would be complete without mention of Bessel van der Kolk’s seminal article, “The body keeps the score: Memory and the evolving psychobiology of posttraumatic stress” (1994). When this piece appeared in the *Harvard Review of Psychiatry*, it radically shifted the mental health professions’ approach to trauma and PTSD. Van der Kolk reaches back to Janet and Freud, invoking the somatic roots of psychiatry and

psychoanalysis—too often minimized in contemporary formulations. Citing Freud, van der Kolk writes that all the long-term effects of trauma are somatic, biologically based (p. 253); in Freud’s terms, these “traumatic neuroses” are a “physical fixation to the trauma” (p. 254) itself. Thus the common symptoms of PTSD are nearly all physical in nature: hypervigilance, rigidity, flashbacks, and violent startle reactions (p. 254). These physical responses co-occur with psychic numbing, amnesia, anhedonia—the emotional components of trauma—such that the “big picture” of trauma pathology is best described as “bi-phasic” (p. 255).

Van der Kolk goes on to enumerate, in medical terms, exactly how the body “keeps the score” of traumatic events—in terms of specific Central Nervous System, hormonal and other biological changes prevalent in PTSD. He refers to neuroendocrine abnormalities such as altered levels of catecholamines, corticosteroids, serotonin and endogenous opioids (pp. 255-260). “Traumatic memories are state-dependent,” he concludes (p. 264), and his suggested means of adjusting the body’s inner landscape “state” are mainly psychopharmacological.

Effective as drug interventions may be, there is a growing wealth of evidence that other body-based techniques can also be extremely useful. The theoretical literature in Dance-Movement Therapy is vast. It is becoming increasingly clear, with advances in brain science, that ideas long embraced by dancers and somatic therapists are completely sound: If trauma is stored in body memory, and such memories are “state-dependent,” then perhaps there is more than one way of altering that traumatic state, shifting the energy and literally *moving* these memories out of hiding and into the conscious level. The way we hold memory has to do with habit—everything about the body involves habits of movement, habits of being...we hold and contain all experience, physically.

Even posture is a “habit” that reveals a great deal about emotional states: Mabel Todd, in her ground-breaking work in ideokinesis and somatic theory, *The Thinking Body* (1937), coined the term “postural hygiene” (p. 12) to describe this notion of somatic habits. The whole book is basically a “mapping” of the body as a record of our emotional lives—she pre-figures many of the concepts later echoed by van der Kolk, and her work is a touchstone for dancers and dance-movement therapists who attempt to move “stuck” emotional energy through physical expression. Our striving for emotional balance, she writes, is biologically determined, by our verticality, our center of gravity, our very means of locomotion: “Physically and psychologically,” writes Todd, “the human body is compelled to struggle for a state of equilibrium” (p. 2). Her rationale for a movement-based intervention for emotional healing is based on her understanding that “feeling” not only flows in our veins and fluids, but is woven into muscle fiber itself, and informs every action that we take:

Behavior is rarely rational; it is habitually emotional...For every thought supported by feeling, there is a muscle change. Primary muscle patterns being the biological heritage of man, man’s whole body records his emotional thinking.
(p.1)

Todd was the first—at least among modern, Western, anatomy-based theorists—to articulate this connection between the organization and arrangement of skeletal parts (posture) and emotional/mental health. Her clinical work focused on using detailed imagery and precise movement to treat the effects of traumatic injury: She herself had used the method to overcome a crippling back injury, and predictions that she would never walk again. Having attained full recovery through ideokinesis, she worked to pass the technique on to others. Her thesis is essentially that our specific “postural patterns” reveal areas of “holding” in the body—often as a direct result of physical or emotional trauma (p. 277). Patients, she writes, use the same language over and over, to express what this feels like: “I can’t let go;” ‘I am all keyed up;’ ‘I

can't get a deep breath'" (p. 276). All of these, she states, "are expressions of muscles gripping the bony structure, interfering with nervous, muscular and vascular balances and the mechanical reactions of the bodily framework" (p. 276).

These fixed "holding" patterns in the traumatized body can restrict the thinking, feeling and action of the whole system—producing, as Todd describes it, an "inhibited human being," gripped by "conflicts between materials and forces, conscious and unconscious" (p. 277). To my understanding, these "inhibited" patterns very much resemble, on a physical level, the "stuck points" described as major trauma symptoms in Cognitive Processing Therapy, or CPT (Resick, Monson & Chard, 2010, p. 40). Stuck points in thinking; stuck points in muscles, tissues and cells: Either way, the feeling of "stuck-ness" is a major component of trauma sequelae. Todd suggests—as the founding principle of ideokinesis—that re-patterning of the whole system begins with precise imagery leading to precise movements: bringing unconscious habits to conscious awareness, then un-knotting the "stuck" points slowly, deliberately, one strand at a time. In traumatic injury, she writes, muscles have "emotional pressure to express" but are not able to express (p. 276). "Freedom" of movement (and thought, and emotion) comes through "knowledge of organized movement" (universal forces of bodily expression) and "knowledge of old associations" (patterns of movement that result from trauma). In this way, using imagery and movement, the patient can "learn to give his skeletal muscles something to do when there is a central drive of emotion put upon them beyond their endurance" (p. 276).

Andre Bernard was, until his death in 2003, perhaps the best-known contemporary practitioner of Todd's ideas, and was renowned for his workshops in ideokinesis, taught not only to dancers at Juillard and NYU, but to survivors of trauma and injury throughout the world. Because the term "ideokinesis" was off-putting to many and hard to understand, Bernard referred

to his methodology simply as “the work,” and emphasized that it is defined far more by experience than ideas or theory (Bernard, Steinmuller & Stricker, 2006, p. ix). He was, however, quite eloquent in describing the rationale for the use of imagery in the work, based on the fact that imagery is what allows the conscious mind to participate in the process of re-patterning movement. “What we are doing,” he writes, “is using imagery that images movement of parts of the structure in relation to the central axis” (p. 21). In order to understand the function of the image, he adds, you have to understand something about the way in which Central Nervous System organizes movement, in the first place:

Central Nervous System (CNS) organizes your movements on a sub-cortical level, below consciousness—in other words, you are unconscious of what the nervous system is doing, and you should be. Muscles do not act singly, they act in groups, and groups interact with other groups...if you try to interfere with that complex process, you will blow the process! (p. 45)

Instead, writes Bernard, we use imagery to achieve conscious change in postural patterns. “What you need to improve the movement is to focus on the movement” (p. 45), by using imagery to shape the “six conscious components” of movement that the mind can voluntarily influence: start, end, direction, effort, speed and range. “This is where you put your conscious mind,” Bernard advises—“on the image that pictures where you want to go” (p. 45). Like van der Kolk, Bernard taps into the neurobiological premise that there is a “map” of the whole body inside the brain (Damasio, 1999, pp. 22-23; 321-22); the image is thus a way of “translating” our emotive/expressive plan into the language of motor impulse through CNS (Bernard et al., 2006, p. 45). That is, the image can help us get to the frozen places—to get around the stuck points in the body, and access what lies beneath.

To give an example: I use imagery and ideokinesis in TangoFlow!® in a variety of ways. Anyone struggling with recovery from trauma may have difficulty accessing sensation in the pelvic girdle. This may partly account for somatic complaints such as low back pain, sciatic

nerve pain, numbness in ankles and feet, lack of lateral or rotational mobility in lumbar/sacral area, and the feeling (often described by survivors of relational/sexual trauma) of being “cut off” between upper and lower body, as if there is no connection between the two. In TangoFlow!® I am using the intrinsic, spiral movements of Argentine Tango to help re-pattern and re-create sensation in the pelvic girdle, by introducing a movement-feeling that may be brand-new and different to the body—one way of un-sticking the stuck points. To help make the movement explicit—and to help the client overcome “holding,” avoidance and resistance—I introduce an image, and we work from there. We must, I say, “un-glue” the pubic bone, and I briefly explain how the rami of the two pubic bones meet at the pubic symphysis. We imagine the symphysis, the joint itself, as a “squishy sponge” that expands and contracts; we imagine the pelvis as composed of two separate halves, like wings that meet at the symphysis in front, or unfurl posteriorly from the two sacro-iliac joints. I refer to the entire complex of intrinsic muscles of rotation—which lie basically underneath the gluteal muscles—with one simple image: the back pocket. Resistance melts away, as the client plays with the idea of moving the back pocket: Take it up and down, swing it on its axis, try to rotate the back pocket toward and away from center. Each tiny gain in mobility is a step toward dislodging the trauma from body and mind.

This idea of body-thinking, body-memory and re-patterning recurs throughout the recent literature in neuroscience and theories of consciousness. A good, thorough rationale for the current trends in somatic trauma treatments—such as “body mapping” and EMDR—can be found in psychiatrist Allison Crawford’s article, “If ‘the body keeps the score’: Mapping the dissociated body in trauma narrative, intervention and theory” (2010). Building on van der Kolk’s ideas, Crawford addresses the classic “split,” in psychotherapy, between mind and body, and the reasons why somatic experience was often left out of the original “talking cure” (p. 704).

Advances in neuroscience, Crawford writes, have now allowed scientists to “see” the effects of trauma on brain function and memory: More and more, there is a consensus that trauma is not stored at the level of conscious memory at all, and that the body-mind—the whole organism—actually resists the effort to “narrate” the traumatic experience verbally (pp. 710-711); indeed, such efforts can be re-traumatizing, in and of themselves. There appears to be a correlation between sense memory, permanent neuronal changes at the level of the hippocampus (including actual loss of mass/volume in the hippocampus), and an array of observable somatic symptoms, in particular lower back pain, pain in hips, knees and legs, generalized body “aches,” and alexithymia (p. 705). Crawford describes her work with “body mapping” techniques, which attempt to use visual media to bring these somatic complaints to consciousness as effects of trauma (pp. 715-717)—an excellent approach, but it still winds up in the realm of narrative, not movement. Body mapping and EMDR, while effective, do not get to the full range of systemic effects of trauma: They do not reach into the deepest core of the muscle and fascial bodies; they do not dislodge trauma from all the places where it “lives.”

Van der Kolk himself now extols the virtues of yoga as an intervention in the treatment of trauma, and wrote the introduction to the 2011 book *Overcoming Trauma through Yoga*. Like van der Kolk, the book’s co-authors, Emerson and Hopper, suggest that cognitive or talk-based therapies do not go far enough in engaging the full range of trauma symptoms, given that each of the major symptom “clusters” (avoidance, arousal and re-experiencing) affect both body and mind (p. 23). Cognitive therapies, they state, take a “top-down” approach, whereas yoga works from “bottom-up” (p. 23), addressing symptoms first at the physical level. They also make the salient point that body-based interventions offer an excellent means of overcoming the defense of intellectualization—a common defensive pattern among trauma survivors (p. 23). Yoga, they

write, can “prioritize making a connection at the somatic level, and then moving from that entry point to addressing emotions and cognitions” (p. 24); in other words, the “postures and breathing technique” of yoga, by creating a “sense of connection to the self,” then have a “ripple effect” on the mind and emotions (p. 24).

There is also ample evidence supporting use of whole-body, systemic movement for trauma treatment, in the empirical literature on dance/movement therapy. Dance/movement therapist David Harris (2009)—in describing his very powerful work using dance and ritual with child-soldier survivors of civil war in Mozambique—writes that, “as the neuroscience of trauma develops,” there is increasing rationale for non-verbal “creative arts therapy” interventions (p. 95); Amber Gray (2001), also a dance/movement therapist, presents a similarly convincing argument in her case study on the effectiveness of dance/movement as an intervention with survivors of torture. Margariti et al. (2012), in their study of “Primitive Expression” dance movement with psychotic patients, conclude that “more such studies should be undertaken in the future,” especially in cases where dance therapy is applied to a “particular disorder...among psychiatric populations” (p. 100).

Margariti and colleagues were looking at quantitative neurological data, using EEG and other such methods immediately after the patients had practiced “Primitive Expression” dance: They observed “statistically significant” (p. 98) increases in alpha EEG activity, after dance interventions of relatively short duration (along with more subjective findings, such as increased perception of “happiness”). Harris was addressing the issue of trauma, specifically—working with survivors of severe trauma in war-torn Mozambique: Using dance/movement therapy techniques grounded in the work of dance/movement therapy pioneer Marian Chace, along with ritual healing techniques traditional to the local culture, he was able to help these patients

overcome their “speechless terror,” through “symbolic enactments” (pp. 96-98). Following this intervention, most experienced some relief of symptoms such as flashbacks and hallucinations; some were able to return to a semblance of normal, daily functioning (pp. 98-99). Gray achieved impressive results working with a victim of torture, also a refugee from civil war in Africa. Like Harris’s child soldiers, Gray’s client achieves a kind of expressive relief through enacting in movement a level of suffering that cannot be wrestled into words. Stressing “the importance of non-verbal therapy for torture survivors” (p. 31), Gray writes, “in torture, the body becomes the key to the soul: We begin to find the limits of words and the failure of all metaphors and other tropes of the language” (p. 31). All three of these empirical studies address neuroscience data and observable changes in symptoms through the use of dance movement; Gray in particular is lyrically eloquent on the poetry of gesture, and its healing effects on the client. However, none of these studies provides quantitative data on the specific movement techniques, or *how* the body-mind effect is being achieved, systemically.

Harris’ article is especially interesting, in providing some thorough grounding in the understanding of how and why trauma symptoms can be so resistant to conventional psychotherapies based on “verbal processing” (p. 97). Through his work with child-soldier survivors, he also makes the case that, in many parts of the world, talk therapy is not culturally syntonic with “proscriptions against the verbal processing of pain” (p. 97). Harris’ findings suggest that movement—symbolic reenactment—may be the only way for some severe trauma sufferers to process the “speechless terror” they have endured, and that this phenomenon is “rooted in brain physiology itself” (p. 94). At moments of trauma, “hippocampal function shuts down...traumatic memories are relegated to more primitive somatic and visual areas of processing” (p. 94). Harris goes on to suggest that humans have always practiced non-verbal

means of processing trauma, in the form of “ritual healing practices” that have been “handed down body to body” through generations (p. 95). By making use of this “inherited knowledge” (p. 95), the modern practitioner can help trauma survivors to work through what they cannot speak. He talks about the dance space—the closed circle—as “liminal” space, akin to Winnicott’s “transitional” space (p. 101). For a period of one year, he ran four dance groups for former boy-soldiers suffering severe trauma symptoms. Each session used movements and rituals that were familiar to the participants, easing through a warm-up, and into more rigorous movement with percussion. The session would culminate in a “Chacean Circle” (p. 100), where each child could improvise, leading the boys to “primary process re-imaginings—through actions, not words—to re-enact how they had caused others to suffer” (p. 100). Harris observed a marked decrease of such symptoms as hallucinations, flashbacks, night terror and alexithymia.

Gray is equally compelling, as she describes her work with one case, that of a 38 year-old African woman who has been imprisoned, repeatedly raped, and tortured, after seeing her brother shot and killed. Having escaped her captors and fled to the US, the client, Rita, endures the ongoing, emotional torture of not knowing whether or not her children are safe. Gray describes Rita’s symptoms in somatic terms (pp. 35-37): Her posture is collapsed and lacks support through the pelvic girdle; she shows an inability to “push” through the spine and her movement is constricted within a “small and fragmented kinesphere” (p. 35). She also presents common PTSD symptoms such as hyperarousal, nightmares, insomnia, and chronic pain in her right shoulder, arm and neck which cannot be explained in medical terms. She describes the pain as “outside her body” (p. 36), and as Gray begins to work with Rita, she is careful to “titrate” the movement experience in small doses (p. 36), and to focus constantly on the breath. Gray helps the client to concentrate on gentle movements through the heart and shoulder girdle—at the

beginning, simply lying on the floor. The client begins to incorporate these fluid movements, and experiences a sensation of “angel wings” moving through heart-center. At this point, she remembers that, during her captivity and torture, she kept having a feeling that a “guardian angel” was protecting her from death, and assuring her that she would escape, and would be reunited with her children. Gradually her body becomes the locus of soothing movements—the angel rather than the tormentor—and as Rita begins to reclaim her body, the chronic pain subsides. “It is the work of the dance/movement therapist,” writes Gray, “to see what the body reveals, and to help the client feel a relatively safe sense of ‘home’ in the body” (p. 34).

The Margariti team’s study was less spiritually and culturally profound, but quite useful in providing some very specific measures of the effectiveness of the movements involved. The sample consisted of 11 residential psychiatric patients, aged 21-64, six female and five male, taking “Primitive Expression” dance sessions twice a week for six weeks. The study enumerates several features of Primitive Expression movement which appeared to have a positive effect on EEG function. These include: force of rhythm; sound of percussion; use of voice; repetition process; importance of group dynamics, relation to the ground (and working in bare feet); the use of play; and “duality” (p. 99)—the idea of resolving opposing forces; left and right, high and low, moving both up toward sky and down toward ground, moving toward and away from center. The authors observe that this movement between opposites seemed to have a calming effect on the patients, and helped them find a “healthier balance of feelings” (p. 97) in the moment.

