

NOTES

You are being provided with a book chapter by chapter. I will request you to read the book for me after each chapter. After reading the chapter, 1. shorten the chapter to no less than 300 words and no more than 400 words. 2. Do not change the name, address, or any important nouns in the chapter. 3. Do not translate the original language. 4. Keep the same style as the original chapter, keep it consistent throughout the chapter. Your reply must comply with all four requirements, or it's invalid. I will provide the chapter now.

NOTES

PROLOGUE

1. V. Felitti, et al. "Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study." *American Journal of Preventive Medicine* 14, no. 4 (1998): 245–58.

CHAPTER 1: LESSONS FROM VIETNAM VETERANS

1. A. Kardiner, *The Traumatic Neuroses of War* (New York: P. Hoeber, 1941). Later I discovered that numerous textbooks on war trauma were published around both the First and Second World Wars, but as Abram Kardiner wrote in 1947: "The subject of neurotic disturbances consequent upon war has, in the past 25 years, been submitted to a good deal of capriciousness in public interest and psychiatric whims. The public does not sustain its interest, which was very great after World War I, and neither does psychiatry. Hence these conditions are not subject to continuous study."

2. *Op cit*, p. 7.

3. B. A. van der Kolk, "Adolescent Vulnerability to Post Traumatic Stress Disorder," *Psychiatry* 48 (1985): 365–70.

4. S. A. Haley, "When the Patient Reports Atrocities: Specific Treatment Considerations of the Vietnam Veteran," *Archives of General Psychiatry* 30 (1974): 191–96.

5. E. Hartmann, B. A. van der Kolk, and M. Olfield, "A Preliminary Study of the Personality of the Nightmare Sufferer," *American Journal of Psychiatry* 138 (1981): 794–97; B. A. van der Kolk, et al., "Nightmares and Trauma: Life-long and Traumatic Nightmares in Veterans," *American Journal of Psychiatry* 141 (1984): 187–90.

6. B. A. van der Kolk and C. Ducey, "The Psychological Processing of Traumatic Experience: Rorschach Patterns in PTSD," *Journal of Traumatic Stress* 2 (1989): 259–74.

7. Unlike normal memories, traumatic memories are more like fragments of sensations, emotions, reactions, and images, that keep getting reexperienced in the present. The studies of Holocaust memories at Yale by Dori Laub and Nanette C. Auerhahn, as well as Lawrence L. Langer's book *Holocaust Testimonies: The Ruins of Memory*, and, most of all, Pierre Janet's 1889, 1893, and 1905 descriptions of the nature of traumatic memories helped us organize what we saw. That work will be discussed in the memory chapter.

8. D. J. Henderson, "Incest," in *Comprehensive Textbook of Psychiatry*, eds. A. M. Freedman and H. I. Kaplan, 2nd ed. (Baltimore: Williams & Wilkins, 1974), 1536.

9. *Ibid*.

10. K. H. Seal, et al., "Bringing the War Back Home: Mental Health Disorders Among 103,788 U.S. Veterans Returning from Iraq and Afghanistan Seen at Department of Veterans Affairs Facilities," *Archives of Internal Medicine* 167, no. 5 (2007): 476–82; C. W. Hoge, J. L.

Auchterlonie, and C. S. Milliken, "Mental Health Problems, Use of Mental Health Services, and Attrition from Military Service After Returning from Deployment to Iraq or Afghanistan," *Journal of the American Medical Association* 295, no. 9 (2006): 1023–32.

11. D. G. Kilpatrick and B. E. Saunders, *Prevalence and Consequences of Child Victimization: Results from the National Survey of Adolescents: Final Report* (Charleston, SC: National Crime

Victims Research and Treatment Center, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina 1997).

12. U.S. Department of Health and Human Services, Administration on Children, Youth and Families, Child Maltreatment 2007, 2009. See also U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, Child Maltreatment 2010, 2011.

CHAPTER 2: REVOLUTIONS IN UNDERSTANDING MIND AND BRAIN

1. G. Ross Baker, et al., "The Canadian Adverse Events Study: The Incidence of Adverse Events among Hospital Patients in Canada," *Canadian Medical Association Journal* 170, no. 11 (2004): 1678–86; A. C. McFarlane, et al., "Posttraumatic Stress Disorder in a General Psychiatric Inpatient Population," *Journal of Traumatic Stress* 14, no. 4 (2001): 633–45; Kim T. Mueser, et al., "Trauma and Posttraumatic Stress Disorder in Severe Mental Illness," *Journal of Consulting and Clinical Psychology* 66, no. 3 (1998): 493; National Trauma Consortium, www.nationaltraumaconsortium.org.

