

# Somatic Psychology

An Overview

By Karen Roller, PhD, MFT



# The Study of the Embodied Soul

- Psychology = “the study of the soul”
- Somatic = “of and with the body”
- Somatic Psychology seeks to repair Descartes’ split of “Mind over Matter”, as the mind is inextricably linked with our physical matter.
- Our physical matter comes together at conception, develops into our nervous system, brain, and the body that will inhabit all of our developmental experiences, relational and otherwise, until death. The body carries implicit memory of experience.



# Historical and Cultural Roots of Somatic Psychology

- “The term *somatics* was first introduced into modern psychology by Thomas Hanna with his book *Bodies in Revolt*. The Greek word *soma* is defined as ‘the body experienced from within’ and reflects the efforts of modern bodywork practitioners and somatic movement therapists to move away from the dualistic splitting of mind from body, towards a model of integrated functioning of the whole person, psyche and soma. ‘The science of somatology...sees the human spirit as transparently embodied and sees the human body as transparently inspired. *Somatology* is the holistic science of human experience and behavior (Hanna, 1994:4).



# Historical and Cultural Roots

## continued

- “The science of somatology is not new: the term was first used during the late sixteenth century when the study of the human being was divided into psychology and somatology. In the late nineteenth century somatology was further divided into the separate studies of anatomy and physiology, structure and function becoming unnaturally divorced from each other, and the split between mind and body was thoroughly entrenched into scientific thinking. Hanna reintroduced the naming of the science of somatics into modern thinking in the 1970s, as a development within the field of humanistic psychology. However, as Johnson claims, somatic approaches being practised today all have roots that go back to a few individual researchers and practitioners of the mid-1800s” (Hartley, 2004, pg. 11).



# Historical and Cultural Roots

## continued

- “The holistic approach of somatology of course goes back much further than sixteenth-century Western science. It shares common origins with ancient healing, yoga, meditation, and shamanic practices from every part of the world, and every period of pre-modern civilization that we know of. These ancient traditions took the experience of the embodied self, the integrated bodymind, as fundamental to the practice of healing and disciplines of psychospiritual development. To go back to the roots of Western culture, the view of an integrated bodymind or psyche-soma was prevalent in the philosophy and healing practices of the ancient Greeks” (Hartley, pg. 11).



# Historical and Cultural Roots continued

- “Studying the sources, we see at once that incubation is for the cure of bodily illnesses alone. You might then ask what it has to do with psychotherapy. In the first place, the sources constantly emphasize that Asclepius cares for *soma kai psyche*, both body and mind- ‘body and soul’ is the corresponding Christian term; and second, bodily sickness and psychic defect were for the ancient world an inseparable unity. The saying *mens sana in corpore sano*, which is often misunderstood today, is a later formulation of this idea. Thus in antiquity the ‘symptom’ is an expression of the *sympatheia*, the *consensus*, the *cognatio* or *coniunctio naturae*, the point of correspondence between the outer and the inner” (Meier, 1989: iv).



# Pre-and Peri-Natal Psychology

- PPN Psychology does not start the study of human life at birth, but rather at conception (or pre-conception). The epigenetic (neurochemical, emotional, relational, nutritional, psychoactive, toxic, etc. ) markers that were present during gestation in mother's womb informed our epigenetic development, and shaped our early sensory experience .
- Mother's experience during pregnancy is the world of the developing fetus. The ova that eventually became half of your genetic inheritance was present in your mother during her gestation and birth, and was exposed to your maternal grandmother's pregnancy experience during your mother's gestation.
- We are not born a *tabula rasa*. Birth is a transitional experience between critical phases of our lifespan development.



# Attachment Theory

- As social mammals dependent on our caregivers to survive, we are wired to attach from gestation forward. PPN encourages mindful attachment to in-utero fetuses, as the neurochemical cascade experienced by mother is healthier for both mother and child when she is mitigating stress hormones (e.g., adrenaline, catecholemines, cortisol) with bonding and happy/hopeful hormones (e.g., oxytocin, serotonin, dopamine). It is also theorized that since the fetus is developing his or her sensory system and brain, the fetus' consciousness is developing too.
- We are not in a position as babies to determine whether or not our caregivers are worthy of our attachment. We attach to whom we are given. We are experience-based, sensory-based, relationship-based learners who are unable to regulate even our body temperature at birth. We depend on our caregivers to keep us within healthy limits physiologically, physically, emotionally. As newborns, our only defenses are closing our eyes, turning our heads, and dissociating from sensory experience.