The more subjective findings of each of these studies are echoed—and amplified—in the qualitative study by Leseko and Maxwell. These authors surveyed 29 women about their experiences with dance/movement therapy. Again and again, in the stories of the women

surveyed, they find that “individuals who are unable to talk about certain traumas can often express and release emotions stored in the body through creative movement” (p. 19). They identify three most common themes that seem to run through all the stories: empowerment; transformation/healing; and spiritual awakening. All the women concur that they have experienced “reclamation and renewal” (p. 23) through dance therapy; survivors of abuse and trauma, in particular, find that “emotions stored in the body are not easily accessed through talk therapy” (p. 23), and that dance provides a great deal of release. One of the women even finds a symbolic enactment of healing through the idiom of Argentine Tango, specifically: “to dance tango, you have to be on your axis...and it just kind of expands to the rest of your life, so the rest of your life goes back to that sense of being grounded, of being centred, of being on your own axis...so that as things come at you and hit you, you know where your emotional center is” (p. 22).

Similar findings recur in the qualitative study by Mills and Daniluck, as outlined in their article, “Her body speaks: The experience of dance therapy for women survivors of child sexual abuse” (2002). Like the Leseko-Maxwell study, this was a “qualitative, phenomenological” survey of five women, all survivors of child sexual abuse, and all using some form of dance therapy intervention to address their trauma symptoms. As in the other studies, there is very little specific information about the content of the actual dance interventions; there is mention that each dancer was using common elements such as “rhythmic dance, spontaneous and creative movements, thematic movement improvisations, unconscious symbolic body movement, and relaxation techniques” (p. 78). But there is no description of technique. The authors attempted to create some experimental rigor in their methodology: for example, setting parameters around a minimum number of dance sessions experienced, and having the post-dance interviews

conducted by a neutral observer “trained in qualitative research” (p. 79), in order to eliminate bias. The result was that they identified six themes common to all the women, in the effect of the dance therapy on their trauma symptoms: most significantly “reconnection to their bodies,” a sense of “safe, intimate connection” with others, and a “sense of freedom” they had never felt before (pp. 80-83).

Each of these empirical studies seems to point to certain basic tenets of the intersection between movement and psychotherapy: Quoting Wilhelm Reich, Leseko and Maxwell assert that emotions are “movements of tangible energy,” and that “the muscular holding of emotions can develop body armor” (p. 17). The body reflects the mind and the mind reflects the body (p. 18), and the resultant “mechanism of mutual feedback” is what allows the clinician to integrate the cognitive and the somatic, in therapeutic approach (p. 18). Mills and Daniluck echo this point, quoting from Vigier, ““there is a voice inside the flesh that is simply the body speaking”” (p. 79). Harris also stresses the importance of non-verbal, non-linear components (pp. 95-98) in any effective treatment for severe trauma, and links this understanding both to his anthropological study of movement and symbol, and his work with boy-soldiers in the field. His approach, he writes, is an effort to “fuse evidence-based practice with the wisdom of the ages” (p. 95).

Given the widespread interest in this area of research, I am convinced there is significant value in this study of TangoFlow!® in clinical application with trauma. It should be noted that there is already some documentation in the literature, of Argentine Tango used as a form of psychotherapy: notably, for example, the Australian study, by Piniger, Brown, Thorsteinsson and McKinley (2012), “Argentine Tango dance compared to mindfulness meditation and a waiting-list control: a randomised trial for treating depression” (*Complementary Therapies in Medicine*, 20(6)). Two features distinguish this work—and indeed all similar studies reviewed—from the

TangoFlow!® study presented here: 1. Tango is studied as an intervention for depression, only; and 2. Tango dance technique is identified as “therapeutic” based solely on its aspects of partnering and connection-to-other. I have found no mention in Tango-based research of possible therapeutic benefits, to the individual, of Tango movements, per se.

Several of the authors mentioned in this chapter point explicitly to the need for further research on body-based interventions. It is also noteworthy that few of the studies thus far examined (with the exception of Harris’s project) attempt to exceed the scope of a small-scale, qualitative “pilot” study. Most of the research designs are descriptive in nature, lacking in correlations or experimental measures. Even more significant, except in Gray’s poetic narrative, there seems to be little effort to describe specific movement techniques in detail, or to analyze exactly *how* the mechanism of the dance intervention is acting on the body-mind, at the level of muscle, neuro-chemicals and central nervous system. Also, apart from Harris’s superb and culturally sensitive work, there was little interpretation of findings through a more social work-oriented lens around socio-cultural location—which would certainly be important to look at, especially when thinking about trauma. While I do not purport to contribute a wealth of quantitative data—given the small scope of this study, as a “pilot project” with limited sample and a “one-figure” budget (i.e, \$0!)—I dare to hope nonetheless that this TangoFlow!® research project has generated findings of some value, in the field.

Indeed, in terms of the pressing need for further research: The influential 2009 guide, *Effective Treatment for PTSD*, edited by Edna Foa and colleagues, points explicitly to the lack of quantitative, empirical research to support the use of creative arts therapies in PTSD. The authors lament the fact that, although creative therapies—including dance/movement—are showing widespread promise, anecdotally, in treating both the somatic and emotional symptoms

of trauma, there is simply too little research to document the effects, and most of the studies that have been conducted are qualitative, phenomenological, or single case studies (p. 484). The authors are compelling in their call for quantitative research on creative therapies for trauma:

Clinical experience suggests that creative arts therapies have been helpful for clients with acute trauma in accessing memories of the trauma or abuse, and have also aided clients with chronic PTSD to address conditions of demoralization and hopelessness...[however], there is a dearth of experimental research on the creative arts therapies, due largely to the lack of training of practitioners in research methodology (p. 484).

In fact, write Foa and her colleagues, the field of trauma/PTSD research and treatment is literally crying out for randomized, controlled studies that give some level of generalizable credence and validity to the excellent results that have been widely observed and described by clinicians. Certainly there is room for a study that aims at some level of anatomical detail, in describing the mechanism of treatment; adheres to a quantitative, experimental research methodology, and situates the application of dance-based intervention within the framework of clinical social work practice. Again, in the words of Foa and her co-authors: “Implementation of rigorous empirical research studies in this area is a primary priority for the field” (p. 486). It is my sincere hope that this TangoFlow!® study may someday expand in scope sufficiently to offer such a contribution.

CHAPTER III

Methodology

As stated in Chapter I, the purpose of this study was to explore the efficacy of the TangoFlow!® dance/movement technique in treating clients with trauma history. The primary research question was twofold: First, does TangoFlow!® practice, over a set period of time, deliver any significant relief in trauma symptoms; and second, what is the specific mechanism by which TangoFlow!® provides such relief (based on instructor’s observations and feedback from participants)?

The TangoFlow!® dance-movement technique—as operationalized in the introduction to this thesis—is a system of expressive dance and conditioning movement, developed initially as a means of training the body to dance Argentine Tango. Comprised of fundamentals of Tango dance technique, TangoFlow!® also includes elements of ballet, modern dance and body awareness/somatic techniques (most notably ideokinesis) drawn from the vocabulary of dance/movement therapy. This work was intended to help students master the unusual—and for North Americans, culturally dystonic—movements that define Argentine Tango. Tango is unique in its basic mechanism of using a spiral contraction of the whole, vertical spine to initiate all ex-centering movement, creating a kind of undulation in the sagittal plane that is without parallel in any other form of dance. (However, torsion of the spine can be seen in some of the ancient “temple dance” forms as studied, for example, by Martha Graham, and these forms were echoed in Graham’s own modern dance technique. Graham herself called Argentine Tango the “most beautiful” dance form in the world [Thompson, 2005, p. 3]. It is also noteworthy that the

term “vertebra” itself is the Latin word for “joint,” derived from the verb “verto,” meaning “to rotate,” or “to turn” [Lewis, 1879, rev. 2002, p. 1977].)

This spiral-technique of Tango is difficult for non-Argentines to learn (indeed for anyone who has not been raised with awareness of Tango’s vocabulary of movement); thus TangoFlow!® began as a set of drills to condition, teach the spiral, and build basic dance skills of balance, alignment, flexibility and expression. As the exercises grew more precise and more varied, several physical effects were observed. Practitioners were gaining core strength, muscle tone and definition that they had never been able to obtain before—bodies were being re-shaped completely, and belly fat was disappearing (a major health benefit, as all current research on the dangers of excess belly fat would confirm). But there was something about the spiral movements, the technique and the “flow” state induced by the practice—coupled with the emotional engagement of the body awareness elements—that seemed to be producing a euphoric effect on participants, as well. Participants reported, anecdotally, that they were achieving a state of “bliss” they had never experienced in dance before. They reported feeling “connected,” “whole,” “sensual” and “alive;” they also reported that, at a certain point in the repetition of the spiral twists, they would experience a deep, systemic sweat—“like water being squeezed out of a sponge”—and that this was a predictable effect, which happened every time.

Based on these observations—coupled with a developing awareness of the somatic symptom patterns in trauma, and the growing evidence to support body-based interventions in psychotherapy, in general—the question began to form, as to whether TangoFlow!® might have some utility in a clinical setting.

My proposed method to explore this question was a mixed-method experimental design. I have worked with participants to conduct both quantitative and qualitative measures.

Participants were adults, over the age of 18, in general good health. (I stipulated “general good health” as an inclusion criterion, with the further condition that they be medically cleared for moderate exercise. Any problem caused by a physical injury or illness unrelated to trauma history could constitute a confound to the design, not to mention an ethical and liability concern.) The other main inclusion criterion was that participants self-identify as having a history of trauma. For reasons of privacy and respect, participants were not asked to specify the details of their traumatic experience. (Although, in actual fact, I found that many participants welcomed the opportunity to share their personal experience with me, and were eager to help me “brainstorm” and formulate as to how their history might be playing out, for them, during our dance class.) Interview questions focused on somatic symptom patterns of trauma, regardless of specific origin. For purposes of this research design, no distinction was made between single-incident trauma, relational trauma, PTSD, and so on; inclusion was based on any experience of somatic or emotional symptoms consistent with trauma history—hyperarousal, nightmares and insomnia, intrusive memories, flashbacks, chronic pain and/or movement limitation, or any other body-based symptom, persistent or acute, associated with trauma.

Participants were recruited by a variety of means, once approval of my design was obtained from Smith College HSR Committee (October, 2013). Clearly, this was a purposive sample with specific inclusion criteria: Therefore, I recruited in part by disseminating flyers and through word of mouth among clinicians who work with this population, and among dance professionals and studios who are familiar with my work. I received permission—from the VA associate director of Mental Health Services—to distribute my flyer among mental health staff at the VA Medical Center in White River Junction, VT (where I was a Social Work Intern for 2013-14); flyers were posted also at Dartmouth Medical School, WISE (shelter for women

victims of IPV), West Central Behavioral Health in Lebanon, NH, and at cafes, co-ops, bookstores and the like, throughout the region. Efforts were made to seek diversity in terms of age, gender, race/ethnicity, socio-economic level, etc. However, pragmatic issues—given my goal to secure the largest possible sample size—led to a certain amount of convenience or “snowball” recruiting, which may have biased the sample somewhat, and decreased the diversity profile.

One of the first surprises, in this process, was that most of the initial responses to the flyer came not from referrals or “snowball” sampling, but from complete strangers who simply saw the flyer and felt it “resonated” with their own symptoms and history. An on-line listserv for Upper Valley (VT and NH), along with co-op and café postings, proved to be the most fruitful source of recruiting. Most of the respondents were white females, over the age of 40. About 20% of the sample, however, constituted people in their 20s; there were only three males recruited, two of whom are the partners of other participants (and only two males completed all parts of the project).

Most important, I was amazed by the diversity of experience that participants brought to the study, which allowed me to look more broadly at the ways in which different types of trauma can affect/restrict movement. People were amazingly forthcoming in wanting to share their experiences and sensations during and after movement, and articulating what they felt as the connection between the class and their history of trauma. This led to many anecdotal observations: a car accident survivor who struggled to find any sensation in her pelvis, during dance; a young man with repeated sports-related head trauma, who had trouble organizing small movements to left and right, but is an extraordinary “jumper”...Several women survivors of

relational/sexual trauma reported profound effects, including lessening of menstrual pain. (All were invited to share these subjective/qualitative responses during the focus group session.)

My recruiting protocol also included immediate follow-up to any response or inquiry, and scheduling a meeting with that person to fully explain the study and sign the informed consent document in person, if participation was confirmed. This protocol ensured that I had informed consent in hand for each participant, before scheduling their pre-assessment interviews, which helped expedite interview scheduling and completion for our volunteer-interviewer, Ms. Nufield. It also gave me a chance to meet each participant, and get a sense of their needs and their struggles, before the first class. In all, the sample size per original recruitment efforts yielded N=34 who signed informed consent; however, there was some attrition even before the first round of interviews, so our sample size dropped to N=25 completing the pre-intervention assessment.

Post-recruitment, the study proceeded as follows. Each participant was given a baseline assessment of trauma symptoms (per telephone interview, administering TSI-2 testing instrument), followed by an eight-week intervention (i.e. one TangoFlow!® class per week, for eight weeks) and then a re-assessment of the baseline (A-B-A design). The test was to determine whether an independent variable (i.e. TangoFlow!®) would show any correlations to change in somatic and emotional trauma symptoms. Correlations were to be tracked in part by randomly selecting half the sample into a wait-list control group, who would receive the same intervention, starting eight weeks later. By gathering data from both cohorts, according to the testing protocol (see below), I would conduct quantitative analysis to determine whether observed changes could be correlated to the independent variable alone.

Once the participants had been recruited, and their informed consent in place, the next step was baseline assessment of symptoms: All participants were interviewed to determine the nature, duration and severity of their somatic and emotional trauma symptoms, using the “Trauma Symptom Inventory™—2” (TSI-2) test, designed by John Briere, PhD and published by PAR, Inc. TSI-2 is a recognized diagnostic instrument for assessing trauma symptoms, used in numerous clinical settings. To avoid having a “dual role” with participants, and thus to maintain the validity of the study, I asked research assistant Louisa Nufield, LMT to conduct the pre-and post-assessment interviews for this project. It should also be noted that the results of both pre-and post-assessment interviews were compiled as coded, anonymized data: Thus all quantitative data in this study were both anonymous to me as the primary researcher and teacher, and confidential with respect to the research assistant who administered the assessments.

Ms. Nufield contacted each participant and conducted the interviews by phone; the process took 15 to 20 minutes per interview. Ms. Nufield was kind enough to track each participant’s answers on a spreadsheet, identified by code and not by name, so that data could be easily compiled at the end of the study. Ms. Nufield and I also made the decision to use a version of the TSI-2 which did not include any questions about sexual trauma: Because we had promised participants no questions about personal history, the sexual trauma questions seemed to us invasive and beyond the scope of this study, so we elected to use a “general” version of the test. Prior to beginning the actual interview process with participants, Ms. Nufield and I went through the TSI-2 questions with great care and attention to the content of the test, and awareness of which questions might feel invasive or upsetting to respondents. We also administered the test to each other several times, as “practice,” so that we would be familiar with the feelings evoked by the questions, and the dynamics of the testing process itself. Ms. Nufield

later stated this was an important element of the process, as it helped her to feel more relaxed and responsive, when administering the test, and to anticipate which questions might evoke strong reactions from participants. The TSI-2 was selected because it asks numerous questions that span a broad range of symptoms, and often will ask the same question in several different ways, thereby “catching” symptoms that might otherwise have been missed. Because of the test length and scope, our “practice runs” were important in helping us pare down test delivery to a 15 to 20-minute window, which we both agreed was about the maximum duration that participants could be expected to tolerate. Thanks to our careful preparation and Ms. Nufield’s excellent delivery, no one balked at the length of the test—and in fact several commented that they thoroughly enjoyed conversing with Ms. Nufield, and felt that they “learned a lot about themselves” in the process.

Upon completion of the pre-interviews, participants were randomly selected into two cohorts: Group 1, which would receive the eight-week intervention during January and February, 2014, and Group 2 (the proposed “wait-list” control group), who would receive the same intervention for eight weeks in March and April, 2014. Classes were held at the exact same times and locations for both cohorts. (Classes took place at two locations: Raq-On Dance Studio in Lebanon, NH, and Studio Bliss: Center for Expressive Movement in Rutland, VT. This allowed me to recruit from a wider geographic area; although randomly selected into Cohort 1 or 2, participants were able to choose location based on their own convenience.) For ethical reasons, I made certain that none of the participants were connected to me by any prior relationship, such as being a former student or direct client. Bias in the design was also avoided by asking participants not to alter any other habitual aspect of their lifestyle, during the study: For example, they should not significantly vary their diet, sleep patterns, leisure activities and so

on. (There is, of course, no real way to control for this, beyond asking people to comply. Also, we faced other random factors that may or may not have influenced participants' symptom patterns, during the eight weeks: if someone got sick, for example, with a cold or flu, that might impact their response to or participation in class.)