2. E. Bleuler, *Dementia Praecox or the Group of Schizophrenias*, trans. J. Zinkin (Washington, DC: International Universities Press, 1950), p. 227.

3. L. Grinspoon, J. Ewalt, and R. I. Shader, "Psychotherapy and Pharmacotherapy in Chronic Schizophrenia," *American Journal of Psychiatry* 124, no. 12 (1968): 1645–52. See also L. Grinspoon, J. Ewalt, and R. I. Shader, *Schizophrenia: Psychotherapy and Pharmacotherapy* (Baltimore: Williams and Wilkins, 1972).

4. T. R. Insel, "Neuroscience: Shining Light on Depression," *Science* 317, no. 5839 (2007): 757–58. See also C. M. France, P. H. Lysaker, and R. P. Robinson, "The 'Chemical Imbalance' Explanation for Depression: Origins, Lay Endorsement, and Clinical Implications," *Professional Psychology: Research and Practice* 38 (2007): 411–20.

5. B. J. Deacon, and J. J. Lickel, "On the Brain Disease Model of Mental Disorders," *Behavior Therapist* 32, no. 6 (2009).

6. J. O. Cole, et al., "Drug Trials in Persistent Dyskinesia (Clozapine)," in *Tardive Dyskinesia, Research and Treatment*, ed. R. C. Smith, J. M. Davis, and W. E. Fahn (New York: Plenum, 1979).

7. E. F. Torrey, *Out of the Shadows: Confronting America's Mental Illness Crisis* (New York: John Wiley & Sons, 1997). However, other factors were equally important, such as President Kennedy's 1963 Community Mental Health Act, in which the federal government took over paying for mental health care and which rewarded states for treating mentally ill people in the community.

8. American Psychiatric Association, Committee on Nomenclature. Work Group to Revise DSM-III. *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Publishing, 1980).

9. S. F. Maier and M. E. Seligman, "Learned Helplessness: Theory and Evidence," *Journal of Experimental Psychology: General* 105, no. 1 (1976): 3. See also M. E. Seligman, S. F. Maier, and J. H. Geer, "Alleviation of Learned Helplessness in the Dog," *Journal of Abnormal Psychology* 73, no. 3 (1968): 256; and R. L. Jackson, J. H. Alexander, and S. F. Maier, "Learned Helplessness, Inactivity, and Associative Deficits: Effects of Inescapable Shock on Response Choice Escape Learning," *Journal of Experimental Psychology: Animal Behavior Processes* 6, no. 1 (1980): 1.

10. G. A. Bradshaw and A. N. Schore, "How Elephants Are Opening Doors: Developmental Neuroethology, Attachment and Social Context," *Ethology* 113 (2007): 426–36.

11. D. Mitchell, S. Koleszar, and R. A. Scopatz, "Arousal and T-Maze Choice Behavior in Mice: A Convergent Paradigm for Neophobia Constructs and Optimal Arousal Theory," *Learning and Motivation* 15 (1984): 287–301. See also D. Mitchell, E. W. Osborne, and M. W. O'Boyle, "Habituation Under Stress: Shocked Mice Show Nonassociative Learning in a T-maze," *Behavioral and Neural Biology* 43 (1985): 212–17.

12. B. A. van der Kolk, et al., "Inescapable Shock, Neurotransmitters and Addiction to Trauma: Towards a Psychobiology of Post Traumatic Stress," *Biological Psychiatry* 20 (1985): 414–25.