# Neuroanthropology

- Like other species, we have evolved amidst threats and dangers that have conditioned us to behave in certain ways toward our young and caregivers. Young babies that keep their caregivers in close proximity stay more regulated in temperature, heart rate, blood pressure, and emotional arousal than babies who are isolated. This is a foundational requirement for the eventual development of secure attachment; attunement to the developmental needs of the young that keep the baby's arousal within tolerable limits.
- Baby-wearing, skin-to-skin contact, breast-feeding, and co-sleeping are some methods caregivers use to provide for baby's developmental needs. Babies keep caregivers close and borrow the organized adult nervous system to establish increasing self-regulation. PPN research encourages the use of these practices with a consistent caregiver where possible to keep baby's arousal within healthy limits. Limbic familiarity supports co-regulation. Left-eye contact creates co-regulation.
- When a young baby is more than 4 feet away from a caregiver, its heart rate becomes more irregular, leading to a distressed emotional state. If this lasts long enough to need discharge, the baby will call out to bring the caregiver into proximity. Babies can tolerate protest for only so long before the distress leads to over-arousal physiologically. Then they shut down the ANS for survival. Babies who are not able to count on co-regulation from their caregivers are at higher risk for eventual development of insecure attachment. Instead of learning to self-regulate (which is a mature, open-loop system which can include other people in it), they are conditioned to auto-regulate (which is a closed-loop system that cannot tolerate the unpredictability of other people).



# A Little Bit of Math

- Attachment literature suggests that  $\frac{2}{3}$  individuals benefit from secure (enough) attachment. About  $\frac{1}{3}$  meet criteria for some version of insecure attachment (ambivalent, avoidant, disorganized). Some toddlers who qualify for secure attachment were studied in their caregiver pairs: the caregivers were accurately attuning to their needs (physical, physiological, emotional, developmental)  $\frac{2}{5}$  times, while attempting to repair the  $\frac{3}{5}$  times they missed. In the insecure pairs, the attempt at repair of mis-attunement was not happening. It seems that the parents' aptitude of guessing at needs accurately enough, along with the child's felt sense of mattering enough to warrant do-overs, is what allows people to grow up more secure.
- Insecure attachment does not have to be a life sentence. If an individual suffering from insecure attachment is able to be in relationship (e.g., clinical, friendly, romantic, familial) with a securely-attached individual for 5 years, it is possible for that individual to meet criteria for "earned secure attachment". This speaker postulates that the ethical role of the clinician for most psychotherapy (as opposed to interviewing and counseling ) is to foster "earned secure attachment", which is tested for qualitatively by a cohesive narrative (which reflects internal emotional organization, having put the emotional charges of past mis-attunements etc. to rest).



# A Little Bit of Neuroscience

- In-utero development focuses on the reptilian and mammalian levels of the triune brain, leaving a good portion of the neocortex for development after birth. The real estate that allows for higher executive functioning does not develop until after birth, and not until we are about 26 years old do we have all that real estate. The patterns to which we are exposed in that very lengthy process determine how internally organized we become as an adult. Greater internal organization allows for greater emotional regulation, which allows for more satisfying relationships.
- Our early development after birth focuses on the limbic portion of the brain, housed in the right temporoparietal lobe. The right hemisphere of the developing brain can receive information re: how to regulate through the optic nerve, which crosses the corpus callosum and is exposed to the caregiver through the left eye. When the caregiver affords left-eye to left-eye contact with the baby, the two limbic systems come into attunement, and co-regulate. This practice, over time, allows the developing nervous system to have a template for self-regulation.