The eight-week intervention itself was a set curriculum of TangoFlow!® classes, using the exact same syllabus and lesson plans for the two cohorts. I created a syllabus that would take participants through all of the core movements that define TangoFlow!®, with enough repetition week-to-week so that there was at least a chance for people to attain some “mastery” of the more difficult combinations. I presented the overall theme of the class as “connection”—described in language about re-connecting to de-sensitized or “stuck” places within the self, re-connecting body and mind, re-connecting with sensation, overall, and connecting to one another, as a community of dancer/movers. Each week's class had a theme, and the class prep/choreography for that theme was identical across all classes, in both cohorts. By focusing on different body parts/regions in each class, I was able to assess participants' responses to the different areas—and different images used—in order to gauge whether any one image or focus seemed especially connected to the experience of trauma. I also made a point of closing each class with a guided meditation using that evening's particular focus or image—in line with principles of ideokinesis, as explained previously in this thesis. In all of these ways, I made sure that each and every class offered the exact same benefit to participants, and covered the full range of ideas and techniques contained in TangoFlow!®

Themes for the eight weeks were as follows: (For complete syllabus and lesson plans, please see Appendices F and G.)

Week 1: Central Axis. Technique of collection; spinal twist

Week 2: Pelvic Girdle. Navigation from center; localized rotation (pubic bone to “back pocket”); new technique: leg wraps

Week 3: Focus on Feet. Grounding; articulation; “26 bones, 33 muscles;” new technique: pivot on ball of foot (with proper weight bearing and distribution)

Week 4: Shoulder Girdle. Strength and power; “wings;” “yoke;” holding the frame; new technique: “ochos” (change of direction, front and back)

Week 5: Inner Thigh. Speed and power; gliding strength; new technique: “boleos” (fast kick)

Week 6: Musicality. Exploration of traditional Argentine Tango music; pulse and format; connecting to rhythm and melody; new technique: “adornos” (improvised embellishments)

Week 7: Free Leg. Opening hip sockets; leg swings; new technique: “sacadas” (foot-play, from outstretched leg/open hip)

Week 8: Standing Leg. Back to beginning; walking is always new! Challenge of being vertical.

Each week’s particular skills and techniques were taught according to the named steps of Argentine Tango: in part to increase the ambiance and playfulness of the experience, for participants, but also to strengthen their sense of mastery and self-efficacy, in realizing that they were learning named dance steps that are part of the recognized repertoire of the artform. Even from this list of basic themes, it is also clear that imagery and poetic narration—as prescribed in the tradition of ideokinesis—are important elements of the teaching style. The idea was to construct an eight-week experience that would target movement around specific areas where somatic symptoms and emotional “holding” most often occur, while keeping participants’ awareness focused on the felt sensation of dance itself.

At this point, I must acknowledge that my research design changed somewhat, due to logistical concerns beyond my control. This very need to shift and adapt to changing conditions became a major part of the learning experience, for me, as I came to realize that conducting an ambitious project involving commitment and participation from human subjects, will always call

upon the researcher to adapt creatively, and roll with changing tides! While I did, in fact, complete two eight-week courses in succession, I faced unforeseen obstacles in terms of weather and attrition, which forced me to re-think and adapt our protocols for analysis.

From the second week of Cohort 1, my project was assailed non-stop by the incessant batterings of one of the worst New England winters on record: Week after week, we faced major snowstorms, bitter cold temperatures, roads impassible for days at a time, and frequent outbreaks of illness. (One local weather station reported that we averaged a major storm every three days, throughout the winter months.) I had to cancel class on two occasions during Cohort 1, and then was able to extend the cohort duration by one week, asking Cohort 2 to start a week later than planned. Then in Cohort 2, we had constant storms once again, leading to two more cancellations, and again, an extension of the Cohort, such that we did not finish until the first week of May. But even beyond the logistical nightmare of people trying to get to class each week, we faced the additional problem of participants becoming discouraged and dropping out, stating they “just simply could not keep it going” due to all the bad weather.

By the end of Cohort 2, our total number of completing participants, across both cohorts, had dropped to 13. (Part of this was, for me, a major lesson in rates of attrition, generally—which turn out to be much higher than I had realized, across all modalities, for both psychotherapy and exercise, as I will explore in detail in Chapter IV.) Determined not to be discouraged, I consulted with my research advisor, Gael McCarthy and research analyst Marjorie Postal, and together we determined that the best course of action would be to fold the two cohorts into a single sample group, $N=13$, for analysis at post-interview. This meant that we essentially lost the control element of the design, but as Ms. Postal assured us that quantitative analysis could still be applied to a single data group, we decided to proceed in this way. It was

understood that quantitative analysis in this case may be less powerful than with the envisioned control element and larger sample, but again, it was an excellent learning experience for me to adapt to changing conditions and still find a way proceed. The change in design also meant that qualitative results might have even more importance than originally conceived—although, in the end, I was gratified to discover that, even with the small sample size, our quantitative analysis of the pre/post test scores, using paired t-test, showed significance at the .001 level. (These results will be explored in depth in Chapter IV.)

Upon completion of the classes, we proceeded with our planned quantitative and qualitative means of assessing results and symptom changes. To secure quantitative measures, Ms. Nufield again administered the TSI-2 symptom assessment interviews, as post-testing instrument, to all completing participants. It should be noted that *all* participants were offered the opportunity to take the post-assessment test, but only the completing participants agreed to do so. This made sense to both Ms. Nufield and myself, as the level of discouragement and disappointment was quite high, for some of the non-completers—and seemed to be equivalent, whether they had dropped out because of weather concerns, or due to physical or emotional issues that made the work too difficult. Those who had left the project were reluctant to re-engage, yet all graciously agreed to allow use of their pre-interview data, if needed.

Once in possession of pre- and post-scores for the 13 completers, as well as pre-test scores for the non-completers, I began the rather arduous process of compiling the data and looking for quantitative trends and patterns. I first created a template by typing out the TSI-2 questions themselves (93 total), and then created a profile-text for each participant, identified by code number, listing the participant's age, gender and racial/ethnic origin, their pre- and post-numerical responses to each question, and tallying total pre- and post-scores at the end.

(Needless to say, this was a lot of work, but it allowed me to have easy access to all the participant's data, right alongside the actual content of the test questions. Thus, I was able to get a "feel" for the numbers by physically typing them in, and this helped me begin to identify patterns and trends around specific symptom clusters, as tracked by the test questions. Some researchers may have found this an unnecessary step; I am, however, a dancer, not a scientist, by training! For me, the kinesthetic experience of getting my "hands" on the numbers was a key part of the learning, and helped me feel more connected to the "story" these numbers held.)

At this point, I was fortunate to benefit from the advice and expertise of the extremely patient and generous research analyst, Ms. Postal, who suggested we begin with paired t-test of the pre- and post-total scores, to check for significance, and that I should begin to examine my profile-data carefully, to see what trends I might find among specific symptoms or symptom-clusters. I thus created a spreadsheet of pre- and post-TSI-2 scores for the 13 completing participants, and Ms. Postal ran the paired t-tests, as planned. As I will detail more fully in Chapter IV, these results showed an impressive change in mean test score from pre- to post-, with significance at .001 level, in spite of the small sample. Encouraged by these results, I examined the profiled data once again. Now that I knew the overall symptom scores had dropped significantly, post-TangoFlow!®, could I identify specific symptoms or symptom-clusters that were most affected by this work?

Comparing participants' numerical responses to specific questions with their most frequently self-reported symptom changes (per focus group discussion), I found that three areas seemed to hold the most interest, i.e. symptoms relating to anger, depression and somatic complaints. I thus compiled spreadsheets containing pre- and post-data for eight specific questions in each of these areas, and Ms. Postal used this information to run paired t-tests on the

changes in specific symptoms patterns. These tests again showed that TangoFlow!® had significance across each of the three sub-scales, with the most impressive change in mean score in the scale for somatic symptoms. (Results of all quantitative measures appear in detail in Chapter IV. It should also be noted here that my selection of sub-scales for this study was based on participants' self-reported symptom changes, not on directives advised by TSI-2 test developers, per se. I was applying the data in this way to a particular sample group, for purposes of my own information and study, rather than to demonstrate any particular TSI-2 result.)

While our quantitative measures found symptom changes with significance attributable to TangoFlow!®, we sought to add a qualitative component allowing participants to describe their own experience of the work: All participants were invited to attend a focus group, at the completion of the project. Focus groups were held in late April, during the final weeks of class, in both class locations (Rutland, VT and Lebanon, NH). Nearly all completing participants, from both of the eight-week cohorts, were in attendance at the focus group sessions; several of the non-completers offered qualitative feedback, during follow-up phone calls with Ms. Nufield. In the focus groups, I asked participants a series of 10 open-ended questions, encouraged discussion, and invited the group to offer personal comments as they wished. This was important because, while quantitative research is crucially important in determining the validity of TangoFlow!® as an intervention, it cannot capture the richness and more subjective aspects of the experience of participants—which is, after all, the heart of the matter, and the reason why any psychotherapeutic technique can be an instrument of healing. It was vitally important to collect, in their own words, the narratives of participants as to why TangoFlow!® did or did not affect their symptoms, and what aspects of the work they perceived as most important: If the personality or energy level of the instructor seemed more relevant than the actual content of the

movements, for example, it would be critical to know that, and perhaps envision a way to control for such variables in future research. As Chapter IV will reveal, these focus groups produced a wealth of information that may inform my work with TangoFlow!® for years to come.

Finally, in terms of ethical considerations for this study, it should be on record that participants were offered compensation in two ways: The TangoFlow!® classes were provided free of charge, and each participant would receive a \$10 gift card of their choice in exchange for their time spent on the interviews. In nearly every case, however, participants declined the gift cards, stating that the free classes were “payment enough.” It has also been gratifying to me that most of the completing participants have chosen to continue on with TangoFlow!®, after completion of this thesis project, as paying clients. This has been a lovely “fringe benefit” of this learning experience, as it has brought together a motivated and responsive group of new dancers, now devoted to TangoFlow!® and convinced of its benefits, but who might not otherwise have known about the work.

I was also very careful not to alter the TangoFlow!® technique itself in any way, in order to accommodate the research. I did not create a special, different “kind” of TangoFlow!®, to try and “target” a certain effect on trauma. I was quite intentional about remaining within my scope of practice, and offering only the type of intervention I am certified to offer. (Please see researcher bio/credentials, Appendix E.) The TangoFlow!® technique was offered in exactly the format for which it was trademarked in 2010. I also maintained the rigor of the study by ensuring that I did not have any dual role with participants, whatsoever: I did not conduct the interviews, only taught the classes, and I had no prior relationship with any participant. All participants were asked, as part of informed consent, to attest that they were cleared for moderate exercise, and serious physical limitations or injury were considered exclusion criteria. Likewise,

any issues of liability were entirely covered: I carry professional liability insurance for all my dance/teaching activities, and the NH studio rented for the research classes is not only fully covered but was added to my own policy as additional insured.

Chapter IV

Findings

“Everything worthwhile is difficult...”

Rainer Maria Rilke, *Letters to a Young Poet*

Results of this study yielded both gratifying answers to my original question and a dizzying swirl of answers to questions I had not thought to ask. The process has unfolded, week to week, through observation, perseverance, testing, interviews, focus groups and most of all, action: Dancing with participants, flowing within the quiet serenity of their kinetic “group process,” I was able to watch their bodies—and their symptoms—change before my eyes. Although we faced challenges due to severe winter weather, cancellations, attrition, still, the energy of the group survived, and for those who stuck it out to the end, the intensity of their physical expression in class seemed to swell like a tidal wave. As one participant stated, during the focus group, “the barriers to entry are high”—higher, apparently, than I had realized. But for those who manage to scale these barriers, the rewards are great, as both our quantitative and qualitative data would attest.

What is it, exactly, that makes the difference? What determines being able to get past the “barriers”—within and without—versus giving up on the process, and on oneself? I am reminded of the words of famed diarist, Anais Nin (1979): “And the day came when the risk to remain tight in a bud was more painful than the risk it took to blossom.” What makes someone ready to take that risk? We can certainly take into account substantive obstacles that might cause TangoFlow!® to be counter-indicated for an individual: Physical injury, chronic illness, difficulties with concentration or kinetic learning. No one modality can be considered “right” for

everyone; indeed, the attempt to “dilute” or make the work universally adaptable may weaken what is most effective in the technique. Yet the strange truth is that participants who persevered to the end suffer many of the same symptoms and limitations which others cited as their reasons for dropping out.

For example, several of our non-completers (an awkward term, but less pejorative than “quitter” or “drop-out,” which imply judgment that has no place here), had problems of severe arthritis, joint replacements, minor brain injury, and emotional trauma symptoms such as severe anxiety, depression and avoidance, that seemed to render their participation impossible. All of these are very “real” and understandable concerns. Ms. Nufield, the interviewer (who is herself a certified massage therapist with over 30 years’ experience, specializing in recovery from traumatic injury) commented that people who mentioned orthopedic injury in the pre-interview, tended to be among the non-completers. True enough; and yet, one of the most devoted, enthusiastic participants—who not only completed the eight weeks, but has continued on paying for classes, and swears that TangoFlow!® has “changed her life”—is a survivor of a major automobile accident which shattered her pelvis in several places and left her near-paralyzed, in hospital, for months. Even during the first class, this woman wept with the emotion of “feeling” again, for the first time, sensation of movement in the pelvic floor; and even though she felt frustrated, by not being able to connect or control her movements from psoas and pelvic floor, at first, she declared that her tears were “tears of joy,” at being “able to feel again.” Another participant—at age 70, our honored “elder”—suffers terrible neuropathy in her feet, has little feeling in her legs, walks with difficulty and has never danced in her life. Yet she too stayed with us to the end, at times sitting out, during the hour, as she saw fit, and doing many of the upper body exercises seated in a chair. A self-professed “old hippie” who is also a social worker

and a veteran of years of training in Gestalt therapy, in the 1970s, this delightful woman stated that she benefitted simply from the energy of “dancing with the group,” and would not have missed class for the world.

One might also speculate that non-completers rated very high, in emotional trauma symptoms, during the pre-interview—and in fact, that is the case. Most of the pre-interview scores for non-completers were high (over 150), in numerical total; however, there was one as low as 34, and several in the 50s and 60s. On the other hand, our very highest pre-interview score (220), was for someone who not only completed all the classes and post-interview, but again, is continuing on and paying for class. This woman’s trauma symptoms are primarily emotional, not physical. She scores off the charts (reports “3+” on scale of 0 – 3) on questions relating to arousal, fragile or fragmented sense of self, re-experiencing and depression; when we first met, I had the sense that—even though she is a large woman—she might “fly apart” at any moment. She worked harder in class than almost anyone I have ever been privileged to teach; I saw her body change, in particular her relationship to gravity. She became more grounded, began to move from her center, sinking feet into the floor, gliding laterally from lumbo-sacral junction and “pushing through” the spine. She also became visibly more sensual, more expressive, and stated that she was feeling things in her body she had never felt before. Her alignment and posture changed dramatically, even in the first few sessions.

About three weeks in, she shared with us that she works as a corrections officer: Thus compounding pre-existing trauma symptoms with daily “triggers” and hyper-arousal that come with the job. She talked about body language, how she tries to convey “power and authority” by standing with feet planted firmly, and hands crossed in front of her, at waist level. I pointed out that, by relying on the position of her hands to convey “authority,” she was covering up her

center of power, and actually blocking her own strength. I also pointed out that by planting both feet, she had reduced rather than increased her “readiness” to move quickly toward trouble, and was actually conveying that she was “stuck” rather than poised for action. As we worked with her alignment, she “felt” it, she got it; she felt that awareness of deep center kick in, and she became powerful, in an instant. From that moment on, she “owned” her power, she claimed it, and she drank in the movements in class every week like medicine. For this woman, her high level of trauma sequelae were less an obstacle than a motivation.

Likewise, we might look at participants’ problems with low self-image and self-worth, as encapsulated by their relationship to the studio mirrors. One woman entered the studio the first week of class, looked at the mirror and fled, never to return. Others—including the woman just described, with very high symptom scores—acknowledged struggling with the mirror, but understood it as a tool, and were able to tolerate the distress and frustration of facing the mirror, as it gave them instruction and feedback in how to master the techniques and thereby attain relief of symptoms. (The whole idea of the mirror was, in fact, a subject of heated discussion during the focus group, to be reported in greater detail later in this chapter. The mirror was an issue for nearly everyone, but a “deal-breaker” for a few. Again the question: Why? What makes the difference?)

Thus, an element of mystery remains, as to what exactly is the internal mechanism, that leads one person to stick with the work, where another will flee. What spark of readiness or desire will cause someone to “take the risk” to blossom? In many ways, I feel, the entire process of teaching these classes was, for me, a spiral journey, deeper and deeper into that unfolding rose, seeking the answer to this question, the elusive center.

Quantitative Results

Despite the troublesome enigma of why some stay while others go, the numbers bear out impressively that, for those who do stay, the benefits are significant. Even with our small sample (N=13) who completed all eight classes plus pre- and post-trauma symptom interviews, our results demonstrate that TangoFlow!® had an impact on symptom change. Although we were forced to abandon the “wait-list control” aspect of the research design (as described in Chapter III), analysis confirms that the intervention had significance for our group.

Per Table 1 (below), paired t-test on the sample found a significant difference in TSI-2 score pre/post: $t(12)=4.513$, $p=.001$. The mean pre-score was much higher ($m=106.5$) than the mean post-score ($m=70.42$). This difference in mean score reaches significance at the .001 level.