13. C. Hedges, *War Is a Force That Gives Us Meaning* (New York: Random House Digital, 2003).
14. B. A. van der Kolk, "The Compulsion to Repeat Trauma: Revictimization, Attachment and Masochism," *Psychiatric Clinics of North America* 12 (1989): 389–411.
15. R. L. Solomon, "The Opponent-Process Theory of Acquired Motivation: The Costs of Pleasure and the Benefits of Pain," *American Psychologist* 35 (1980): 691–712.
16. H. K. Beecher, "Pain in Men Wounded in Battle," *Annals of Surgery* 123, no. 1 (January 1946): 96–105.
17. B. A. van der Kolk, et al., "Pain Perception and Endogenous Opioids in Post Traumatic Stress Disorder," *Psychopharmacology Bulletin* 25 (1989): 117–21. See also R. K. Pitman, et al., "Naloxone Reversible Stress Induced Analgesia in Post Traumatic Stress Disorder," *Archives of General Psychiatry* 47 (1990): 541–47; and Solomon, "Opponent-Process Theory of Acquired Motivation."
18. J. A. Gray and N. McNaughton, "The Neuropsychology of Anxiety: Reprise," in *Nebraska Symposium on Motivation* (University of Nebraska Press, 1996), 43, 61–134. See also C. G. DeYoung and J. R. Gray, "Personality Neuroscience: Explaining Individual Differences in Affect, Behavior, and Cognition, in *The Cambridge Handbook of Personality Psychology* (2009), 323–46.
19. M. J. Raleigh, et al., "Social and Environmental Influences on Blood Serotonin Concentrations in Monkeys," *Archives of General Psychiatry* 41 (1984): 505–10.
20. B. A. van der Kolk, et al., "Fluoxetine in Post Traumatic Stress," *Journal of Clinical Psychiatry* (1994): 517–22.
21. For the Rorschach aficionados among you, it reversed the C + CF/FC ratio.
22. Grace E. Jackson, *Rethinking Psychiatric Drugs: A Guide for Informed Consent* (AuthorHouse, 2005); Robert Whitaker, *Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs and the Astonishing Rise of Mental Illness in America* (New York: Random House, 2011).
23. We will return to this issue in chapter 15, where we discuss our study comparing Prozac with EMDR, in which EMDR had better long-term results than Prozac in treating depression, at least in adult onset trauma.
24. J. M. Zito, et al., "Psychotropic Practice Patterns for Youth: A 10-Year Perspective," *Archives of Pediatrics and Adolescent Medicine* 157 (January 2003): 17–25.
25. http://en.wikipedia.org/wiki/List_of_largest_selling_pharmaceutical_products.
26. Lucette Lagnado, "U.S. Probes Use of Antipsychotic Drugs on Children," *Wall Street Journal*, August 11, 2013.
27. Katie Thomas, "J.&J. to Pay \$2.2 Billion in Risperdal Settlement," *New York Times*, November 4, 2013.
28. M. Olfson, et al., "Trends in Antipsychotic Drug Use by Very Young, Privately Insured Children," *Journal of the American Academy of Child & Adolescent Psychiatry* 49, no.1 (2010): 13–23.
29. M. Olfson, et al., "National Trends in the Outpatient Treatment of Children and Adolescents with Antipsychotic Drugs," *Archives of General Psychiatry* 63, no. 6 (2006): 679.
30. A. J. Hall, et al., "Patterns of Abuse Among Unintentional Pharmaceutical Overdose Fatalities," *Journal of the American Medical Association* 300, no. 22 (2008): 2613–20.
31. During the past decade two editors in chief of the most prestigious professional medical journal in the United States, the *New England Journal of Medicine*, Dr. Marcia Angell and Dr. Arnold Relman, have resigned from their positions because of the excessive power of the pharmaceutical industry over medical research, hospitals, and doctors. In a letter to the *New York Times* on December 28, 2004, Angell and Relman pointed out that the previous year one drug company had spent 28 percent of its revenues (more than \$6 billion) on marketing and administrative expenses, while spending only half that on research and development; keeping 30 percent in net income was typical for the pharmaceutical industry. They concluded: "The medical profession should break its dependence on the pharmaceutical industry and educate its own." Unfortunately, this is about as likely as politicians breaking free from the donors that

finance their election campaigns.

CHAPTER 3: LOOKING INTO THE BRAIN: THE NEUROSCIENCE REVOLUTION

1. B. Roozendaal, B. S. McEwen, and S. Chattarji, "Stress, Memory and the Amygdala," *Nature Reviews Neuroscience* 10, no. 6 (2009): 423–33.
2. R. Joseph, *The Right Brain and the Unconscious* (New York: Plenum Press, 1995).
3. The movie *The Assault* (based on the novel of the same name by Harry Mulisch), which won the Oscar for Best Foreign Language Film in 1986, is a good illustration of the power of deep early emotional impressions in determining powerful passions in adults.
4. This is the essence of cognitive behavioral therapy. See Foa, Friedman, and Keane, 2000 *Treatment Guidelines for PTSD*.