[Bruce Perry's images re: Brain Development](#)



# Developmental/Relational Trauma

- Since we depend on caregivers for everything until we are able to live independently, relationship affords a broad swath of opportunity for trauma (the body's natural response to an overwhelming situation). Neglect, emotional/physical/sexual abuse, and patterns of mis-attunement during critical developmental periods all overwhelm the developing individual and can lead to neurological, psychological, emotional symptoms.
- Trauma that happens in relationship is likely to be triggered in relationship, and needs corrective emotional experience in relationship to be discharged and healed. Trauma resolution includes physiological discharge of the neurochemistry of overwhelm (catecholemines, cortisol, adrenaline), in order for the stored survival energy to be released from the body. Only then can a neurochemical cascade of well-being (dopamine, serotonin, oxytocin) and ease become the new baseline for psychological development to occur.



# “Other” Trauma

- Single-incident shock trauma: a calamitous event typified by natural disaster, medical emergency, car accident, etc. Social mores tend to create few barriers to accurate empathy and emotional/physical support in these circumstances, so there is generally little shame re: large physiological and psychological reactions to these events. This “type” of trauma tends not to engender as many lasting symptoms effecting relationships as trauma which occurred within relationship, except for those with insecure attachment (as they cannot relax into social support as readily). Pre-existing insecure attachment, compounded by single-incident shock trauma, can lead to PTSD.
- Complex trauma: multiple occurrences, and/or multiple “types”, and/or compounded events; typified by losses associated with immigration, war, and other events that have both human and extra-relational stressors. Circumstances can make it difficult to identify the order of operations best followed to address the multiple events. Synergistic effect of stressors.



# Resilience

- Resilience is as natural to our inborn state as the experience of trauma in life. Resilience is correlated with attachment; highly secure individuals are quicker to bounce back from trauma than highly insecure individuals. The neuro-chemical arousal of distress lasts longer and creates more profound emotional dysregulation in insecure people than secure people.
- Resilience is fostered in strong social support networks, where one can maintain an “open-loop system” and receive acknowledgment, normalization, validation, and nervous-system to nervous-system regulation. Physiologically, emotionally resonating with a regulated individual helps settle the overwhelmed nervous system. Securely attached individuals allow for this readily, and in fact seek it out from generally trustworthy individuals on the whole.



# Somatic Interventions

- Including the body in therapeutic dialogue. Talking “through” pain rather than talking “about” pain. Referencing the client’s felt sensations, postures, movements, tension, and slowing down the verbal processing to make increased room for awareness of energy moving (or holding) in the body. Utilizing movement modalities, body-based modalities, and sensory awareness to access implicit memory and bring it into explicit awareness, so that stored experience can be completed and released. The practice is to let go of recorded experience that causes suffering, disconnection from self or others, or filters incoming data through the lens of the busy mind.
- Somatic practitioners increase awareness of body-based experience in themselves and clients via study, personal therapy, and expanding scope of practice through ongoing training. It is not necessary to utilize touch in many somatic modalities, thus it is not required to earn a license to touch for many somatic modalities. However, some somatic modalities do require a license to touch. Some somatic practitioners are not licensed psychotherapists, but have their own ethical guidelines to follow based on their training modality.



# Somatic Modalities:

## a preliminary, non-exhaustive list

- Accelerated Experiential-Dynamic Psychotherapy
- Adventure and Experiential Therapy
- Authentic Movement
- Bioenergetics
- Biofeedback
- Body Psychotherapy
- Body-mind Centering
- Bodydynamics
- Brain Gym
- Breathwork
- Chi Gong
- Chiropractic
- Continuum
- Cornell's Focusing
- Cranio-Sacral
- Dance Improv
- Dance Movement Therapy
- Deeksha
- Dialectical Behavioral Therapy
- Emotional Freedom Technique
- EMDR
- Equine-Facilitated Therapy
- Feldenkrais
- Gestalt Family Sculpting
- Hakomi
- HeartMath
- Ideokinesis
- Intensive Short-Term Dynamic Therapy
- Jin Shen Jitsu
- Massage
- Mindfulness-Based Stress Reduction
- Network Spinal Analysis
- Neurofeedback
- Osteopathy
- Prenatal exploration
- Reichian segment exploration
- Reiki
- Relational Somatic Psychotherapy
- Rolfing
- Sand Tray
- Sensory Awareness
- Somatic Experiencing
- Somatic Movement Therapy
- T'ai Chi
- Theraplay
- Traditional Chinese Medicine
- Trauma Releasing Exercises
- Watsu
- Yoga
- Zazen