Table 1

Results of paired t-test for TSI-2 pre/post overall scores

T-Test										
Paired Samples Statistics										
		Mean	N	Std. Deviation	Std. Error Mean					
Pair 1	TSIpre	106.5	13	51.4769	14.2771					
	TSIpost	70.42	13	34.1332	9.4669					
Paired Samples Correlations										
		N	Correlation	Sig.						
Pair 1	TSIpre & TSIpost	13	.849	.000						
Paired Samples Test										
		Paired Differences				t	df	Sig. (2-tailed)		
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference					
					Lower	Upper				
Pair 1	TSIpre - TSIpost	36.08	28.8248	7.9946	18.6583	53.4956	4.513	12	.001	

Thus, even without the originally envisioned control, it is clear that TangoFlow!® intervention had an impact on pre/post scores. But the question remained of how to interpret the meaning of that impact? Given that the sample was small, I began by looking at the make-up of the sample, to try and identify patterns among the specific symptoms reported in TSI-2 pre-test: Were there any identifiable factors, in the pre-test, that might predict the effectiveness of TangoFlow!® for an individual (and/or any counter-indications)? Were there any patterns, among the test scores, that might suggest TangoFlow!® was particularly effective on certain trauma symptoms, or symptom clusters? Even though the sample was far too small to draw general conclusions, might I locate trends warranting further study?

I began by referring to feedback from participants themselves, both from the focus group and from comments made to Ms. Nufield during the post-interviews. I identified three topics which seemed to arise again and again: Almost every “completer” reported improvement in somatic symptoms, and most also noted changes in levels of anger and depression. (“Improved mood” was also mentioned frequently, but I find the term “mood” problematic, given that participants’ intended meaning may not match clinical connotations of the term.) Ms. Nufield also reported that, during post-interviews, she noticed that respondents appeared “less angry” and “less depressed,” almost across the board.

Using these responses as a starting point, I pulled from the TSI-2 eight questions related to somatic symptoms, eight that asked specifically about anger, and eight that concerned depression. I thus had three question clusters to look at: Somatic symptoms, Anger and Depression. Table 2, on page 42, gives examples of questions in each symptom category. (Please note that we do not publish all the questions here, to avoid copyright infringement.)

Table 2

Sample questions from TSI-2 symptom categories

Questions are answered using Likert Scale of 0—3, with 0 meaning “never,” and 3 meaning “frequent.”

Question numbers listed here reflect the numbering in TSI-2 test.

Somatic Symptoms

In the last month, how often have you experienced:

- #7 aches and pains?
- #11 trouble getting to sleep or staying asleep because you were so tense?
- #28 lower back pain?
- #56 your heart suddenly going fast when you were reminded of a bad thing?

Anger Symptoms

In the last month, how often have you experienced:

- #3 feeling mad or angry inside?
- #23 getting angry about something that wasn't very important?
- #55 getting angry when you didn't want to?
- #86 wishing you weren't so angry all the time?

Depression Symptoms

In the last month, how often have you experienced:

- #12 feeling hopeless?
- #33 feeling so depressed you avoided people?
- #62 feeling depressed?
- #70 not enjoying things that other people enjoy because you were so depressed?

Thanks, once again, to the generous support of Ms. Postal, we ran paired t-tests on each of these specific symptom-clusters and found that, indeed, TangoFlow!® showed statistical significance in each area. Results were as follows: Somatic symptoms, $t(12)=5.731$, $p=.000$ (pre-score $m=11.31$, post $m=6.23$); Anger symptoms $t(12)=3.696$, $p=.003$ (pre-score $m=10.85$, post $m=8.15$); Depression symptoms $t(12)=3.028$, $p=.011$ (pre-score $m=9.42$; post $m=7.23$). Table 3, on page 43, shows detailed results:

Table 3

Results of paired t-test for specific TSI-2 symptom categories

TTest

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	somaticPRE	11.3077	13	5.31326	1.47363
	somaticPOST	6.2308	13	3.53327	.97995
Pair 2	angerPRE	10.8462	13	5.52413	1.53212
	angerPOST	8.1538	13	4.18522	1.16077
Pair 3	deprPRE	9.4231	13	5.40002	1.49770
	deprPOST	7.2308	13	3.80030	1.05401

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	somaticPRE & somaticPOST	13	.813	.001
Pair 2	angerPRE & angerPOST	13	.890	.000
Pair 3	deprPRE & deprPOST	13	.896	.000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	somaticPRE - somaticPOST	5.07692	3.19404	.88587	3.14678	7.00707	5.731	12	.000
Pair 2	angerPRE - angerPOST	2.69231	2.62630	.72840	1.10525	4.27936	3.696	12	.003
Pair 3	deprPRE - deprPOST	2.19231	2.61038	.72399	.61487	3.76975	3.028	12	.011

Thus, the numbers confirmed participants' self-reporting in terms of which types of symptoms saw the most improvement, and these results were consistent across the sample. In spite of the small sample, the rate of significance was high enough, in each symptom category, to suggest that similar trends might recur with larger groups of participants. It is noteworthy that, in most cases, the recorded drop in somatic symptoms actually exceeded participants' "felt" sense of change: At $p=.000$, the high level of significance even surprised me, based on the comments made during focus group and during class. It was also striking to me that the particular somatic symptoms most affected were quite consistent, as well. For example, headaches, back pain, dizziness, insomnia and tightness/pain in the chest, were all improved during the eight weeks of TangoFlow!®—as well as menstrual pain, reported as greatly improved by several participants who also were survivors of sexual/relational trauma. (However, TSI-2 has no questions addressing menstrual pain.). On the other hand, no one endorsed somatic symptoms such as difficulty eating or swallowing, either pre- or post-intervention (happily, this was a group of hearty eaters, whatever their other concerns!). So, in considering how to interpret this high level of significance for somatic symptom change, I am wondering if perhaps this is an area where the dance/movement intervention penetrates to that deep level where the trauma is stored beyond words—out of reach of conscious memory, and unable to be addressed through cognitive means, as van der Kolk and others have written. Is TangoFlow!® getting to what van der Kolk (reprising Freud) terms the "physical fixation to the trauma" (p. 254), such that participants are simply feeling better, without being able to articulate exactly why and how?

It was also very interesting to me that, while both anger and depression symptoms showed significant decrease, the rate of significance for anger ($p=.003$) was far higher than that

for depression ($p=.011$). This too strikes me as somehow a reflection on the ways in which trauma is actually held in the body, and which manifestations of trauma are most acutely affected by a vigorous emotional release, such as that experienced in TangoFlow!®. It is also true that anger and depression are closely related, so again we are looking perhaps at subtle shifts in perspective—nuances of emotional experience, being affected by the act of strenuous physical movement, per se. Then there is the matter of how participants themselves may understand the terms “anger” and “depression,” as presented in the test questions. “Anger” may be perceived as something more explosive, external—an “event” or incident—whereas “depression” may seem more internalized, a mode of being, a way of life. Both may be habitual, but the direct outpouring and release of emotional energy that occurs during TangoFlow!® may feel more connected to a decrease in anger rather than depression—and that felt relief of the symptom may be longer lasting. One may leave class feeling, “Wow, I really poured out some anger, with the sweat, tonight—I really left all that stuff in the studio; I am not carrying that home tonight!” Then, as the class experience fades, and “real life” intrudes—the student arrives home, finds a stack of bills in the mail, the hot water isn’t working, she is out of cat food and the cat is whining to be fed—the usual cloud of “depression” settles around her again like an old, familiar shirt. “Depression,” perhaps, is the fixed, habitual condition of her solitude; the “anger,” on the other hand, stays gone.

But whatever the subjective meaning of these findings, the fact remains that the quantitative data showed significant decrease in all three symptom-areas most consistently endorsed by participants. Thus the measured effects of the work are in line with participants’ perceived benefits—a key factor in determining the effectiveness of TangoFlow!®, as a form of

therapy. I am greatly encouraged by the quantitative findings detailed here, and feel that our data at the very least reinforce the need for research on a broader scale.

A word is in order, here, on rates of attrition, and how to interpret the rather high rate we observed. As detailed in Chapter III, this study has faced some almost insurmountable logistical barriers that have surely contributed to attrition, missed classes, and low energy among participants. As we endured storm after storm through one of the worst Vermont winters of all time, not knowing from week to week whether class might have to be cancelled, it became increasingly discouraging for all of us, trying simply to make it through the project. People would make progress, in class, and leave feeling great—only to “lose steam,” departing the studio, as they faced the ice, the cold, the long drive home, not knowing whether next week’s class would reliably happen, or not. The emotional and psychological impact of that uncertainty—in a project such as this, which engages the spirit and emotions—cannot be overstated.

But even beyond the challenges of weather, distance, budget, and so on, there is a story contained within the attrition rates that bears further interpretation, and further study. What is it that makes people drop out of things that they enjoy, and that are good for them? I will reflect on this question more in the pages ahead. Quantitatively, however, it is important to note that our rates of attrition match *almost exactly* the rates widely known and published both for exercise classes, generally, and most interestingly, for psychotherapy.

Researchers Marcus, Williams et al., in their in-depth study on attrition rates in exercise (“Physical activity intervention studies: What we know and what we need to know”), report that, despite endless research attesting to the benefits of exercise, attrition rates can reach as high as 87%, regardless of the specific type of exercise intervention (p. 2740). Indeed, the authors

found, only 32% of U.S. adults engage in regular physical exercise, “which highlights the compliance problem” (p. 2740). Seeking to explain attrition behavior, they cite “triadic reciprocal causation” such that personal, environmental and behavioral factors are “mutually influential” (p. 2748). But ultimately, they admit, it remains something of a mystery as to precisely why people drop out of exercise; they conclude that “half or fewer of those who initiate [exercise] will continue, irrespective of the type of program” (p. 2745).

Similarly, Barrett, Wee-Jhong et al., in their study of early withdrawal from mental health treatment, found that fully 50% of clients drop out of psychotherapy by the third session—and more than 65% by Session #10. These drop-out rates, they add, echo exactly the attrition rates noted in research conducted by Carl Rogers back in 1951 (p. 261). It would seem that, after 50 years of trying, the profession has yet to figure out reliable methods of retention.

My own attrition data match the rates published in these studies. From 34 prospective participants who responded to recruitment and signed informed consent, we dropped to 25 actually completing the pre-interview (i.e., we lost more than one-fourth before we even began!). From 25 at pre-interview, we lost a few more before classes began, dropping down to 21 who completed some class. Of those, only 13 completed all the classes, and the post-interview. So, if we begin with the 25 who pre-interviewed, down to 13 who completed, we are right “in the pocket” of the published attrition rates, our numbers shrinking by just about half.

I have thought long and hard about what this “means,” and how it should affect my current findings and future study. Search as I might, I have found little conclusive explication, in the literature, for why people drop out of anything—yet it seems that about half of people do drop out, of everything, all the time. One participant (herself an academic and researcher) commented to me that I should “really go back to the ones who dropped out,” and get them to

dig deep and try to be specific about what did not work for them, why they dropped out, etc. It occurred to me that, ever since I have been a dance teacher and performer (a span of nearly two decades, I shudder to admit), I have been trying to figure out why people do NOT come to class. What is it about the technique, or the teaching style, or the difficulty level—what is it about the work that “drives” people away, or causes them not to return? What is it indeed about people’s internal processing, their readiness to change, their tolerance for feeling worse (or feeling better!), that makes it so hard for them to continue?

But could it be that, in all this time, I have missed the forest for the trees? In this study—as in all my years teaching—I have received constant and interesting feedback from the students who DO continue. People have made tremendous changes through this work, reduced all kinds of symptoms, changed their bodies and their lives; yet I have been so focused on figuring out what made some people leave, that I risk neglecting the importance of what *works*, for the ones who stay. My brief survey of attrition rates has suddenly “turned on the lights”: About half of people seem to drop out of any kind of intervention that may help them. There may be all kinds of reasons for that fact. But the truly important piece, here, is that *half* of the people keep coming back! This is literally a case of “glass half-empty” vs. “glass half-full”: Perhaps it is time to look more closely at the details of what makes this work effective. What, specifically, about TangoFlow!® helped our participants to reduce trauma symptoms, motivated them to return each week, braving weather cancellations and other discouragements, and caused them to report, at the end, that the classes had truly changed their lives? Because, for about half of the participants, not only did they report these benefits and more, but (with a few exceptions) they have all opted to continue attending TangoFlow!® class as paying clients. In interpreting the

qualitative data, the story begins to emerge, as to why and how TangoFlow!® works, if you work it.

Qualitative Results

In my quest to name and describe the working mechanisms of TangoFlow!®, I have found that the heart and soul of the story lie in the qualitative data. While I have been intrigued to discover the “mystery” in the numbers, which tell a story of their own, it is within the bones and cells of participants that the true meaning of the work unfolds: Their bodies have “kept the score,” and their experience comes alive in their own words.

Most of our findings regarding subjective experience of participants emerged from the Focus Group meetings, which took place in both locations (Rutland, VT and Lebanon, NH) after the final week of classes. I also group with these findings subjective comments participants made to Ms. Nufield during post-interview sessions. (It is interesting to note that, in some cases, people seemed more comfortable sharing their thoughts privately, with Ms. Nufield or myself, than with the group as a whole.) It should also be noted at this point that each of the groups really bonded, over the eight weeks, with a sense of cohesion and camaraderie that, in my view, may have increased the therapeutic benefits of the work. The feeling that one is not alone, that others are struggling, that group members are able to witness change and growth in each other: All of this seems to enhance the direct benefits of the movements themselves, as reported by most participants. As I watched these changes take place, week to week, I became aware of a kind of group “synthesis” or learning, whereby if one member started visibly “getting” a combination, others would soon fall in; at that point, I would begin to decrease my verbal instruction, and we would continue repeating the combination in a kind of wordless, mindful

unison, like a school of fish. Over time, I was able to shorten my instruction of familiar combinations down to one-word “cues,” which several respondents mentioned during focus group, as being an effective technique. The feeling of this kinesthetic group cohesion was akin to the principle of “entrainment” or resonance, in the realm of sound: It truly felt as if movement “waves” in the room would act on the group, as a whole, lifting everyone to the same plane of momentum. Perhaps part of the therapeutic benefit (I am thinking in terms of reduced depression, higher energy level, improved mood) is connected to this experience of the whole being more than the sum of its parts—the group itself moving, breathing, being at a faster energetic frequency.

I also discovered, given this opportunity for focused observation, that repetition itself was a key to people’s mastery and embodiment of the movements, and that the balance of “new” vs. “familiar” movements each week was a factor in helping people tolerate the difficulty. If in fact, as I strongly believe, TangoFlow!® works by opening, stretching and challenging the body—changing the internal environment in such a way that psychophysical sequelae of trauma can be “un-stuck” and moved out of the tissues, nerves and fluids that have held them—then the “difficulty” of mastering new movements must be tolerated, somehow. It seems that “parceling out” difficult physical challenge a little at a time, making sure the work feels progressive week to week, and that new exercises are titrated in manageable doses, are all crucial to retaining students long enough that benefits can be seen and felt. It was my experience in these groups that people will tolerate difficulty, if there is a belief that rewards will come via “delayed gratification”—and also, if they can feel successful in some small way, in the moment. I believe the syllabus for this project (please see Appendix F)—which I constructed with conscious attention to all the issues I have been describing—had a lot to do with people’s ability to tolerate

difficulty, “sit with” discomfort, and enjoy the benefits of the moment, each week. Several respondents commented on exactly this factor, during the focus group. Several also stated—as my own observation bore out—that once people began to *feel* the benefits, and feel their bodies changing, it became easier to wait for the “mastery” of a new technique, and to trust the process. (Indeed, this really points to the paradox that underlies all the arts—too often reduced to the facile maxim, “practice makes perfect”: that with virtuosity comes “natural” beauty; with restriction comes freedom; with technique, true expression. As the poet Rilke famously wrote, “everything worthwhile is difficult”; the difficulty itself is part of the healing.)

So, again, in the search for a “profile” of what makes TangoFlow!® feel so right for some, so wrong for others: This study has allowed me to observe, qualitatively, that the “ideal” candidate for TangoFlow!® is someone who can tolerate difficulty, and delayed gratification—someone for whom mastery and control can be a process, allowed to unfold. For some who dropped out—based on high TSI-2 pre-scores, and on their own self-reporting—it would seem that the level of concentration and frustration tolerance required to attain mastery was just too high. If trauma manifests for someone, in the form of avoidance—in particular that sense of restlessness, of being in constant flight—it may be very challenging for that person to tolerate the level of detailed, body-focused practice required to obtain mastery, in TangoFlow!®, and enjoy those “delayed” results. On the other hand, as one participant noted, for some individuals, the directive to focus on nuanced anatomical and movement patterns may allow them to “get out of their heads” for a moment, and thus transcend the depression, anger, hopelessness—whatever it is that habitually “keeps them down.” Much of what determines the “fit” of TangoFlow!® for an individual, may have to do with formative experience, character structure, defensive patterning and so on—factors that pre-date their particular identifying trauma. It may be that some of us are

made for movement; just simply put together that way. The “stuck points” of trauma may well affect all in similar, predictable ways; but I suspect that for those who are “hard-wired” to *move* through stress, talk therapy alone could never be an adequate treatment.