CHAPTER 4: RUNNING FOR YOUR LIFE: THE ANATOMY OF SURVIVAL

1. R. Sperry, "Changing Priorities," *Annual Review of Neuroscience* 4 (1981): 1–15.
2. A. A. Lima, et al., "The Impact of Tonic Immobility Reaction on the Prognosis of Posttraumatic Stress Disorder," *Journal of Psychiatric Research* 44, no. 4 (March 2010): 224–28.
3. P. Janet, *L'automatisme psychologique* (Paris: Félix Alcan, 1889).
4. R. R. Llinás, *I of the Vortex: From Neurons to Self* (Cambridge, MA: MIT Press, 2002). See also R. Carter and C. D. Frith, *Mapping the Mind* (Berkeley: University of California Press, 1998); R. Carter, *The Human Brain Book* (Penguin, 2009); and J. J. Ratey, *A User's Guide to the Brain* (New York: Pantheon Books, 2001), 179.
5. B. D. Perry, et al., "Childhood Trauma, the Neurobiology of Adaptation, and Use Dependent Development of the Brain: How States Become Traits," *Infant Mental Health Journal* 16, no. 4 (1995): 271–91.
6. I am indebted to my late friend David Servan-Schreiber, who first made this distinction in his book *The Instinct to Heal*.
7. E. Goldberg, *The Executive Brain: Frontal Lobes and the Civilized Mind* (London, Oxford University Press, 2001).
8. G. Rizzolatti and L. Craighero "The Mirror-Neuron System," *Annual Review of Neuroscience* 27 (2004): 169–92. See also M. Iacoboni, et al., "Cortical Mechanisms of Human Imitation," *Science* 286, no. 5449 (1999): 2526–28; C. Keysers and V. Gazzola, "Social Neuroscience: Mirror Neurons Recorded in Humans," *Current Biology* 20, no. 8 (2010): R353–54; J. Decety and P. L. Jackson, "The Functional Architecture of Human Empathy," *Behavioral and Cognitive Neuroscience Reviews* 3 (2004): 71–100; M. B. Schippers, et al., "Mapping the Information Flow from One Brain to Another During Gestural Communication," *Proceedings of the National Academy of Sciences of the United States of America* 107, no. 20 (2010): 9388–93; and A. N. Meltzoff and J. Decety, "What Imitation Tells Us About Social Cognition: A Rapprochement Between Developmental Psychology and Cognitive Neuroscience," *Philosophical Transactions of the Royal Society, London* 358 (2003): 491–500.
9. D. Goleman, *Emotional Intelligence* (New York: Random House, 2006). See also V. S. Ramachandran, "Mirror Neurons and Imitation Learning as the Driving Force Behind 'the Great Leap Forward' in Human Evolution," *Edge* (May 31, 2000), <http://edge.org/conversation/mirror-neurons-and-imitation-learning-as-the-driving-force-behind-the-great-leap-forward-in-human-evolution> (retrieved April 13, 2013).
10. G. M. Edelman, and J. A. Gally, "Reentry: A Key Mechanism for Integration of Brain Function," *Frontiers in Integrative Neuroscience* 7 (2013).
11. J. LeDoux, "Rethinking the Emotional Brain," *Neuron* 73, no. 4 (2012): 653–76. See also J. S. Feinstein, et al., "The Human Amygdala and the Induction and Experience of Fear," *Current Biology* 21, no. 1 (2011): 34–38.
12. The medial prefrontal cortex is the middle part of the brain (neuroscientists call them "the midline structures"). This area of the brain comprises a conglomerate of related structures: the orbito-prefrontal cortex, the inferior and dorsal medial prefrontal cortex, and a large structure called the anterior cingulate, all of which are involved in monitoring the internal state of the organism and selecting the appropriate response. See, e.g., D. Diorio, V. Viau, and M. J. Meaney, "The Role of the Medial Prefrontal Cortex (Cingulate Gyrus) in the Regulation of