# Sample Interventions for Talk Therapy

- **Questions:**

- Where do you feel that in your body?
- What kind of sensation is it?
- How big is (e.g., that tingling; the cramp; the pinch; the ache; the throbbing; the heavy stone, etc)?
- What is happening (e.g., along your spine, in your jaw, with your breath) as you relate that story today?
- How does that feel in your muscles/bones/joints/connective tissue, etc. right now?
- Can you make that sensation/movement bigger/smaller/louder/smoothen, etc?
- What happens when you breath into that (sensation)?
- What does that (sensation) need right now?
- If it were to speak, what would that (sensation/movement) say right now?
- What color would it be? What shape? How heavy? What sound would it make?
- What happens if you let it get as big as it wants to get? What happens if you slow it down?
- Where does that sensation/movement want to go right now?

- **Reflections:**

- Your hand (arm/foot/shoulder, etc) just did this (mirror back the movement) right now, while you were sharing that detail of the story.....
- You just took a really sharp/big/round breath when you shared that part of the story.
- That was a lot to hold (showing arms as if around a big beach ball).
- That was a big let-go (showing arms dropping big beach ball).
- I notice your face get really soft when you talk about (X).
- The corrugator muscles on your forehead furrow when you talk about (X).
- I notice your posture did this (mirror back) as you mentioned (X).
- It seems like your hands/feet/etc want to do (mirror back ) when you talk about this.
- I'm noticing my guts are getting tight/my breathing is getting shallow/my fists are clenched, etc when I hear this.
- (Non-verbal placement of hand over heart, belly, or other mirroring gesture, including exhale).
- Let's just sit with that for a moment, shall we? (Modeling time to digest what has been processed).