All of these observations are clearly borne out by the remarks of participants themselves. Looking through the responses collected during the focus group, along with feedback shared during post-interviews, I find several themes emerge, which aid in understanding both the working mechanism of TangoFlow!® and the “barriers to entry” (as one respondent so aptly described it) which can make the work both so difficult and so rewarding. Participants were remarkably candid in their reflections, and clearly put a great deal of thought into their responses, both during focus group and during the interviews. Though it would be nearly impossible to replicate in print, I was struck by the dynamic of the focus group, as discussion evolved: Thinking again about the incredible cohesion that developed within these groups, it was noteworthy that as different subjects were introduced, participants flowed in and out of each other’s comments, built on one another’s thoughts, interrupted, finished each other’s phrases...The conversation itself moved like a dance, and participants were visibly comfortable allowing each other “in” to personal space, and the space of expression. All the comments became in this way “collaborative,” and there were far too many digressions to repeat here! The most interesting digressions, however, turned out to be more significant than the questions I had asked; thus—as in the case of the “side bar” about the mirrors—I have allowed the group conscience to dictate, and thus have abandoned my planned questions in favor of what organically emerged.

Examining the commentary in this way, I have found six significant themes which I will explore here: barriers to entry; response to specific movements; the difference between

TangoFlow!® and other forms of exercise; mirrors; surprises; and results—including whether or not respondents plan to continue with TangoFlow!®

Barriers to Entry

Most participants identified feeling some version of this concept. Of course, the group as a whole experienced external “barriers” relating to snowstorms, extreme cold, weather cancellations, even the fact that, on some nights, the studio floor was so cold that we could not work in bare feet, as the work prescribes. But all pointed to internal barriers that, while difficult to describe, were universally endorsed. As one woman put it, “I don’t know why, but it was just so hard to *get* there. Even though I knew that, once I got there, I was going to feel better, and all my symptoms were improving. But it was just so hard to *get* there!”

This was a common feeling, in both focus groups; the comment was met with a chorus of similar thoughts. When pressed to reflect on what made “getting there”—and getting into it—so difficult, participants named a few issues that, again, seemed common to most. Some mentioned pre-existing physical injuries or issues that got in the way: For instance, the young man who used the term “barriers to entry” also referred to having been a serious college athlete, who had to give up a sports career because of repeated head injuries. For him, this history of physical trauma had created internal barriers of fear and hypervigilance (along with cognitive symptoms resulting from the injuries) that made it difficult to focus, at first; he also commented that TangoFlow!® movement was “not like field sports movement,” and thus required learning “new vocabulary.” (Over time, he stated, the safety of the studio combined with the body-mind and cognitive challenges of the movement actually improved the symptoms of his head injuries, but he was quite emphatic that this was “not an immediate reward system.”)

Other participants also mentioned physical barriers and resistance, going in: “bad knees,” various scars and injuries, fear and muscle tightness dating to car accident and other physical traumas. Being overweight was also mentioned as a “barrier,” both in terms of body image and in the reported feeling that excess weight was “getting in the way” of the movement. It is interesting that physical barriers to entry were mentioned with equal frequency by people who completed the project and those who did not, and the injuries named were of equivalent severity, across both groups.

Participants also mentioned various cognitive and emotional barriers, and here too some common themes emerged. For those without background in dance, the style of kinetic learning was a challenge, at first. Said one woman, “I found myself, at the beginning, working very hard, trying to get the steps.” “Eventually, I got it,” added another, “but it’s definitely not everyday movement. It really took a while, and some effort. It helped that the movement was fun, and that everyone else was struggling too! That group cohesion really helped...” Yet another comment on this subject struck me as especially poignant:

I enjoyed it, when I got it. But at first I had a hard time being able to relax and get into it. It takes some time to settle, and it was difficult to get into my body. At first I was more focused on trying to grasp the choreography, so at times I could not enjoy the movement...I feel like I missed the full experience, and I kind of grieved that.

Comments on emotional barriers also picked up some common threads, mostly around self-image and self-esteem, and what it meant to confront all of that, head-on, standing in front of studio mirrors. Several remarked that it was jarring at first, “just to feel again,” to experience sensation where there had been none, to feel “awakening” in parts of the body that had felt “cut off,” “dormant,” “dead” or “asleep” (the terms most often used by respondents). For some, that “shock” of being in the body, feeling sensation, coming “out of a physical and emotional fog,” was so unnerving that following movement instruction was even more difficult, at first. (Again,

class structure helped, here, as detailed movement sequences were interspersed with periods of “play” and constructive rest.) Basically, it took Central Nervous System a while to catch up with sensory overload!

Finally, it would seem, people were wrestling with all sorts of pre-conceptions about exercise, dance, cultural standards of beauty and fitness—the whole confused web of contradictions that reflect our consciousness of these issues, as a nation. There was discussion of this in the group: How we are faced each day with impossible images of airbrushed models, meanwhile obesity rates keep rising...Several mentioned that, by avoiding exercise, they had been avoiding enmeshment in this whole debate. One woman, with impressive candor, really summed up discussion of this barrier:

I hate exercise. I hate skinny people. My first thought, [when you got up to teach the class], was, ‘look at that skinny little bitch, so cheerful!’ I really had to do some self-talk, to get going! But once I got into it, I forgot all about that. My inner child came out, and I was able to just play!

Response to Specific Movements

Here, there was less consensus, as far as what participants liked or did not like; what worked best seemed far more individual, yet again, some patterns do emerge. Nearly everyone felt that the focus on balance and alignment was important, and effective. Several commented they were surprised by the physical challenge, and that they were feeling so much strength and conditioning in abdominals and intrinsic spinal muscles. People found it difficult to attain what I call the “pigeon” posture (navel pulls back toward sacrum/psoas, as whole spine lengthens up and forward from coccyx to sternum; it’s a “rubber band” stretch, not a “lean”); they enjoyed knowing that this “pigeon” stance is the key to the close embrace in tango, and liked using the sensuous, romantic image of tango to work on that toning effect. As one participant stated, “I

wasn't expecting so much core body awareness. So much focus on where movement is generating from. This was just a great insight!"

Another fairly consistent response was that people felt most enthusiastic about movements they could easily recognize as "Tango." Some pointed out that they loved the Tango music, which evoked for them the ambiance and sensuality they associated with Tango. The particular movement vocabulary seemed to connect with their long-held images of Tango as romantic, soft, supportive, tender; even those who freely admitted that their personal trauma history would make the actual partnered dance of Tango "too scary," nonetheless felt the energy and ideal of Tango as somehow soothing and inviting, when experienced solo. All seemed to recognize the rocking, spiral movements of Tango as calming on a very deep level; as one woman stated, "I like the class best when it feels really Tango-y!"

Some of the most poignant self-reported responses to specific movements were noted during class. The young athlete recovering from head trauma liked short, repeated combinations that helped him re-pattern and re-coordinate his awareness of left and right; he also liked jumping and kicking, which felt more familiar to him, as reminiscent of his days on the playing field. I believe he achieved a release of physical and emotional energy, in these vigorous combinations, that he had sorely missed since being forced to give up sports. Likewise, a woman recovering from a major car accident which had shattered her pelvis, loved movements that "awakened" that part of her body, even though it felt like a tremendous challenge. I recall one "aha!" moment she shared with the class, when we were working a grounded leg extension from a pelvic floor rotation that really opened the sacro-iliac joint (the "back pocket," as I image it in class): She suddenly exclaimed, in the middle of class, "Oh my gosh, I have been doing this entirely with my legs! I have not been able to feel the back pocket or pelvic floor, until just

now!! No wonder I was feeling so HEAVY all the time!” From that moment on, she loved all movements of the “back pocket,” and could not wait to practice more! For each person, it seems, the “favorite” movements were those which were bringing body parts back to life—reviving sensation, in places where they had been “numb.”

Almost everyone noted improvements in balance, which most attributed to the “pigeon” posture and the need to work from deep, spinal muscles in order to achieve the “gliding,” stylized Tango walk. (This focus on balance is important, in particular, since several participants were 50+, in age: We know that loss of balance is a key problem, in aging, so this is a significant benefit of the work. It should also be noted that increase in spinal muscle tone is an excellent offset to loss of vertebral bone density, with age—again, a great conditioning aspect of TangoFlow!®, for those over 50.) One person especially liked that “all the movements are grounded, and feet stay connected to the floor.” Others also highlighted the grounded quality of the movement, and the fact that the work is vigorously aerobic yet low-impact; most commented also on the fluidity of the movement. As one woman put it, “exercise is usually a linear thing, but this has so much more flow.” Added another, “this feels different from any other exercise: It is a dream workout!”

Differences between TangoFlow!® and Other Forms of Exercise

Thoughts on this topic seemed to fall into three broad areas: imagery, teaching style, and the uniqueness of Tango movements. Nearly all respondents found that the narrated imagery of the class was unlike any other guided exercise modality they had experienced. During focus group, we chatted about the theory behind this imagery (please see Chapter II, re: ideokinesis, pp. 7-11). Participants concurred they could feel the effectiveness of the use of imagery during class, that it

felt “targeted” and not random, and that it “freed the mind” from trying to home in on anatomical detail, thus facilitating more expressive movement. Each participant reported having “favorite” images, often connecting to their own specific challenges (for example, the woman recovering from shattered pelvis, loved the image of the “back pocket”). All agreed that the balance, each week, between “the same” and “new” images was part of what made the imaging effective: Certain ideas would always recur, such as “back pocket” for sacro-iliac region and glutes, or using shoulder girdle as “handle bars” or “yoke.” But then in the moment, each week, new images would raise cognitive challenge to new levels, likewise increasing body awareness; for example, hearing a certain phrase on the bandoneon, in the music, I might refer to the spine as an “accordion,” folding down and up, toward the floor. All participants agreed their bodies became “sensitized” to these images, over the eight weeks, and that their movement responses became “more visceral” and “more natural,” as our work together progressed.

This focus on imagery led to discussion of teaching style, generally, which again, participants identified as unique to TangoFlow!® The young athlete—thanks in part to his long history of movement instruction by coaches, trainers, etc.—spoke from a broad frame of reference, when he stated that the imagery—coming from a place of precise knowledge of anatomy, kinesiology, and dance mechanics—set TangoFlow!® apart from any other style of instruction he had experienced. “What’s great,” he remarked, “is that you start with the image, kind of elaborate, and then you keep paring the instruction down to less and less, as you see that we are getting it...to the point that, by the end of class, you can just say ‘inner thigh’ or ‘shoulder girdle,’ and the body just does what it is supposed to do. It becomes automatic.”

Other comments focused on the syllabus, the fact that each class focused on a specific movement or body part, and that combinations were structured, specific and repeated week to

week. One remarked that the teaching style was distinctive because “it is not taught quite like a dance class, per se, but then it is definitely not like an exercise class...it is somehow in between, this unique style that you have created.” Several remarked that they appreciated hearing the “reasons” for each movement, along with snippets of theory and intended results; this aspect of the teaching showed respect for their intelligence, they felt, which made them feel more comfortable with the invitation to let loose and “just play.” This woman’s enthusiasm for the teaching style really speaks for itself, and echoes most of the points reported by the group, as a whole:

It’s great the way you change your mind and go with the flow...it’s so YOU! Like when you will suddenly get excited about something, or get inspired by a new idea, and then you run back over and re-start the song, or say ‘I’m not done with this one yet, there is something else I want to teach you!’ The whole class has this infectious feel...And you really let people in—you let us see the thinking behind the work, the theory and all that; you bring us in and share that with us, which is really special to be a part of...

Another feature of the work which participants identified as unique was the focus on Tango movements and technique—the whole idea of Argentine Tango as the “mystique,” the ambiance, the archetype; the romantic ideal of “Tango” serving as an image to draw them in. Several commented that, while they understood the importance of Tango, as technique, they also felt it as an “invitation” to express themselves in ways they might not dare in “ordinary” life. It gave them “permission” to act; and like all theater, thus helped them embody something deeply, intimately real. All responded to the “flow” of Tango, the liquid, gliding walk; several said the image of moving “like a panther, a cat” helped them to feel the sensuality and heightened awareness, in a way that felt “safe.” One said she was “surprised” that Tango movement could target the hard-to-reach areas, such as glutes and deep abdominals; “after the first class,” she stated, laughing, “I could not get out of bed! My butt was so sore, I could not believe it! I was

sore in muscles I never knew I had!” Others echoed the sentiment, stating they “never knew” that Tango could be “such a workout.”

Again, the key elements of balance, alignment and groundedness were identified as benefits of the Tango vocabulary; also the focus on embodying “Tango” helped participants to stay engaged in the work, mentally and emotionally. Another interesting discussion emerged around the question of whether or not the fluidity of Tango is a “feminine” quality. Said one woman, “these movements helped me to feel more feminine, more sensual...I felt myself so much more a ‘woman,’ doing these movements!” Others concurred, but there was debate as to what makes a style of movement “feminine,” and what is the role of the woman in Tango, to begin with? Why is this image of woman one that I would hold up, in my work, as empowering and healing?

We talked about the history of Tango, its origins in the barrios of Buenos Aires, developed as a dance of courtship within a working-class, immigrant culture where the population was overwhelmingly male. Women were scarce; thus in archetypes of Tango, the woman holds all the power. By tradition, I explained, the “leader” uses the dance to demonstrate to the “follower” that he is considerate, focused on her needs and her skills—that in Tango, all of the leader’s movements are organized to showcase the lines and virtuosity of the follower. In the ideal dance, the two partners “follow” each other; it is a conversation between two bodies, a dialogue of balance, ideas, connection and concentration. I shared with the group this famous quotation from a late, great *milonguero*: “When I die, I do not want them to say, ‘what a great dancer he was.’ I want them to say, ‘how sweet it was to dance with him!’” (Denniston, 2007, p. 24).

One participant picked up this thread, stating “Yes! I really felt that, in class, that energy! I had never realized that Tango was so empowering, for the woman! It’s all about the flow, but it’s not like the man leads the woman and she has to submit! It’s about finding your own power!” It is interesting to me that the woman who made this comment also came in with high TSI-2 pre-score, reports severe trauma history, and works as a corrections officer: After all her attempts to find “safety” in weapons and tactics of “self-defense,” she finally found a sense of power she could connect with in the image of “divine feminine,” through dance. The young former athlete—as the only male in the room—also had a strong perspective on this debate, which helped to open up our thinking: “I always liked the sinuousness of the movement,” he stated. “That is how I prefer to think of it. It can be interpreted as ‘feminine,’ but more fluid, or sinuous, is another way to describe it. I always found that one of the hardest, the most challenging, aspects of the movement! I had to work hard to get that sinuous quality; whether or not it’s ‘feminine,’ I really liked the way it felt!”

Mirrors

The discussion around mirrors caught me off guard, I confess; I have been dancing for so long, I take for granted the presence of studio mirrors, which I view as another dimension, in dance—a way in which the studio opens beyond four walls, and becomes a sacred space. Being so accustomed to using the mirror as a tool for teaching and expression, I had perhaps grown insensitive to how great an obstacle a mirror may seem, for others. In Focus Group, the issue came up again and again, despite the fact that I had included no question about mirrors, per se. Thus what began as a digression turned into one of our most heated topics.

“Oh! Those mirrors!” one woman exclaimed. “At first, that made it so hard to be here!” “The mirrors were a challenge!” chimed another, “but you made even that more comfortable. It was all done with so much joy and enthusiasm! We could really watch you in the mirror, and I know, I realize that’s what it’s there for, to make the teaching easier. But sometimes, I swear, I would catch a glimpse of myself in the mirror, and be so disappointed. Because that’s not what my dancing was looking like, in my head!” “I agree,” another woman added, “the mirrors! The mirrors are *not* a trivial part of it! There is a whole experience/challenge of the mirror. Those who can find a way to deal with that, *do* find empowerment within themselves. And those who can’t, well, they miss something!”

I was struck by how raw and intensely felt these responses to the mirror were, for everyone. I shared that I had wrestled with the question of whether to cover the mirrors, because of people’s resistance, but then resolved to push the edge a little: I explained that mirrors are a tool, in dance, they allow me to see the student and the student to follow me; they also open up space, in this almost mystical way, that can add dimension to the dance itself. There is a reason that mirrors are always used in dance class; the trick is to bring oneself into alliance with the mirror, and to realize that “judgment” is not coming from the mirror, but from within us.

Responses to these thoughts were varied, and again, deeply felt. People shared stories about eating disorders, body image history, how they have grappled with mirrors and image their whole lives. One woman shared that, when she was in high school, she was so phobic about mirrors that when she would go into the bathroom or locker room, she would dress or wash her hands and then literally shield her eyes and flee from the above-sink mirror, without looking. As she described, “it was a ‘thing’ for me, it was like a compulsive ritual, really a rule: to wash and go without even looking up, to avoid at all costs looking in the mirror.” She later found out that

the other girls, observing this behavior, assumed she was “so proud of her looks she did not even need to look in the mirror!” There was gossip and resentment, jealousy and judgment: As a result, this very timid girl, insecure about her looks, gained a false reputation as a “diva”!