- Hypothalamic-Pituitary-Adrenal Responses to Stress,” *Journal of Neuroscience* 13, no. 9 (September 1993): 3839–47; J. P. Mitchell, M. R. Banaji, and C. N. Macrae, “The Link Between Social Cognition and Self-Referential Thought in the Medial Prefrontal Cortex,” *Journal of Cognitive Neuroscience* 17, no. 8. (2005): 1306–15; A. D’Argembeau, et al., “Valuing One’s Self: Medial Prefrontal Involvement in Epistemic and Emotive Investments in Self-Views,” *Cerebral Cortex* 22 (March 2012): 659–67; M. A. Morgan, L. M. Romanski, J. E. LeDoux, “Extinction of Emotional Learning: Contribution of Medial Prefrontal Cortex,” *Neuroscience Letters* 163 (1993):109–13; L. M. Shin, S. L. Rauch, and R. K. Pitman, “Amygdala, Medial Prefrontal Cortex, and Hippocampal Function in PTSD,” *Annals of the New York Academy of Sciences* 1071, no. 1 (2006): 67–79; L. M. Williams, et al., “Trauma Modulates Amygdala and Medial Prefrontal Responses to Consciously Attended Fear,” *Neuroimage*, 29, no. 2 (2006): 347–57; M. Koenig and J. Grafman, “Posttraumatic Stress Disorder: The Role of Medial Prefrontal Cortex and Amygdala,” *Neuroscientist* 15, no. 5 (2009): 540–48; and M. R. Milad, I. Vidal-Gonzalez, and G. J. Quirk, “Electrical Stimulation of Medial Prefrontal Cortex Reduces Conditioned Fear in a Temporally Specific Manner,” *Behavioral Neuroscience* 118, no. 2 (2004): 389.
13. B. A. van der Kolk, “Clinical Implications of Neuroscience Research in PTSD,” *Annals of the New York Academy of Sciences* 1071 (2006): 277–93.
14. P. D. MacLean, *The Triune Brain in Evolution: Role in Paleocerebral Functions* (New York, Springer, 1990).
15. Ute Lawrence, *The Power of Trauma: Conquering Post Traumatic Stress Disorder*, iUniverse, 2009.
16. Rita Carter and Christopher D. Frith, *Mapping the Mind* (Berkeley: University of California Press, 1998). See also A. Bechara, et al., “Insensitivity to Future Consequences Following Damage to Human Prefrontal Cortex,” *Cognition* 50, no. 1 (1994): 7–15; A. Pascual-Leone, et al., “The Role of the Dorsolateral Prefrontal Cortex in Implicit Procedural Learning,” *Experimental Brain Research* 107, no. 3 (1996): 479–85; and S. C. Rao, G. Rainer, and E. K. Miller, “Integration of What and Where in the Primate Prefrontal Cortex,” *Science* 276, no. 5313 (1997): 821–24.
17. H. S. Duggal, “New-Onset PTSD After Thalamic Infarct,” *American Journal of Psychiatry* 159, no. 12 (2002): 2113-a. See also R. A. Lanius, et al., “Neural Correlates of Traumatic Memories in Posttraumatic Stress Disorder: A Functional MRI Investigation,” *American Journal of Psychiatry* 158, no. 11 (2001): 1920–22; and I. Liberzon, et al., “Alteration of Corticothalamic Perfusion Ratios During a PTSD Flashback,” *Depression and Anxiety* 4, no. 3 (1996): 146–50.
18. R. Noyes Jr. and R. Kletti, “Depersonalization in Response to Life-Threatening Danger,” *Comprehensive Psychiatry* 18, no. 4 (1977): 375–84. See also M. Sierra, and G. E. Berrios, “Depersonalization: Neurobiological Perspectives,” *Biological Psychiatry* 44, no. 9 (1998): 898–908.
19. D. Church, et al., “Single-Session Reduction of the Intensity of Traumatic Memories in Abused Adolescents After EFT: A Randomized Controlled Pilot Study,” *Traumatology* 18, no. 3 (2012): 73–79; and D. Feinstein and D. Church, “Modulating Gene Expression Through Psychotherapy: The Contribution of Noninvasive Somatic Interventions,” *Review of General Psychology* 14, no. 4 (2010): 283–95. See also www.vetcases.com.

CHAPTER 5: BODY-BRAIN CONNECTIONS

1. C. Darwin, *The Expression of the Emotions in Man and Animals* (London: Oxford University Press, 1998).
2. *Ibid.*, 71.
3. *Ibid.*
4. *Ibid.*, 71–72.
5. P. Ekman, *Facial Action Coding System: A Technique for the Measurement of Facial Movement* (Palo Alto, CA: Consulting Psychologists Press, 1978). See also C. E. Izard, *The Maximally Discriminative Facial Movement Coding System (MAX)* (Newark, DE: University of Delaware

Instructional Resource Center, 1979).

6. S. W. Porges, *The Polyvagal Theory: Neurophysiological Foundations of Emotions, Attachment, Communication, and Self-Regulation*, Norton Series on Interpersonal Neurobiology (New York: WW Norton & Company, 2011).

7. This is Stephen Porges's and Sue Carter's name for the ventral vagal system.

http://www.pesi.com/bookstore/A_Neural_Love_Code__The_Body_s_Need_to_Engage_and_Bond-details.aspx

8. S. S. Tomkins, *Affect, Imagery, Consciousness* (vol. 1, *The Positive Affects*) (New York: Springer, 1962); S. S. Tomkin, *Affect, Imagery, Consciousness* (vol. 2, *The Negative Affects*) (New York: Springer, 1963).