# References

- References
- Acceptance. (n.d.) *Princeton University*. Retrieved December 6, 2008, from dictionary.com website: <http://www.dictionary.reference.com/browse/acceptance>.
- 
- Agosinelli, S., Bid, C., Miles, P., Nayak, S., Shiflett, S.C. (2002). Effect of reiki treatments on patients in poststroke rehabilitation: a pilot study. *Journal of Alternative and Complimentary Medicine*, 8(6), 755.
- 
- Aickin, M., Elder, C., Elmer, P., Mist, S., Ritenbaugh, C., Schneider, J. & Zwickey, H. (2007). Randomized trial of two mind-body interventions for weight loss maintenance. *Journal of Alternative and Complimentary Medicine*, 13(1), 67-78.
- 
- Amini, F., Lannon, T., & Lewis, R. (2000). *A general theory of love*. New York: Vintage Books.
- 
- Anderson, R. (2005). Body intelligence scale. Retrieved on December 6, 2008, from <http://wellnessconsulting.org>.
- 
- Anderson, R. (2006). Body intelligence scale: defining and measuring the intelligence of the body. *The Humanistic Psychologist*, 34(4), 357-367. Lawrence Erlbaum Associates, Inc.
- 
- Andrews, H., Baker, A., Carrington, P., Polglase, K. & Wells, S. (2003). Evaluation of a meridian-based intervention, EFT, for reducing specific phobias of small animals. *Journal of Clinical Psychology*, 59(9), 943-966.
- 
- Anxiety. (n.d.) *Webster's Revised Unabridged Dictionary*. Retrieved on December 6, 2008, from <http://www.dictionary.reference.com/browse/anxiety>.
- 
- Aposhyan, S. (1999). *Natural intelligence: body-mind integration and human development*. Baltimore, MD: Williams and Williams.
- 
- Aposhyan, S. (2004). *Body-mind psychotherapy: principles, techniques, and practical applications*. NY, NY: W.W. Norton & Co.
- 
- Ardaugh, A. (2007). *Awakening into oneness*. Boulder, CO: Sounds True Publishing.
- 
- Astin, J., Ernst, E., Harkness, E. (2000). The efficacy of distant healing: a systematic review of randomized trials. *Annals of Internal Medicine*, 132, 903-910.
- 
- Auerbach, S., Gramling, S., & Rausch, S. (2006). Effects of a single session of large-group meditation and progressive muscle relaxation training on stress reduction, reactivity, and recovery. *International Journal of Stress Management*, 13(3), 273-290.
- Backonja, M., Davidson, R., Johnstone, T. & Salomos, T. (2004). Perceived controllability modulates the neural response to pain. *Journal of Neuroscience*. 24:7199-203.
- 
- Courtois, C. (2004). Complex trauma, complex reactions: assessment and treatment. *Psychotherapy: Theory, Research, Practice, Training*. 41(4) 412-425.
- 
- Cram, J. & Wirth, D. (1993). Multi-site electromyographic analysis of non-contact therapeutic touch. *International Journal of Psychosomatics*, 40(1-4), 47-55.
- 
- Cummings, C., & Fristad, M. (2007). Medications prescribed for children with mood disorders: effects of a family-based psychoeducation program. *Experimental and Clinical Psychopharmacology*, 15(6), 555-562.
- 
- Dalton, K., Davidson, R., Dolski, I., Jackson, D., Mueller, C., Nitschke, J., Rosenkranz, M., Ryff, C., Singer, B. & Urry, H. (2004). Making a life worth living: neural correlates of well-being. *Psychological Science*. 15: 367-72.
- 
- Daly, M., Garfield, R., Grant, R., Jaber, P., Madrid, P., Richard, G. (2008). Mental health services in Louisiana school-based health centers post-Hurricane Katrina and Rita. *Professional Psychology: Research and Practice*, 39(1), 45-51.
- 
- D'Amico, F., Gordon, M., Hudgens, D., Merenstein, J. (1998). The effects of therapeutic touch on patients with osteoarthritis of the knee. *Journal of Family Practice*, 47(4), 271-277.
- 
- D'Aquili, E., Newberg, A. & Rause, V. (2001). *Why god won't go away: brain science and the biology of belief*. NY, NY: Ballantine Books.
- 
- Davidson, R. (2001). The neural activity of emotion and affective style: prefrontal cortex and amygdala contributions. *Social Science Information*, 40.
- 
- Davidson, R. (2004). Well-being and affective style: neural substrates and biobehavioral correlates. *Philosophical Transactions of the Royal Society*, London. 359:1395-411.
- 
- Davidson, R., Greishar, L., Lutz, A., Rawlings, N. & Ricard, M. (2004). Long-term meditators self-induce high-amplitude gamma synchrony during mental practice. *Proceedings of the National Academy of Sciences*. 101:16369-73,
- 
- Davidson, R. & Irwin, W. (1999). The functional neuroanatomy of emotion and affective style. *Trends in Cognitive Science*, 3, 11-21.