Everyone seemed to have some kind of story; stories of self-judgment, self-condemnation, all centered on relationship with the mirror. It would seem that our youth-and-appearance-obsessed culture has turned the mirror—historically an instrument of magic, a shamanic portal to extraordinary realms—into an implement of torture. Despite this passionate discussion with the group, I remain convinced that dis-arming the mirror, robbing it of its power to distort and condemn, is part of the process of empowering the self. It is one step in unpacking the trauma; self-acceptance is something that can be learned. As one participant stated, “At first I could not believe what I looked like in the mirror! But then I realized I had to shut that out, focus on the music, and enjoy what I was doing.” Another beautifully summed up the whole conversation, on mirrors:

I am realizing from this discussion, I don't think I ever looked at myself in the mirror during class! I could not even see my own resistance, because I refused to look at myself, the whole time! What we see is not really what we see...Eventually you realize, what you are seeing in your head *is* what you are creating with your body. But there is an issue of translation, into expression: Are my eyes, looking in the mirror, ever seeing what is 'real'?

Surprises

I include here a section on “surprises” as distinct from “results,” because I think all of us in this project were surprised and delighted by so much of what took place, that the experience has had a lasting impact, regardless of quantifiable results. My own surprise was to witness the true dedication of those who completed the classes—how joyfully they participated, how fully they “drank in” the movements, and how genuinely thrilled they seemed with each small step

toward progress. I was touched by their level of commitment, and their desire to contribute to the research. I was also surprised by the sincere affection that developed within the group, and how much I already miss them.

The “surprises” reported by participants emerged, during Focus Group, like so many small gifts being unwrapped, one by one; I display them here in that same spirit, without any particular order or connecting thread.

One woman expressed surprise that she was able to tolerate the physical intensity: “I was surprised that I could even come in the door—I could show up! It was hard at first, but I was surprised that I was finally able to track you as well as I could, to follow what you were doing.” The young athlete was surprised by the freedom and joy he experienced: “It was exciting to learn new things my body can do...I could not believe it was so fun to be goofy and move like that! I would feel it after class, at the grocery store; it’s fun to just walk after class, and feel like I have all this mobility, and ability to express with my body in a way that is really freeing...it accrues! Running, jumping, moving around: It is pure joy of movement!”

One woman said she was surprised that the class was such a workout; “I was expecting more of a Tango class, with partners!” Another was surprised by the level of detail and technique; still another that “any form of exercise could be so targeted, around the glutes.” Several were surprised by the improvement in balance, and nearly all reported surprise at the level of emotional engagement, and how expressive they became, as they began to master the movements and combinations. One was surprised to learn that we had been repeating some of the same combinations each week, with different music; “it felt so new and different every time!” Most were surprised by how deeply the movements engaged their core muscles, and all said it took a while to “find” those muscles enough to feel successful. One woman commented

she was “most surprised by how much better I can *walk*, just by thinking about how to use my torso muscles!” All agreed they were surprised by the level of mind-body connection they tapped into, by focusing on movement technique; one woman remarked, of this mindfulness element:

It gave me an appreciation for and awareness of the connection of the mind-body piece and the dance piece, the movement piece. I had never really thought about [dance] settling with your soul. I’ve made it more inward than outward, now...creating as you dance!

Results

Finally, all participants happily pointed to the results they have seen, after eight weeks of TangoFlow!® While the numbers have confirmed that the intervention played a significant role in symptom-level change, nothing can be more convincing than the words of participants themselves. In terms of physical improvements, people reported increase in strength, flexibility, core muscle control and alignment, body awareness, and general fitness. Our young athlete stated (rather mysteriously) that he can now “walk better mentally,” as well as physically, and that TangoFlow!® has helped him improve skills for another dance class he is now taking. Improved balance was a commonly endorsed result, along with improved definition in “trouble spots” such as glutes and lower abs; several cited inches lost around the waistline, and reduced levels of belly fat. One woman reported ecstatically that she had lost 15 pounds and “changed her whole body type and relationship to her body!” (An important note, here, is that this same respondent was also our one “outlier” in pre/post symptom score. She is the only completing participant whose score rose slightly in the post-interview. Her self-reported results, however, were emphatically positive, and she is continuing as a paying TangoFlow!® client. The discrepancy may be due to the fact that she is a Ukraine native, relatively recent immigrant, and

not yet a fluent speaker of English. Some of the TSI-2 questions, by her own account, were “confusing” and hard to understand.)

Several had comments about the emotional results, in terms of reduced trauma symptoms. Our corrections officer stated that she felt “safer” and more “present in her body” than ever before. Though her post-interview still showed symptoms of depression, anxiety and hyper-arousal, the numbers were far lower than on pre-test, and she reported having “moments of joyfulness” she had not experienced before. Most participants endorsed some reduction of dysthymic symptoms, and noted an “increased sense of well-being,” overall. One woman stated that her anger had “simply melted away” over the eight weeks, and seemed bemused by the change: “Where has all that anger gone? What happened to all the anger?”

Others reflected in more general ways, on changes in their trauma symptoms. One woman stated that she “probably did not understand all the symptoms.” In the beginning, she said, “it was hard to tell if it was more the physical trauma, or the emotional trauma I was still holding in my body. It was hard to quantify that. But in the end, I have improved; just by doing this work on being more connected, mind and body, I have improved.” Several commented that the focus on spinal mobility had taught them just how much of their trauma and anxiety they were “holding” within the spinal column, and that even in eight short weeks, they felt better. Nearly all participants remarked a change in “mood,” though it was difficult to assess exactly what meaning each ascribed to the term. Still, it was agreed by all that their “better mood” was directly related to the experience of TangoFlow!®. Said one woman, “dancing is something pleasant. It lifts and improves our insides! Dance is great because it can change our outsides and our insides!” Another woman captured eloquently the effects of TangoFlow!®, on her trauma symptoms:

I definitely felt like I could come here and just *be*...not have to be worried or anxious. Then I started looking forward to it. Some of the anxiety lessened, and I really had never thought of it but when you have trauma you disengage from your body—whereas here, if I was too much in my *head* I had a hard time! But if I could just get into my body it was so much easier. It took down some walls and some barriers...

Nearly all participants expressed desire to continue with TangoFlow!®, and most are actually doing so. Of the 13 completing participants, all but four have returned to class as paying clients; of these four, two cited distance and work schedules as interfering, and one said that old injuries had gotten in her way throughout the eight weeks, thus she might not continue, as a result. Only one reported wrestling with internal resistance, stating that she felt “conflicted” about it, because she could “really feel the benefits,” and yet found it “too hard to just *get* there.” Even though I called her later to ask if she might want to expand on her meaning, she really could not put it into words. “I just know myself,” she said. “I just don’t think I would really get myself there if it wasn’t for a project, like this, if the time was not limited. And then I would end up feeling worse about myself, because I didn’t go...” I have heard this sentiment before, over the years, from students; and while I appreciate their honesty, I remain at a loss as to how to help. Perhaps this very form of resistance would be a needed focus for further study.

Among those continuing on, enthusiasm for the work remains high, and the former research participants have now integrated themselves into my “regular” ongoing classes as part of our TangoFlow!® community. Unfortunately, I will not be able to continue teaching in the Lebanon, NH area, since my internship at the local VA Medical Center has now ended; I have however promised the studio owner and the students that I will come back and offer a weekend workshop, during the summer. One of the participants has made plans to drive over to my Rutland, VT studio twice a month, for my Saturday morning class (a distance of 50+ miles each way); another proudly exclaimed, one evening, that she was the “high bidder” on some classes I

had donated to Silent Auction for a local charity, and was able to redeem those classes at the Lebanon studio before I left. It was also noteworthy—and very touching to me, personally—that all the completing participants declined the \$10 gift card they were offered, per informed consent agreement. Several stated that “they simply would not take my money,” in a spirit of wanting to support the project. Others said they would accept “one free class instead” (an equivalent value); most reported they viewed the eight weeks of “free” class as “enough of a reward.”

Whether or not they are continuing with TangoFlow!®—and despite the significant results they achieved—participants agreed that eight weeks was not enough time to experience all that the work may have to offer, or to master the movements as they might have wished. Though our findings, both quantitative and qualitative, showed definite promise, it would be helpful to know what further symptom changes might ensue from greater mastery and control, of the movement vocabulary. Specific impacts of the work, in terms of point-by-point technique, would need to be studied over a longer term. Still, this small study has demonstrated that even a short-term intervention can harness some of TangoFlow!®’s potential to increase body awareness; improve “mood;” reduce levels of anger, depression, somatic complaints and other trauma symptoms; and, most important, awaken within the body-mind the *desire* to feel better, through movement. As I observed participants, from week to week, I would have to say that what I witnessed most was that awakening, those first stirrings of joy and enthusiasm. I cannot think of any better way to express this, than to close with the experience of this participant, brought to life in her own words:

I thought this was phenomenal!...My life was better for having done it, and I have been grieving because it was over! When it really kicks in, is in that minute when you realize it doesn't matter if you get the exact movement or not...Part of the beauty is that TangoFlow!® is its own thing, it's like nothing else! There is truly nothing else that feels like this, and has that combination of dance and exercise, structure and freedom...

Chapter V

Discussion

*Tango...is ideal
For passion and argument
If Freud didn't prescribe it
he just didn't know
that this flower among flowers
can cure lovesick hours...*

--Mario Arraga, "Apostillas del Tango" (in Thompson, R. F., *Tango: The Art History of Love*, p. 46)

In reflecting on the implications of this small pilot study, and what indications our findings may have for further research, I am reminded of Mario Arraga's coy Tango lyric, poetically invoking the healing powers of dance. We miss so many important opportunities, when we focus exclusively on a "talking" cure. We are each of us unique, not only in how we respond to and "hold" a trauma, but also in terms of where and how we find relief. It is my hope that more and more body-based interventions for trauma can be explored—analyzed quantitatively as to specific mechanism and technique—so that the appellation "evidence-based" can embrace many different types of somatic and movement practice, as well as talk-based therapies. Yoga has made great strides toward being recognized as a clinically effective somatic intervention for a variety of mental health symptoms, including trauma. But yoga is only one among many dance and movement practices which may hold great—and very specific, quantifiable—therapeutic potential. This whole area of research feels to me cutting-edge, and urgent. More research could add more colors to the palette, more tools to the toolbox—more and more viable ways of using somatic intervention to bring about lasting change.

Several of our findings and challenges in this study have suggested to me areas of further research, which I hope to explore in the future. I was intrigued by some of the observations of our interviewer, Ms. Nufield—in particular her question as to whether the TSI-2 was in fact the “right” test for this study, and the fact that some participants either resisted the questions altogether, or found that the questions did not entirely correspond to their experience. One respondent, for example, shared with Ms. Nufield that, as a survivor of sexual/relational trauma, she simply “did not see her particular somatic complaints” as being addressed in any of the questions. So, even though Ms. Nufield and I had prepared carefully, had gone through the questions with a fine-toothed comb and “practice-tested” each other several times, before she ever interviewed an actual participant, it is possible that, in a larger study, we might want to re-think our choice of testing instrument, and/or use more than one measure, to ensure more accurate results and a broader range of information. (For example, we might use both the TSI-2 and the Beck Depression Inventory, and see whether pre/post scores show parallel changes in symptom levels.)

It is also unfortunate that we were not able to work in a “control” group of any kind, given the logistical barriers of weather, with resultant class cancellations and attrition, as detailed in previous chapters. It would be a good direction for future research to compare TangoFlow!® with other forms of dance or aerobic exercise, in an attempt to determine whether TangoFlow!® does indeed have a unique ability to reduce trauma symptoms. It is likewise important to acknowledge that some of the apparent effects in trauma symptom reduction could be owing to relational attunement between instructor and group—which might not transfer and generalize to other instructors and other groups.

Ms. Nufield also observed that some participants seemed more “resistant” than others, even during the pre-interview; and in some cases those she identified as resistant did not, in fact, complete the project. As we talked more (and as my discussion of attrition, in Chapter IV, also attests), it became clear that further research—on TangoFlow!® or any other movement-based intervention—would need to incorporate some way of studying the phenomena of attrition and resistance, as such. It is also evident to me that eight weeks of class is not enough to measure adequately just how much people can change and grow, through this type of intervention; we really only scratched the surface in that short time. It remains unknown as to how much improvement in symptoms we might see in a longer-term study. Given more time, even those with severe avoidance/resistance symptoms may be better able to settle in, and open up; some of the fears around mirrors, lack of “mastery” and so forth might also soften, with more time to engage. Longitudinal study, to track continued participation over time, would likewise be important to any full understanding of the effectiveness of TangoFlow!® I am extremely hopeful that, with increased interest in this work, publication, and perhaps additional funding, research could be conducted that would test TangoFlow!® in all of these ways.

Reflecting on this experience, I am drawn back to the comment of noted PTSD expert Edna Foa, as quoted in Chapter II—in particular her observation that, while creative arts therapies of all types have been found effective for clients with both acute trauma sequelae and chronic PTSD, there is regrettably a “dearth of experimental research on the creative arts therapies, due largely to the lack of training of practitioners in research methodology” (p. 484). I would add to this key insight that (at least in the case of the artist-practitioner typing these words now!), training in research methods may not be the only skill lacking. In my case, although I have spent years acquiring training and knowledge of anatomy, kinesiology, dance and

movement theory, I am by no means a scientist. Dance, movement, the body: These are the flesh-and-bone building blocks of my life's work. But further research on TangoFlow!® could be made so much more powerful through collaboration—in particular with someone expert in the field of neuroscience, who might be able to interpret our observed symptom changes in light of specific mechanisms of Central Nervous System and brain function. Ms. Nufield made a similar observation, in describing the changes she witnessed from pre- to post-interview. “We need a category for brain function,” she remarked, “the neuroscience part. What I saw, in the post-interviews was that people knew themselves better, were more conscious, more realistic about themselves. They all answered the questions with more decisiveness. It really felt, as I sat and listened to them, like there had been a change in brain function—they literally sounded different.”

If in fact there is such a change at work—and if that change could be demonstrated more powerfully, using control-group design, larger sample, and more solid scientific component—the implications for Social Work and Mental Health, generally, would be significant. As I consider the evidence-based modalities now in use for PTSD (including Cognitive Processing Therapy, a VA-based, manualized treatment in which I trained during my internship this year), it is clear to me that most of the current interventions recognize trauma as “bi-phasic” (van der Kolk, 1994, p. 255), equally impacting body and mind. Neurological re-patterning—releasing “stuck points,” whether cognitive or somatic—is an important aspect of all these therapies, and many researchers (Emerson et al., 2011, p. 23) are documenting excellent results from interventions based on yoga. But is yoga an active enough modality for all patients? Are there some for whom more rigorous, dynamic, fluid movement patterns are required to release “stuck” energy?

Are there some for whom expressive movement, improvisation and the act of generative creativity itself, are vital to the healing process?

Active movement also challenges the particular trauma sequelae connected to what Basham (2011) refers to as the “Victim-Victimizer-Bystander Dynamic” (p. 456), whereby a trauma survivor may tend to cast everyone in her life into one of these three roles. Implications in terms of object relations can be severe, including the tendency, through projective identification, to enlist others to act in these limited ways, thereby ensuring that negative expectations are fulfilled, and curtailing possibilities for nurturing relationships (p. 456). Dance movement—and in particular the passionate, sensual and “feeling” vocabulary of movement derived from Argentine Tango—calls the dancer out of any limited role and gently but firmly opens the body-mind to a broader emotive range. Dancing in a roomful of expressive, moving allies, no one can be a “bystander.” No one can be passive. Each defines his or her own kinesphere, each moves within a “bubble,” there is no victim and no victimizer. And yet there is the constant, felt presence of the “other,” dancing—fluid waves of motion filling the room, harmonizing, entraining, so that even without touch, there is always connection.

Finally, I would point to one other important way in which TangoFlow!® challenges the student, and which constitutes a direction for further study. In dealing with trauma, we are often faced with the cluster of symptoms pertaining to avoidance: Not only avoiding “triggers” that remind one of the traumatic event, but defensive patterns such as dissociation, passivity, ritualized behaviors, resistance to any new sensation that might push the traumatized patient outside a narrow realm of experience defined as “safe.” Numbness in the body, lethargy, lack of physical sensation: These can all be part of the profile of avoidant symptoms. Any new experience that threatens the carefully constructed status quo could be a tremendous challenge to

trauma survivors. In considering how to introduce TangoFlow!® to such patients, it would be important to look carefully at avoidance and resistance. Frustration tolerance, distress tolerance—and even success tolerance, in terms of whether or not it feels “okay” to feel better: All of these could be important predictors of whether a particular trauma client might find TangoFlow!® effective.

Indeed, as we processed these ideas together, upon completion of the post-interviews, Ms. Nufield suggested that it would not be merely frustration-tolerance, or an absence of specific avoidant symptoms, that would predict a good “fit” for this work. Rather, it had something to do with intensity, and passion—some kind of deep, inner drive to *feel*, even where that drive has been interrupted. “Passion-tolerance,” we called it, agreeing that this quality might tie in to the mysterious question of why some stay while others go—even with similar types and levels of symptoms. In Ms. Nufield’s words, participants who had “dreamy romantic expectations” about the class tended to drop out, whereas those who described themselves and the experience of TangoFlow!® as “intense” not only completed but derived the greatest benefits. How, why and for whom, we wondered, does the felt “intensity” of an intervention enhance its therapeutic effects? This would be a key question to explore, going forward. As Ms. Nufield put it:

The word “intensity” is an important word for you. There are people who understand that intensity has value, and people who think that if something is intense it is bad. Because your workout uses intensity to change psycho-physiological state, students need to be geared that way, to tolerate intensity.