9. P. Ekman, *Emotions Revealed: Recognizing Faces and Feelings to Improve Communication and Emotional Life* (New York: Macmillan, 2007); P. Ekman, *The Face of Man: Expressions of Universal Emotions in a New Guinea Village* (New York: Garland STPM Press, 1980).

10. See, e.g., B. M. Levinson, "Human/Companion Animal Therapy," *Journal of Contemporary Psychotherapy* 14, no. 2 (1984): 131–44; D. A. Willis, "Animal Therapy," *Rehabilitation Nursing* 22, no. 2 (1997): 78–81; and A. H. Fine, ed., *Handbook on Animal-Assisted Therapy: Theoretical Foundations and Guidelines for Practice* (Academic Press, 2010).

11. P. Ekman, R. W. Levenson, and W. V. Friesen, "Autonomic Nervous System Activity Distinguishes Between Emotions," *Science* 221 (1983): 1208–10.

12. J. H. Jackson, "Evolution and Dissolution of the Nervous System," in *Selected Writings of John Hughlings Jackson*, ed. J. Taylor (London: Staples Press, 1958), 45–118.

13. Porges pointed out this pet store analogy to me.

14. S. W. Porges, J. A. Doussard-Roosevelt, and A. K. Maiti, "Vagal Tone and the Physiological Regulation of Emotion," in *The Development of Emotion Regulation: Biological and Behavioral Considerations*, ed. N. A. Fox, *Monographs of the Society for Research in Child Development*, vol. 59 (2–3, serial no. 240) (1994), 167–86. <http://www.amazon.com/The-Development-Emotion-Regulation-Considerations/dp/0226259404>.

15. V. Felitti, et al., "Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study," *American Journal of Preventive Medicine* 14, no. 4 (1998): 245–58.

16. S. W. Porges, "Orienting in a Defensive World: Mammalian Modifications of Our Evolutionary Heritage: A Polyvagal Theory," *Psychophysiology* 32 (1995): 301–18.

17. B. A. Van der Kolk, "The Body Keeps the Score: Memory and the Evolving Psychobiology of Posttraumatic Stress," *Harvard Review of Psychiatry* 1, no. 5 (1994): 253–65.

CHAPTER 6: LOSING YOUR BODY, LOSING YOUR SELF

1. K. L. Walsh, et al., "Resiliency Factors in the Relation Between Childhood Sexual Abuse and Adulthood Sexual Assault in College-Age Women," *Journal of Child Sexual Abuse* 16, no. 1 (2007): 1–17.

2. A. C. McFarlane, "The Long-Term Costs of Traumatic Stress: Intertwined Physical and Psychological Consequences," *World Psychiatry* 9, no. 1 (2010): 3–10.

3. W. James, "What Is an Emotion?" *Mind* 9: 188–205.

4. R. L. Bluhm, et al., "Alterations in Default Network Connectivity in Posttraumatic Stress Disorder Related to Early-Life Trauma," *Journal of Psychiatry & Neuroscience* 34, no. 3 (2009): 187. See also J. K. Daniels, et al., "Switching Between Executive and Default Mode Networks in Posttraumatic Stress Disorder: Alterations in Functional Connectivity," *Journal of Psychiatry & Neuroscience* 35, no. 4 (2010): 258.

5. A. Damasio, *The Feeling of What Happens: Body and Emotion in the Making of Consciousness* (New York: Harcourt Brace, 1999). Damasio actually says, "Consciousness was invented so that we could know life", p. 31.

6. Damasio, *Feeling of What Happens*, p. 28.

7. *Ibid.*, p. 29.