# References

- Davidson, R., Jackson, D. & Kalin, N. (2000). Emotion, plasticity, context, and regulation; perspectives from affective neuroscience. *Psychological Bulletin*, 126(6), 890-909.
- 
- Davidson, R., Kalin, N., Kelley, A. & Shelton, S. (2001). The primate amygdala mediates acute fear but not the behavioral and physiological components of anxious temperament. *Journal of Neuroscience*, 21, 2067-2074.
- 
- Davis, M.K., Garske, J.P., and Martin, D.J. (2000). Relation of the therapeutic alliance with outcome and the other variables: a meta-analysis review. *Journal of Consulting and Clinical Psychology*, 68(3), 438-450.
- 
- Demerdzieva, A., and Pop-Jordanova, N. (2011). Alpha asymmetry in QEEG recordings in young patients with anxiety. *Prilozi*, 32(1): 229-44.
- 
- Distraction. (n.d.). *Princeton University*. Retrieved from dictionary.com website: <http://www.dictionary.reference.com/browse/distraction>.
- 
- Doidge, N. (2007). *The brain that changes itself*. NY, NY: Penguin.
- 
- Dressen, L.J., Singg, S. (1998). Effects of reiki on pain and selected affective and personality traits in mentally ill patients. *Subtle Energies*, 9 (1).
- 
- Duque, J.F., Egan, G., Lewis, D., Turner, R. (2009). Neuroanthropology: a humanistic science for the study of the culture-brain nexus. *Oxford University Press*, 5(2-3), 138-147.
- 
- Engebretson, J. & Wardell, D. (2001). Biological correlates of reiki touch healing. *Journal of Advanced Nursing*, 33(4), 439-445.
- 
- Fischer, P., Frey, D., & Greitmeyer, T. (2008). Self-regulation and selective exposure: The impact of depleted self-regulation resources on confirmatory information processing. *Journal of Personality and Social Psychology*, 94, 382-295.
- 
- Fischer, J.D. & Whitcher, S.J. (1979). Multidimensional reaction to therapeutic touch in a hospital setting. *Journal of Personality and Social Psychology*, 37(1), 87-96.
- 
- Fosha, D. (2000). *The transforming power of affect*. New York: Basic Books.
- Gagne, D. and Toye, R. (1994). The effects of therapeutic touch and relaxation therapy in reducing anxiety. *Psychiatric Nursing*, 8(3), 184-189.
- 
- Gendlin, E. (1982). *Focusing*. NY, NY: Bantam Dell.
- 
- Gerber, R. (2001). *Vibrational medicine*. Rochester, VT: Bear & Co. Publishing.
- 
- Glass, G.V., and Smith, M.L. (1977). Meta-analysis of psychotherapy outcome studies. *American Psychologist*, 32(9), 752-760.
- 
- Goldberg, S., Kerr, J., Main, M., Muir, R. (1995). Recent studies in attachment: overview, with selected implications for clinical work. Hillsdale, NJ: Analytic Press, Inc. 407-474.
- 
- Goleman, D. (1995). *Emotional intelligence*. NY, NY: Bantam Books.
- 
- Green, V. (2003). Emotional development in psychoanalysis: attachment theory and neuroscience. Hove, England: Brunner-Routledge.
- 
- Grossman, K., Grossman, K., & Waters, E. (2005). *Attachment from infancy to adulthood: the major longitudinal studies*. NY: Guilford Press.
- 
- Hall, J.R. & Snyder, S.M. (2006). A meta-analysis of quantitative EEG power associated with attention-deficit hyperactivity disorder. *Journal of Clinical Neurophysiology*, 23(5), 440-553.
- 
- Hardt, J.V. and Kamiya, J. (1978). Anxiety change through EEG alpha feedback seen only in high anxiety subjects. *Science*, 201,(4350):79-81.
- 
- Hartley, L. (2004). *Somatic psychology: body, mind and meaning*. London: Whurr Publishers.
- 
- Hassmen, P., Johansson, M. & Jouper, J. (2008). Acute effects of qigong exercise on mood and anxiety. *International Journal of Stress Management*, 15(2), 199-207.
- 
- Heidt, P. (1981). Effect of therapeutic touch on anxiety level of hospitalized patients. *Clinical Nursing Research*, 30(1), 32-37.
- 
- Heller, D. & Heller, L. (2004). Somatic experiencing in the treatment of automobile accident trauma. *US Association for Body Psychotherapy Journal*, 3(2), 42-52.