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*Items starred were not directly quoted in the text, but were valuable resources in developing the TangoFlow!® method and syllabus, and are therefore included here.

APPENDIX A

HSR Approval Letter



School for Social Work
Smith College
Northampton, Massachusetts 01063
T (413) 585-7950 F (413) 585-7994

October 18, 2013

Catherine A. Salmons

Dear Cathy,

You did a very nice job on your revisions. Your project is now approved by the Human Subjects Review Committee.

Please note the following requirements:

Consent Forms: All subjects should be given a copy of the consent form.

Maintaining Data: You must retain all data and other documents for at least three (3) years past completion of the research activity.

In addition, these requirements may also be applicable:

Amendments: If you wish to change any aspect of the study (such as design, procedures, consent forms or subject population), please submit these changes to the Committee.

Renewal: You are required to apply for renewal of approval every year for as long as the study is active.

Completion: You are required to notify the Chair of the Human Subjects Review Committee when your study is completed (data collection finished). This requirement is met by completion of the thesis project during the Third Summer.

Congratulations and our best wishes on your interesting study.

Sincerely,

A handwritten signature in black ink, appearing to read 'Elaine Kersten'.

Elaine Kersten, Ed.D.
Co-Chair, Human Subjects Review Committee

CC: Gael McCarthy, Research Advisor

APPENDIX B Informed

Consent Document



SCHOOL FOR SOCIAL WORK

**Consent to Participate in Dance for Your Life Study
Smith College SSW • Northampton, MA**

.....

**Title of Study: Dance for Your Life: TangoFlow!® Technique and Implications for Treatment
of Trauma**

Investigator(s): Catherine A. Salmons

(MSW thesis project, Smith College School for Social Work, XXX-XXX-XXXX, csalmons@smith.edu)

.....

Introduction

1. You are being asked to participate in a research study of TangoFlow!® dance/movement technique in order to explore its possible benefits in the treatment of body-based and emotional symptoms of trauma.
2. You were selected as a possible participant because you have responded to recruitment materials about this study, or have been referred by a mutual colleague. You are over 18 years of age, and in general good health; you have also identified yourself as someone with a history of body-based or emotional trauma symptoms. You have never been a direct client in any of my dance classes, and you have no prior connection to me or to this research study which might constitute a conflict of interest.
3. I ask that you read this form and ask any questions that you may have before agreeing to take part in my study.

Purpose of Study

- The purpose of the study is to explore whether or not the TangoFlow!® dance/movement technique is effective, or not effective, in relieving trauma symptoms. This study is being conducted as a thesis requirement for my master's in social work degree.
- Ultimately, this research may be published or presented at professional conferences.

Description of the Study Procedures

If you agree to be part of this study, you will be asked to do the following things:

1. Participate in once-weekly TangoFlow!® movement sessions beginning in January 2014, *OR* be randomly assigned to a comparison group, to begin the once-weekly TangoFlow!® sessions in March 2014. Each group will meet for a duration of eight weeks (eight sessions total). Your participation in the groups will be entirely confidential.
2. Participate in pre- and post-assessment interviews, to be conducted by an interviewer other than myself. Each of these interviews will be no more than 20 to 30 minutes in duration, and will contain questions from the Trauma Symptom Inventory-2 scale, as pertaining specifically to your body-based or emotional symptoms, and any changes you may observe during the course of the study. All personally identifying information will be removed in any report of the findings: thus, the interview responses you give will be handled in a way that protects your confidentiality.
3. If you are selected for participation in the second group (that is, the group beginning TangoFlow!® sessions in March), your experience will be the same as that of the first group. You will also be asked to repeat the Trauma Symptom questionnaire as you begin the TangoFlow!® sessions in March, to check for any changes that may have occurred since the first time you answered the questions.
4. ***Optional:** In addition to your participation in the TangoFlow!® groups, and the trauma symptom assessments, you will be invited to participate in a one-hour focus group, if you wish. Participation in this group will also be entirely confidential. The focus group will offer an opportunity to discuss at greater length with myself and other participants what the TangoFlow!® experiences have been like for you.

Risks/Discomforts of Being in this Study

- The study has the following risks. First, although unlikely, it is possible that unfamiliar and fairly vigorous dance movements may cause some discomfort, or that you may feel some anxiety--for example, if you find it difficult to learn the movements as quickly as you might like. In this case, you would be invited to take a break, and perhaps just observe the session until you feel more comfortable. And of course, you are always free to discontinue a session, if you need to. Second, it is possible that talking about your symptoms--either in the focus group or during the interviews--may cause you to feel some emotional discomfort or anxiety. In this case, too, you are invited to take a break, discuss your feelings of distress with the interviewer, and even terminate the interview altogether if you need to do so. Please be reminded that participation in any and all aspects of this study is entirely voluntary, and you are free to discontinue participation at any time.

Benefits of Being in the Study

- The benefit of participation is that TangoFlow!® may afford you some reduction in the scope and severity of your identified symptoms of trauma. Whether or not you notice reduction of your trauma symptoms, you will receive the aerobic and conditioning benefits of eight weeks of vigorous exercise. You may also benefit by helping to document the effectiveness or lack of effectiveness of this method, contributing to its further development

Confidentiality

- The records of this study will be kept strictly confidential. Research records will be kept in a locked file, and all electronic information will be coded and secured using a password protected file. Interviews and focus group will be recorded via audiotape and written notes, but transcripts and audio files will be kept confidential, and used only to synthesize data for analysis. No electronic recording media of any kind will be used to document these sessions, thus no participant will be recognizable

by visual, audio or any other means. I will not include any information in any report I may publish that would make it possible to identify you.

- The data will be kept for at least three years according to federal regulations. They may be kept longer if still needed for additional research. After the three years, or whenever the data are no longer being used, all data will be destroyed.

Payments [

- You will receive the TangoFlow!® classes at no charge; in addition, you will receive a gift card in the amount of \$10 (choice of Starbucks or Target), in appreciation of your time spent on the pre- and post-interviews. There is no additional compensation for the focus group, but we will serve coffee and light refreshments during that session.

Right to Refuse or Withdraw

- The decision to participate in this study is entirely up to you. You may refuse to take part in the study *at any time* without affecting your relationship with the researchers of this study or Smith College. Your decision to refuse will not result in any loss of benefits (including access to services) to which you are otherwise entitled. You have the right not to answer any single question, as well as to withdraw completely at any point during the study. If you choose to withdraw, I will not use any of your information collected for this study. I would ask that you notify me of your decision to withdraw by email or phone before the end of the 8-week TangoFlow!® session’s assessment. After that date, your information will be part of the thesis report.

Right to Ask Questions and Report Concerns

- You have the right to ask questions about this research study and to have those questions answered by me before, during or after the research. If you have any further questions about the study, at any time feel free to contact me, Cathy Salmons at csalmons@smith.edu or by telephone at XXX-XXX-XXXX. If you like, a summary of the results of the study will be sent to you. If you have any other concerns about your rights as a research participant, or if you have any problems as a result of your participation, you may contact the Chair of the Smith College School for Social Work Human Subjects Committee at (413) 585-7974.

Consent

- Your signature below indicates that you have decided to volunteer as a research participant for this study, and that you have read and understood the information provided above. You will be given a signed and dated copy of this form to keep, along with any other printed materials deemed necessary by the study researcher.

.....

Name of Participant (print): _____

Signature of Participant: _____ Date: _____

Signature of Researcher(s): _____ Date: _____

.....

Audio recording:

1. I agree to be audiotaped for this interview:

Name of Participant (print): _____

Signature of Participant: _____ Date: _____

Signature of Researcher(s): _____ Date: _____

2. I agree to be interviewed, but I do not want the interview to be taped:

Name of Participant (print): _____

Signature of Participant: _____ Date: _____

Signature of Researcher(s): _____ Date: _____

APPENDIX C

Recruitment Flyer

Smith College School for Social Work--Masters Thesis

Dance For Your Life!! “TangoFlow![®] Dance-
Conditioning Technique: Implications in the
Treatment of Trauma”

Participants Needed for a Research Study

This study is part of a Masters Thesis project for Smith College School for Social Work.

The study will investigate the possibility that TangoFlow![®]--an expressive dance-conditioning technique--may be useful in the treatment of physical and emotional symptoms of trauma.

Participants would agree to be assigned either to “group I,” beginning in January 2014, or to “group II,” beginning in March. All participants would complete a trauma symptom questionnaire before the start of their group, and again at the group’s end, to assess for changes in symptoms. All participants would attend one TangoFlow![®] class per week, for a period of eight weeks.

The TangoFlow![®] classes will take place at studios in Lebanon, NH and Rutland, VT. The classes will be offered free of charge, and participants will receive a gift card (value \$10) as compensation for answering the questionnaires. Participants will also receive the fitness benefits of TangoFlow![®], a trademarked dance-conditioning technique developed by researcher and professional dance instructor Cathy Salmons, M.A.

Participants need to be at least 18 years of age, in general good health, cleared for moderate exercise, and also self-identifying as having some history of trauma, and trauma symptoms. No participant will be asked for any details whatsoever of personal trauma history, only for description of physical or emotional symptoms. Confidentiality will be fully guaranteed.

Thank you for considering my study! If you wish for more information, please contact:
Cathy Salmons, M.A.
Smith College SSW Masters degree candidate
XXX-XXX-XXXX

APPENDIX D

Testing Instrument and Focus Group Questions

For quantitative measures, testing instrument used:

Briere, J. (2013) Trauma Symptom Inventory™—2. Lutz, FL: PAR, Inc.

(For a sample of questions contained in this testing instrument, please see Table 2, p. 41.)

For qualitative measures, Focus Group questions used:

Describe in your own words your experience of TangoFlow. What did the movements feel like to you? Did you find the exercises hard or easy? Did the class feel good to you, and in what ways?

How did your experience of TangoFlow!® change/evolve over the eight weeks?

To the extent that you feel comfortable sharing this, how do you feel your trauma symptoms did or did not improve during the eight weeks? Thinking mostly of symptoms that are very physical (things like insomnia, being always “alert,” chronic aches and pains...), what changes have you noticed, that you might be willing to share?

What about the TangoFlow!® experience most surprised you?

What about the TangoFlow!® experience seemed most frustrating or difficult?

What were your thoughts about either Tango or “expressive movement” before we began these sessions? Have those ideas changed, over the eight weeks? If so, how have they changed?

Would you recommend TangoFlow!® to a friend struggling with some of the same symptoms that you experience? Why or why not?

How does the experience of TangoFlow!® compare, for you, to the experience of talk therapy? (In your own words...I am more interested in the feeling of the experience, rather than “results”...)

What feedback or comments do you have about this experience, overall?

Now that you are aware of TangoFlow!®, is it something that you would pursue on your own? Why or why not?

APPENDIX E

Researcher Bio/TangoFlow!® History

I come to this project as a dance professional with more than 20 years' experience as a performing artist, teacher, bodyworker and specialist in body awareness/experiential anatomy.

After completing a Master of Arts at Boston University in 1990, I spent the next 12 years as a performer, teacher and arts journalist in the Boston area. I founded and directed the performance group, Vox Pop, which won several awards and received a performance grant from New England Foundation for the Arts (NEFA). I worked as an artist-in-the-schools through the Massachusetts Cultural Council, and joined the adjunct faculty of Lesley University, in the graduate department of Creative Arts in Learning (2001--present). I also completed massage therapy training, including 100 hours' instruction in anatomy and physiology; yoga teacher-training, and I have been a certified instructor of the Nia Technique (dance) for the past 12 years.

My work with expressive movement touches on fundamentals of Dance Movement Therapy, including Laban Analysis, Bartenieff Fundamentals, Chacean movement therapy, Authentic Movement, Ideokinesis, and more. My dance training includes ballet, modern, and Argentine Tango, which I also perform and teach. I have studied with some of the top professional Tango dancers in the world, notably Daniela Arcuri (who has choreographed for numerous Hollywood films, including *Evita*).

Since 2003, I have owned and directed Studio Bliss: Center for Expressive Movement, in Rutland, VT; I have taught dance and yoga classes at my studio for the past 10 years. I also teach dance, body awareness, and dance anatomy at the Community College of Vermont. TangoFlow!® developed in this context, as I worked to design dance-exercises to increase the healing/therapeutic impact of my work with my existing client base. My goal was to create

effective exercises that would increase fitness, mindfulness and expressive release, using specific principles and techniques from Argentine Tango.

TangoFlow!® received a trademark from the United States Patent and Trademark Office in September, 2010. Since that time, I have worked to disseminate the program in a variety of ways. In addition to teaching at Studio Bliss and other studios in Vermont, I have travelled to teach at different locations around the Northeast. I remain on the faculty at New England Tango Academy in Cambridge, MA; I have also been on the faculty of Air de Tango studios in Montreal. Prior to beginning my studies at Smith, I ran a pilot program at CLAY fitness spa in New York City, test-marketing TangoFlow!® for a period of four months. During my past two summers at Smith, I taught TangoFlow!® weekly at Dance Northampton studios, and through the Argentine Tango Society of Brattleboro, VT.

APPENDIX F

TangoFlow!® Research Study—8-week Cohort

Syllabus and Resources

Class times: Wednesdays, 6:45--8:00pm
Thursdays, 7:15—8:30pm
Saturdays, 11:15am

Location: Raq-On Dance Studios
31 Hanover St., Lebanon, NH
Location: Studio Bliss
59-67 Merchants Row, Rutland, VT

TangoFlow!® is an original system of expressive/conditioning dance movement, developed and trademarked by researcher Cathy Salmons, M.A.

TangoFlow!® is based on the principles and techniques of Argentine Tango, but it is not an experience of the “social dance” of tango. It is a system of exercises and tango-based, expressive choreography designed to achieve the following goals: 1. Teach the fundamental techniques of tango, and skills required to move “like a tango dancer”; 2. Improve core strength, flexibility, overall fitness and dance conditioning; 3. Increase body awareness, mind-body connection, and sensation; and 4. Broaden cultural awareness of Argentine tango music, dance and philosophy.

TangoFlow!® is also a journey inward—a profound experience of body, mind and spirit. It challenges us to expand our selves, becoming open to new possibilities, without and within. It challenges us to re-define our experience of being “in” our bodies, and our assumptions about the kinds and qualities of movement of which we are capable. It challenges us also to embrace movement as a basic form of emotional expression—as natural as our instinctive impulse to walk, eat, work and sleep.

TangoFlow!® also brings us back to some of the most basic, existential questions about the body—abilities most of us take for granted, but which in fact are unique to us 2-footed creatures: What does it mean to be vertical, to navigate the world on two tiny feet? What is balance; what does it mean to be “grounded”? What is our connection with the earth, and how do we maintain an alignment that is dynamic, healthy and sustaining?

It is my hypothesis that, by re-connecting us with the body and with disconnected parts of the self—by facilitating our encounter with all the ideas described above—TangoFlow!® also holds the potential to be a powerful tool for emotional healing.

I thank you all sincerely for helping me to study this hypothesis!

****Main Theme of the Class: CONNECTION****

“Connection” is one of the most important skills in Argentine Tango—connection to partner, and connection to self...In trauma, or any type of emotional “wounding,” that connection to self is threatened: We will use TangoFlow!® to try to repair connection to the body and to the self, a little more each week...

Week 1: “Connection”...Experience of Central Axis, “front surface” of spine.
New skills: “collection;” spinal twist

- Week 2: “Connection”...pelvic girdle; navigating from center. Localized rotation; “un-glue” the pubic bone; connect to “back pocket.” New skill: Leg wraps
- Week 3: “Connection”...use of the feet...grounding; articulation; “beveled” shape
New skill: pivot
- Week 4: “Connection”...Shoulder girdle...strength and power; initiating rotation from upper body...energy of the “yoke”...holding “frame”
New skill: Ochos...front and back
- Week 5: “Connection”...Inner thigh...regulating speed and power; gliding strength
New skill: Boleos
- Week 6: “Connection”...Musicality: pulse and format of tango music; dancing both rhythm and melody
New skill: “Adornos” (embellishments)...for both leader and follower
- Week 7: “Connection”...Free Leg: use of hip socket; leg swings
New skill: Sacadas
- Week 8: “Connection”...Standing Leg: Back to where we began!
New skill: Walking! (Walking is always new—over and over again!)

Additional Resources:

All of the music used in TangoFlow!® is available through I-tunes or other on-line music vendor. Tango dance videos are available on youtube.

****TangoFlow!® Music—electronic (“Nuevo tango”)**

These are some of the artists most frequently heard in our playlists:

- Gotan Project --Otros Aires
- Tanghetto --Bajofundo
- Narcotango --Electro Dub Tango

These are some of the most important Traditional Tango Composers of the “Golden Age” (1930’s-40’s):

- Carlos di Sarli --Francisco Canaro
- Osvaldo Pugliese --Miguel Calo

These are some of the dancers you should absolutely watch on youtube—and you will see some of the movement principles and techniques we are learning!

- Mariana Montes and Sebastian Arce (best in the world!)
- Geraldine Rojas and Javier Rodriguez (used to be best in world!)
- Sebastian Jimenez and Maria Inez Bogado
- Osvaldo Zotto and Lorena Ermocida
- Virginia Pandolfi and Fabian Peralta
- Daniela Arcuri (my teacher—mi maestra!)