8. A. Damasio, *Self Comes to Mind: Constructing the Conscious Brain* (New York, Random House Digital, 2012), 17.

9. Damasio, *Feeling of What Happens*, p. 256.
10. Antonio R. Damasio, et al., "Subcortical and Cortical Brain Activity During the Feeling of Self-Generated Emotions." *Nature Neuroscience* 3, vol. 10 (2000): 1049–56.
11. A. A. T. S. Reinders, et al., "One Brain, Two Selves," *NeuroImage* 20 (2003): 2119–25. See also E. R. S. Nijenhuis, O. Van der Hart, and K. Steele, "The Emerging Psychobiology of Trauma-Related Dissociation and Dissociative Disorders," in *Biological Psychiatry*, vol. 2., eds. H. A. H. D'Haenen, J. A. den Boer, and P. Willner (West Sussex, UK: Wiley 2002), 1079–198; J. Parvizi and A. R. Damasio, "Consciousness and the Brain Stem," *Cognition* 79 (2001): 135–59; F. W. Putnam, "Dissociation and Disturbances of Self," in *Dysfunctions of the Self*, vol. 5, eds. D. Cicchetti and S. L. Toth (New York: University of Rochester Press, 1994), 251–65; and F. W. Putnam, *Dissociation in Children and Adolescents: A Developmental Perspective* (New York: Guilford, 1997).
12. A. D'Argembeau, et al., "Distinct Regions of the Medial Prefrontal Cortex Are Associated with Self-Referential Processing and Perspective Taking," *Journal of Cognitive Neuroscience* 19, no. 6 (2007): 935–44. See also N. A. Farb, et al., "Attending to the Present: Mindfulness Meditation Reveals Distinct Neural Modes of Self-Reference," *Social Cognitive and Affective Neuroscience* 2, no. 4 (2007): 313–22; and B. K. Hölzel, et al., "Investigation of Mindfulness Meditation Practitioners with Voxel-Based Morphometry," *Social Cognitive and Affective Neuroscience* 3, no. 1 (2008): 55–61.
13. P. A. Levine, *Healing Trauma: A Pioneering Program for Restoring the Wisdom of Your Body* (Berkeley: North Atlantic Books, 2008); and P. A. Levine, *In an Unspoken Voice: How the Body Releases Trauma and Restores Goodness* (Berkeley: North Atlantic Books, 2010).
14. P. Ogden and K. Minton, "Sensorimotor Psychotherapy: One Method for Processing Traumatic Memory," *Traumatology* 6, no. 3 (2000): 149–73; and P. Ogden, K. Minton, and C. Pain, *Trauma and the Body: A Sensorimotor Approach to Psychotherapy*, Norton Series on Interpersonal Neurobiology (New York: WW Norton & Company, 2006).
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CHAPTER 7: GETTING ON THE SAME WAVELENGTH, ATTACHMENT AND ATTUNEMENT

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CHAPTER 8: TRAPPED IN RELATIONSHIPS: THE COST OF ABUSE AND NEGLECT

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CHAPTER 9: WHAT’S LOVE GOT TO DO WITH IT?

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20. Population attributable risk: the proportion of a problem in the overall population whose problems can be attributed to specific risk factors.

21. National Cancer Institute, “Nearly 800,000 Deaths Prevented Due to Declines in Smoking” (press release), March 14, 2012, available at <http://www.cancer.gov/newscenter/newsfromnci/2012/TobaccoControlCISNET>.

CHAPTER 10: DEVELOPMENTAL TRAUMA: THE HIDDEN EPIDEMIC

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3. R. Yehuda, et al., “Putative Biological Mechanisms for the Association Between Early Life Adversity and the Subsequent Development of PTSD,” *Psychopharmacology* 212, no. 3 (October 2010): 405–417; K. C. Koenen, “Genetics of Posttraumatic Stress Disorder: Review and Recommendations for Future Studies,” *Journal of Traumatic Stress* 20, no. 5 (October 2007): 737–50; M. W. Gilbertson, et al., “Smaller Hippocampal Volume Predicts Pathologic Vulnerability to Psychological Trauma,” *Nature Neuroscience* 5 (2002): 1242–47.

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8. There now is voluminous evidence that life experiences of all sorts changes gene expression. Some examples are: D. Mehta et al., “Childhood Maltreatment Is Associated with Distinct Genomic and Epigenetic Profiles in Posttraumatic Stress Disorder,” *Proceedings of the National Academy of Sciences of the United States of America* 110, no. 20 (2013): 8302–7; P. O. McGowan, et al., “Epigenetic Regulation of the Glucocorticoid Receptor in Human Brain Associates with Childhood Abuse,” *Nature Neuroscience* 12, no. 3 (2009): 342–48; M. N.

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- N. Provençal, et al., "The Signature of Maternal Rearing in the Methylome in Rhesus Macaque Prefrontal Cortex and T Cells," *Journal of Neuroscience* 32, no. 44 (2012): 15626–42;
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9. C. S. Barr, et al., "The Utility of the Non-human Primate Model for Studying Gene by Environment Interactions in Behavioral Research," *Genes, Brain and Behavior* 2, no. 6 (2003): 336–40.
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15. Joseph Spinazzola, et al., "Survey Evaluates Complex Trauma Exposure, Outcome, and Intervention Among Children and Adolescents," *Psychiatric Annals* (2005).
16. Our work group consisted of Drs. Bob Pynoos, Frank Putnam, Glenn Saxe, Julian Ford, Joseph Spinazzola, Marylene Cloitre, Bradley Stolbach, Alexander McFarlane, Alicia Lieberman, Wendy D'Andrea, Martin Teicher, and Dante Cicchetti.
17. The proposed criteria for Developmental Trauma Disorder can be found in the Appendix.
18. <http://www.traumacenter.org/products/instruments.php>.