# References

- Holder, M. & Waite, L. (2003). Assessment of EFT: an alternative treatment for fear. *The Scientific Review of Mental Health Practice*, 2(1), 20-26.
- 
- Horvath, A.O. & Symonds, B.D. (1991). Relation between working alliance and outcome in psychotherapy: a meta-analysis. *Journal of Counseling Psychology*, 38(2), 139-149.
- 
- Hughes, J.R. (1994). *EEG in Clinical Practice*. Chicago, IL: Butterworth-Heinemann.
- 
- Hunt, H. (2007). "Dark nights of the soul": Phenomenology and neurocognition of spiritual suffering in mysticism and psychosis. *Review of General Psychology*, 11(3), 209-234.
- 
- <http://www.dadabhagwan.org>
- 
- <http://www.deekshadanger.weebly.com>
- 
- <http://www.deekshafire.com>
- 
- <http://www.dictionary.reference.com>
- 
- <http://www.energypsych.org>
- 
- <http://www.enlightened-spirituality.org>
- 
- <http://www.enlightenment-online.com>
- 
- <http://www.freewebs.com/dikshainfo>
- 
- <http://www.livinginjoy.com>
- 
- <http://www.medical-dictionary.thefreedictionary.com/free-floating+anxiety>
- 
- <http://www.onenessmovement.org>
- 
- <http://www.psycnet.apa.org>
- 
- <http://www.psyweb.com/glossary/ffanxiety.jsp>
- <http://www.sunyata.blogsome.com>
- 
- <http://www.webmd.com/anxiety-panic/guide/mental-health-anxiety-disorders>
- 
- Johnson, D. H. (Ed.). (1995). *Bone, breath, & gesture: practices of embodiment*. Berkeley, CA: North Atlantic Books.
- 
- Johnson, R. (2007, October). *The Embodied Socially-Conscious Practitioner*. Lecture for Santa Barbara Graduate Institute, Santa Barbara, CA.
- 
- Koopmann, B., Matsumoto, D., & Nezlek, J. (2007). Evidence for universality in phenomenological emotion response system coherence. *Emotion*, 7, 57-67.
- 
- Kramer, N. (1990). Comparison of therapeutic touch and casual touch in stress reduction of hospitalized children. *Pediatric Nursing*, 16(5), 483-485.
- 
- La Barre, F. (2001). *On moving and being moved: non-verbal behavior in clinical practice*. Hillsdale, NJ: The Analytic Press.
- 
- Laing, G. & Simington, J. (1993). Effects of Therapeutic Touch on anxiety in the institutionalized. *Clinical Nursing Research*, 2(4), 438-450.
- 
- Leitch, M. L. (2007). Somatic experiencing treatment with tsunami survivors in Thailand: Broadening the scope of early intervention. *Traumatology*, 13(3), 11-20.
- 
- Levine, P. (1997). *Waking the tiger*. Berkeley, CA: North Atlantic Press.
- 
- Macnaughton, I. (Ed.). (2004). *Body, breath & consciousness: a somatics anthology*. Berkeley, CA: North Atlantic Books.
- 
- Minton, K., Ogden, P., & Pain, C. (2006). *Trauma and the body: A Sensorimotor Approach to Psychotherapy*. New York: W. W. Norton & Co.