APPENDIX G

Sample Lesson Plan

TangoFlow!® Class Preparation: Week 2.

Focus on use of the pelvic girdle. Sense “un-gluing” the pubic bone, and rotation of “back pocket” (glutes, intrinsic adductors, abductors and rotators) toward and away from central axis. This focus will strengthen the muscles of the pelvic floor, create flexibility in sacro-iliac and hip joints, and prepare for “leg wraps”—contra-lateral, crossing center line of the body. It will also challenge balance, by asking the body to “lose” balance and recover. This strengthens proprioception, which leads to increased self-efficacy, through felt sensation of being in control of one’s own body in space.

****Note: In TangoFlow!® simple combinations are taught with precision; then as the combinations repeat, students are encouraged to improvise, play, and “make it their own”...self-expression is happening throughout the class, along with technique.**

1. **Port-de-bras (arm exercises and plies).** Closed stance, 1st position feet. Arms pass through balletic 1st and 2nd position. Demi-plié with core contraction. Open 2nd position feet. Side stretch arms, demi-plié with core contraction. Rpt. right and left, whole sequence x8.
2. **Tendu Sequence.** Tango demi-plié (with spinal torsion). Sense “un-gluing” at pubic symphysis, with front extension into tendu. Collect, return to “Tango neutral” (modified balletic 1st position). Tendu back, sensing rotation of “back pocket” with extension. Collect to Tango neutral. Rpt. left and right x8.
3. **Embellished Tendu Sequence.** Tango step-taps, weight shift, take side step...Repeat tendu sequence, adding leg lift, front and back. Press ball of foot to floor, and practice spinal torsion with squat, front and back. Repeat front and back x8.
4. **BEGIN LEG WRAPS:** Replace tendus with Tango steps, front and back. Push through spine, feel connection to floor, sense connection from pubic bone to back pocket. Step front, leg wrap front. Hold wrap and pulse x4. Release wrap and step back. Cross center line to back, bend knee, rotate back pocket—hold foot and deepen stretch, optional. Repeat whole sequence x8.
5. **COLLECTION exercise** (modified to emphasize leg wrap). Start in wide stance 2nd position. Arms “grab 2 ropes” and “pull” body to collection. Weight on L foot. Small tendu front, to leg wrap. Release and pivot to rotated tendu back. Rpt. L and R x8. Return to wide 2nd. Collect and cross behind. Release down to squat with spinal torsion. Rise and cross behind, with spinal torsion. Release torsion with free leg kick to side. Rpt. sequence L and R x8, with collection each time.
6. **Cross-Front Combination.** Collect, cross-front R, emphasize leg wrap. Step F, foot connected to floor, rotate back pocket with pose or kick. Release, chasse through

center, rpt. whole sequence to L. Rpt. R and L x8. Side kicks with leg wrap and release, L and R x8. Side kicks with leg-wrap, cross-front step, and boleto preps with releve. Torsion “sentada,” and pivot to change direction. Rpt. whole sequence to other side.

7. **Bridge Combinations.** Martha Graham rumble; collect to neutral, release R front kick to back boleto, cross-body. Rpt to L; rpt. whole sequence x8. Shuffle x4, small degages with spinal torsion, grand circular boleto, and release to modern 2nd. Rpt. sequence L and R, x6. Martha Graham rumble, collect to neutral, release R foot to back boleto cross-body, sense engagement from pubic bone to rotation in back pocket. Rpt. sequence to L, and rpt. x8. Wide 2nd position, release scapula to fingertips, R, like wings; collect, cross-front and do Tango pas de bourre (“grapevine” with spinal torsion, cross front, side, cross back); on cross-back, take pose with spinal torsion; release torsion with side kick, initiate kick from pubic bone. Rpt. L and R x8. Rpt. whole sequence with “enrosque” pivot turns.
8. **Cross-behind combo.** From wide 2nd, collect to neutral, then cross back R. Sweep down with spinal torsion, x3; on 3rd sweep release and chasse to rpt. L. Rpt. sequence x8. From balletic 1st position, grand battements R x4, release to cross behind pose; point foot and do Martha Graham sit/stand, without torsion. Return to pose with spinal torsion, and release with spiral grand battement R. Rpt. L; rpt. x6.
9. **Tango Jazz Square sequence.** Cross F right, push off, collect; step back, push off, collect; side step, push off, collect; step F “through eye of needle” (focus on pubic bone), push off, collect. Rpt. whole sequence. Rpt. to left. Emphasize gliding walk of Tango: This is the Tango walk practice! Focus on leg wraps to front, in preparation to take front steps. Practice, play, encourage improvisation.
10. **Traditional Tango Sequence.** After completing jazz square sequence R and L, practice traditional tango “salon” style walk...walk F and B, pivot to change direction. Add simple embellishments and invite them to “play.” Try to synchronize and suggest that group is finding “connection” as you would with partner. Walking together, like “school of fish.”
11. **Cool down:** Wide stance rotated twist pose, with deep plies. Depending on limitations or injuries present, try a simple Graham-style release or fall combination, adding spinal torsion, and resolve into floor work. (Contracted leg lift, from seated 2nd position, with torsion, F and B.) Resolve to “Superman” sequence (modified “boat” pose, lifting limbs from floor in supine position, with strength from pubic bone to back pocket. No torsion in spine. In prone position, spinal “roll ups,” Graham-style, no torsion, roll back slowly, lower abdominal work. Finish with small roll ups to small sit-backs, only scapulae and knees come off the floor. Feel strength of this in pelvic floor and pubic bone.

12. ***Mindful Relaxation.*** Bend knees, let “fall” L and R. Use this motion to massage sacrum and s.i. joints. Feel release of back pocket, letting go of all “work.” Let knees straighten and relax legs completely. Feet ‘windshield wipers’ to release ankle joints and relax arches. Close with guided meditation on “letting go” of pelvic floor.

APPENDIX H

The Technique:

History of Argentine Tango and the 27 Principles of TangoFlow!®

The TangoFlow!® technique is a system of expressive dance and conditioning exercises, which I developed initially as a means of training the body to dance Argentine Tango. Though focused on the fundamentals of Tango dance technique, TangoFlow!® also includes elements of ballet, modern dance and body awareness/somatic theory, most notably from the guided imagery practice known as ideokinesis. As detailed in Chapter III of this thesis, TangoFlow!® uses as its guiding principle a torsion-stretch of the entire spinal column, and a focus on moving each step outward from a “collected” vertical axis, the “center.” This technique is central to the look and geometry of Argentine Tango, as it allows the two partners to “swirl” around each other yet still face one another, with torsos connected. The circularity of Tango choreography is based on this spiral-axis, which requires a swiveling of the hips and lower back, in order to maintain the partnered connection. When practiced solo, this spiral motion of the spine holds unique potential, both for building balance and strength in intrinsic muscles of the core, and (as results of this research study would seem to indicate) for loosening “stuck,” painful memories (implicit or explicit) from those deep places where the body appears to have stored them.

In the vocabulary of Argentine Tango, this spiral motion of the spine is referred to as “dissociation,” because it works by asking the chest and pelvic girdle to move in opposite directions. (Indeed, many of the steps and combinations in Argentine Tango and TangoFlow!® involve a balancing of opposing forces.) The word “dissociation,” needless to say, holds

different connotations when used in a mental health context, thus for purposes of this study, I have substituted the term “torsion” of the spine—which in any case is a more accurate description of the dynamic principles involved. But terminology aside, this movement and focus on central axis must be mastered in order to dance Tango: The entire repertoire of Tango steps and improvisations spins out, literally, from this basic technique.

North Americans often find it difficult to grasp this idea of moving outward from a collected central axis: From our first baby steps in life, we are taught to step boldly with a confident stride—we reach out first with our extremities, rather than pushing languidly through the spine. The result is that we tend to “march” through space, each step devouring the pavement or floor; whereas the Argentine dancer moves from inside-out, connecting with the floor and surrendering to gravity, gliding with the grace of a cat. To me, these are somatic expressions of two very different cultural philosophies; TangoFlow!® really began as a way to help non-Argentine students of Tango overcome that cultural dissonance. Likewise, I sought to help non-Argentine dancers with another feature of the dance which often proves problematic, i.e., the “close embrace” stance. Tango, because of its unique cultural history, uses a chest-forward stance, where the two partners are essentially “glued” together from sternum to mid-thoracic cage; the feet remain farther apart, in order to execute intricate patterns and figures. Known as the “apillado,” or “A-stance,” this posture is the exact opposite of European ballroom dance styles, wherein the two partners’ feet are close together, while the torsos are held at a fixed distance apart—the so-called “frame.”

The spiral axis and embrace of Tango are physical manifestations of the cultural history of the dance. Tango emerged in the late nineteenth century, in the wild, bustling port-city of Buenos Aires (thus Tango is truly a one-city dance, coming not just from Argentina but unique

to its capital city, and nowhere else). The city at that time was populated overwhelmingly by immigrants, most of them European, and nearly all of them male, having arrived in this brave, new, resource-rich mecca to make their fame and fortune and support their impoverished families back home. A few surely prospered, but most lived solitary lives of hard labor, in the “barrios,” or communities of working men that became a cultural hallmark of the city. As British Tango dancer and author Christine Denniston (2007) writes, in her insightful book, *The Meaning of Tango*, the city of Buenos Aires was, at the turn of the 20th century, “a bizarre mixture of sophisticated European capital city and wild west frontier town” (p. 13).

It was in this cultural matrix, overshadowed by homesickness and the pervasive longing for connection, that the music, the dance, the elegant “machismo”—the whole unique pathos of Tango—was born. The music was a swirl of blended traditions: European, African, and Cuban “Habanera,” joined by haunting melodies on the bandoneon, the accordion-like, signature instrument of the Tango, invented in the 1850’s by Heinrich Band and brought by German immigrants to Argentina. Tango lyrics were both tragic and ironic, with a distinctive poetic style all their own. Written in the barrio street-slang known as “lunfardo,” the words were impenetrable to anyone outside this closed milieu, and recounted tales of hard-drinking, hard-fighting, gambling, dissolution, and lost love (Thompson, 2005, pp. 26-27). As Borges famously wrote, Tango “translates outrage into music” (Thompson, p. 3)—and into movement as well, as the vocabulary of Tango dance emerged, improvised and refined by men who were manual laborers, attuned to body-rhythms, inspired by dances they remembered and idealized from “home.” These men were not afraid of exertion, and were accustomed to demanding tasks that tested the limits of their physical capabilities; they lived in a rough and dangerous world, where nearly everyone “carried knives the size of short-swords in their belts” (Denniston, 2007, p. 14).

These men became the “tango hipsters” (Thompson, 2005, p. 4), who organized their lives around the dance. For, as Denniston so poignantly states, “the only place where they could express their softness—the sweet, tender part of their nature—was either in the arms of a prostitute, or dancing the Tango” (p. 14).

Quickly, Tango became the test of a man’s ability to attract and make himself pleasing to women—as well as a test of his skill, as he competed for the attentions of the very few women available to his acquaintance. If the movements of the dance derived in part from the pedestrian movements that defined men’s everyday, working lives, so too did their method of refining and teaching the dance to each other. Like the traditional apprenticeships that prepared them for skilled labor or trade, they evolved a similar system for training and handing down the vocabulary of this artform they were creating on the fly. Known as the “practica” system, Tango dance was essentially standardized by this ad hoc apprenticeship network, whereby men learned the dance from other men, organized via neighborhood “practicass” usually consisting—like trade unions, social clubs or guilds—of other men in one’s same line of work. You might join the butchers’ practica, the bakers’ practica, the practica for stone masons or workers in brick or steel; each guild developed slight stylistic differences, which they would embrace as a mark of pride. In these barrio practicas, a man would be taught first to follow, and would learn the follower’s role with precision for up to two years, before being deemed “ready” by the older men to proceed to learning to lead (Denniston, 2007, pp. 15-30).

Only after lengthy practice of both roles, would the man be taken to a “milonga,” or Tango social dance, to be introduced to the community of women dancers. Competition was fierce—and in more “polite,” social settings, a man often had to appeal not only to the dancer herself, but also to her ever-attendant mother or chaperone, before being accepted for a dance. In

all Tango settings—whether genteel social gathering, dance hall or brothel—it was always considered the man’s job to please the woman, show care and concern for her on the dance floor, and provide her with an enjoyable dance experience (meaning, in part, that she would be able to show off her own lines, technique, and embellishments or “adornos”—as the women, too, were teaching each other, honing the follower’s craft). Thus, while the close embrace stance and romantic energy of Tango may have begun in simple loneliness and need for human touch, the more stylized artistry that followed was born of competition to attract “good” partners (Denniston, pp. 15-25). While there may be an attitude of seduction, there is also intense concentration, a dialogue of movement, and a strong desire for both partners to create something beautiful, together, to behold. The focus is both internal and external, spiritual and carnal, sacred and profane; there is honest emotion in the dance, but there is also something exaggerated, surreal, plus an element of acting—visual “trickery,” and illusion. As a dear friend of mine—an Argentine native and well-known *tanguera*—once explained: “When I dance Tango with a man, he is not just a man, he is the archetype of Man, and I am the archetype of Woman. Even if we are strangers, while we are dancing, just for that one song, he is *my* man, and I am *his* woman...” (Pineira, 2009, personal communication).

From these origins, the history of Tango then becomes a legacy of the periodic, world-wide “dance craze,” whereby a sudden upsurge of interest in Tango prompts professional Tango dancers to travel abroad and teach, and the dance returns home changed by their experience. Tango has continued to evolve through the decades, growing more “ballroom”-esque and elegant during its “Golden Age” of the 1930’s and 40s; going underground altogether during the Argentine military junta’s repression in the 1970’s, and then experiencing a global renaissance in the 1980’s thanks to the popularity of touring Tango revues such as *Tango Argentino*, and later

Luis Brava's *Forever Tango*. These shows touched off a wave of Tango "scenes" in virtually every city where they appeared—so that, today, whether you find yourself in Hong Kong, Istanbul, Atlanta or Santa Fe, you can drop in to a *milonga* every night of the week, and probably see a familiar face.

Indeed, it was very much that sense of community, of immediate connection, that first drew me to Tango, and later became such a compelling force in my creation of TangoFlow!®. Certainly, the technique itself—the need for precise exercises to help students master the difficult movements of Tango—was a big part of the motivation, along with the physical conditioning benefits I had observed from practice of the spinal torsion, core muscle strength, and controlled use of the inner thigh muscles, shoulder girdle and feet, which Tango demands. But the more I learned about the history of Tango, the more I was convinced that the movements evolved in part as a form of "self-soothing" for the dancer. Yes, the impulse was to seek "connection" with a partner, but the more I practiced the more I realized and felt that the movements themselves, in all their spiraling intensity and beauty, are doing something internally healing within the dancer, as well. These movements are like medicine. When practiced with accuracy and precision, they can change your body, and your life.

From this realization, I began to identify the specific, core techniques of Argentine Tango that seemed to have the most therapeutic effect, internally, on the dancer. Combining this awareness with my knowledge of anatomy and the fundamentals of dance, in general, I was able to formulate 27 "principles" which have become the foundation of the technique of TangoFlow!®. Whether used for physical conditioning or therapeutic intervention, the benefits of TangoFlow!® derive from these basic principles:

TangoFlow!®: The 27 Principles

1. Tango builds core strength through *Axis, Alignment and Dissociation (torsion)*.
2. Two lines define the Tango stance: *belly button-to-tail and coccyx-to-sternum*.
3. Tango is a *Walking Dance*.
4. Tango walk starts with *freeing the pubic bone*.
5. Tango walk *engages the “Back Pocket”* to create rotation of the pelvis.
6. Each Tango step ends in *Collection*, building strength in the inner thighs.
7. All Tango steps move *Front, Back or Side*.
8. Tango movement is organized as a spiral around a *vertical center*.
9. Tango movement begins with *balance and weight shift*.
10. *Adornos*: Tango develops mindful use of the feet.
11. *Opposing Forces*: Tango engages diagonal lines of energy in the body.
12. *Cruzado*: Tango demands contra-lateral movement—crossing the center line.
13. *Boleo*: Key embellishment in Tango—a fast kick known as “*The Whip*.”
14. Tango movement is distinguished by action of the *Free Leg*.
15. *Spinal torsion* is the key to navigation in Tango.
16. The single most important technique for change of direction, in Tango, is *The Pivot*.
17. *Connection* in Tango leads to mindfulness and freedom of expression.
18. *Connection* in Tango emerges from the practice of “*Lead and Follow*.”
19. *El Abrazo*: Alignment in Tango is organized to support *The Embrace*.
20. *Body awareness* is the key to fluidity in Tango.
21. *El Yugo*: Shoulder Girdle in tango directs movement with action of a “*Yoke*.”
22. *Subtle Articulations* of intrinsic muscle define the “look” of Tango.
23. *Flow* is one of the two main expressional foundations of Tango.
24. *Musicality* is the other.
25. Tango energizes movement through use of the *Back Body*.
26. Tango grounds movement by lengthening in 2 directions: “*down*” and “*up*” *at the same time*.
27. Tango transforms through unity: *Opposing forces join in the sacred spiral*.