# References

- Moore, N.C. (2000). A review of EEG biofeedback treatment of anxiety disorders. *Clinical Electroencephalography*, 31(1): 1-6.
- 
- Neuroplasticity. (n.d.). Retrieved March 2, 2012 from <http://medterms.com/script/main/art.asp?articlekey=40362>.
- 
- Newberg, A. & Waldman, M. (2009). *How god changes your brain*. NY, NY: Ballantine.
- 
- Newberg, A. & Waldman, M. (2006). *Why we believe what we believe*. NY, NY: Free Press.
- 
- Newton, R. & Rudestam, K. (2007). *Surviving your dissertation: a comprehensive guide to content and process* (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage Publications.
- 
- O'Connor, P. & Vitale, A. (2006). The effect of Reiki on pain and anxiety in women with abdominal hysterectomies: a quasi-experimental pilot study. *Holistic Nurse Practitioner*, 20(6), 263-272.
- 
- Olson, M. & Sneed, N. (1995). Anxiety and therapeutic touch. *Issues in Mental Health*.
- 
- Olson, M. & Sneed, N. (1992). Therapeutic touch and post-hurricane Hugo stress. *Journal of Holistic Nursing*, 10(2), 120-136.
- 
- Oschman, J. (2000). *Energy medicine: The scientific basis*. New York: Churchill-Livingstone.
- 
- Oschman, J. (2004). *Energy medicine in therapeutics and human performance*. New York: Butterworth-Heinemann.
- 
- Perry, B. (1998). *Maltreated children: Experience, brain development, and the next generation*. New York: W.W. Norton & Co.
- 
- Porges, S. (1994). Orienting in a defensive world: Mammalian modifications of our evolutionary heritage: a polyvagal theory. *Psychophysiology*, 32, 301-318.
- 
- Prince, C. & Thompson, E.A. (2007). Measuring dimensions of body connection: body awareness and bodily dissociation. *Journal of Alternative and Complementary Medicine*, 13(9): 945-953.
- 
- Pulos, L., Swingle, M. & Swingle, P. (2005). Neurophysiological indicators of EFT treatment of PTS. *Journal of Subtle Energies and Energy Medicine*, 15, 72-86.
- 
- Quinn, J.F. (1993). Psychoimmunologic effects of therapeutic touch on practitioners and recent advances: a pilot study. *Advances in Nursing Sciences*, 15, 13-26.
- 
- Reich, W. (1973). *The function of the orgasm*. NY, NY: Farrar, Straus and Giroux.
- 
- Reich, W. (1987). *Character analysis*. NY, NY: Farrar, Straus and Giroux.
- 
- Reynolds, W. (1999). *Multidimensional anxiety questionnaire*. Lutz, FL: PAR, Inc.
- 
- Reynolds, W. (1999). *Multidimensional anxiety questionnaire: professional manual*. Lutz, FL: PAR, Inc.
- 
- Rothschild, B. (2000). *The body remembers: the psychophysiology of trauma and trauma treatment*. New York: W.W. Norton & Co.
- 
- Rothschild, B. (2006). *Help for the helper: the psychophysiology of compassion fatigue and vicarious trauma*. New York: W.W. Norton & Co.
- 
- Rowe, J. (2005). The effects of EFT on long-term psychological symptoms. *Counseling and Clinical Psychology Journal*, 2(3), 104-111.
- 
- Scaer, R. (2001). The neurophysiology of dissociation and chronic disease. *Applied Psychophysiology and Biofeedback*, 26(1), 73-91.
- 
- Schmidt, J., Shultz, J., & Steel, P. (2008). Refining the relationship between personality and subjective well-being. *Psychological Bulletin*, 134, 138-161.
- 
- Schore, A. (1994). *Affect regulation and the origin of the self*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- 
- Schore, A. (2003). *Affect dysregulation and disorders of the self*. New York: W. W. Norton & Co.
- 
- Schore, A. (2003). *Affect regulation and the repair of the self*. New York: W.W. Norton &



# References

- Selver, C. (1999). *Sensory awareness and our attitude towards life*. Mill Valley, CA: Sensory Awareness Foundation.
- 
- Shapiro, S., & Walsh, R. (2006). The meeting of meditative disciplines and Western psychology. *American Psychologist*, 61, 237-239.
- 
- Sieck, M. (Ed.). (2007). *Relational somatic psychotherapy*. San Bernadino, CA: Santa Barbara Graduate Institute.
- 
- Siegel, D. & Solomon, M. (2003). *Healing trauma: Attachment, mind, body, and brain*. New York: W.W. Norton & Co.
- 
- Suffering. (n.d.) *WordNet 3.0*. Retrieved December 6, 2008, from Dictionary.com website: <http://www.dictionary.reference.com/browse/suffering>.
- 
- Suffering. (n.d.) *Webster's Revised Unabridged Dictionary*. Retrieved December 6, 2008, from Dictionary.com website: <http://www.dictionary.reference.com/browse/suffering>.
- 
- Weaver, J. (2008). Sensory awareness-the heart of somatic psychotherapy: from sensory awareness to somatic psychotherapy. *Proceedings of the National Conference of the United States Association of Body Psychotherapy*. Philadelphia, PA.
- 
- Weaver, J. (2010). Somatic awareness/sensory awareness-a path of unraveling trauma. *Proceedings of the National Conference of the United States Association of Body Psychotherapy*. Boulder, CO.
- 
- Wetzel, W.S. (1989). Reiki healing: a physiologic perspective. *Journal of Holistic Nursing*, 7(1).
- 
- Windrider, K. (2006). *Deeksha: The fire from heaven*. San Francisco: Inner Ocean Publishing.
- 
- Witt, K. (2007, February). *Theories of Couples, Marriage, and Family Therapy*. Lecture presented at Santa Barbara Graduate Institute, Santa Barbara, CA.