19. Read more about Sroufe at www.cehd.umn.edu/icd/people/faculty/cpsy/sroufe.html and more about the Minnesota Longitudinal Study of Risk and Adaptation and its publications at <http://www.cehd.umn.edu/icd/research/parent-child/> and <http://www.cehd.umn.edu/icd/research/parent-child/publications/>. See also L. A. Sroufe and W. A. Collins, *The Development of the Person: The Minnesota Study of Risk and Adaptation from Birth to Adulthood* (New York: Guilford Press, 2009); and L. A. Sroufe, "Attachment and Development: A Prospective, Longitudinal Study from Birth to Adulthood," *Attachment & Human Development* 7, no. 4 (2005): 349–67.
20. L. A. Sroufe, *The Development of the Person: The Minnesota Study of Risk and Adaptation from Birth to Adulthood* (New York: Guilford Press, 2005). Harvard researcher Karlen Lyons-Ruth had similar findings in a sample of children she followed for about eighteen years: Disorganized attachment, role reversal, and lack of maternal communication at age three were the greatest predictors of children being part of the mental health or social service system at age eighteen.
21. D. Jacobvitz and L. A. Sroufe, "The Early Caregiver-Child Relationship and Attention-Deficit Disorder with Hyperactivity in Kindergarten: A Prospective Study," *Child Development* 58, no. 6 (December 1987): 1496–504.
22. G. H. Elder Jr., T. Van Nguyen, and A. Caspi, "Linking Family Hardship to Children's Lives," *Child Development* 56, no. 2 (April 1985): 361–75.
23. For children who were physically abused, the chance of being diagnosed with conduct disorder or oppositional defiant disorder went up by a factor of three. Neglect or sexual abuse doubled the chance of developing an anxiety disorder. Parental psychological unavailability or sexual abuse doubled the chance of later developing PTSD. The chance of receiving multiple diagnoses was 54 percent for children who suffered neglect, 60 percent for physical abuse, and 73 percent for both sexual abuse.
24. This was a quote based on the work of Emmy Werner, who has studied 698 children born on the island of Kauai for forty years, starting in 1955. The study showed that most children who grew up in unstable households grew up to experience problems with delinquency, mental and physical health, and family stability. One-third of all high-risk children displayed resilience and developed into caring, competent, and confident adults. Protective factors were 1. being an appealing child, 2. a strong bond with a nonparent caretaker (such as an aunt, a babysitter, or a teacher) and strong involvement in church or community groups. E. E. Werner and R. S. Smith, *Overcoming the Odds: High Risk Children from Birth to Adulthood* (Ithaca and London: Cornell University Press, 1992).
25. P. K. Trickett, J. G. Noll, and F. W. Putnam, "The Impact of Sexual Abuse on Female Development: Lessons from a Multigenerational, Longitudinal Research Study," *Development and Psychopathology* 23 (2011): 453–76. See also J. G. Noll, P. K. Trickett, and F. W. Putnam, "A Prospective Investigation of the Impact of Childhood Sexual Abuse on the Development of Sexuality," *Journal of Consulting and Clinical Psychology* 71 (2003): 575–86; P. K. Trickett, C. McBride-Chang, and F. W. Putnam, "The Classroom Performance and Behavior of Sexually Abused Females," *Development and Psychopathology* 6 (1994): 183–94; P. K. Trickett and F. W. Putnam, *Sexual Abuse of Females: Effects in Childhood* (Washington: National Institute of Mental Health, 1990–1993); F. W. Putnam and P. K. Trickett, *The Psychobiological Effects of Child Sexual Abuse* (New York: W. T. Grant Foundation, 1987).
26. In the sixty-three studies on disruptive mood regulation disorder, nobody asked anything about attachment, PTSD, trauma, child abuse, or neglect. The word "maltreatment" is used in passing in just one of the sixty-three articles. There is nothing about parenting, family dynamics, or about family therapy.
27. In the appendix at the back of the DSM, you can find the so-called V-codes, diagnostic labels without official standing that are not eligible for insurance reimbursement. There you will see listings for childhood abuse, childhood neglect, childhood physical abuse, and childhood sexual abuse.
28. *Ibid.*, p 121.

29. At the time of this writing, the DSM-5 is number seven on Amazon's best-seller list. The APA earned \$100 million on the previous edition of the DSM. The publication of the DSM constitutes, with contributions from the pharmaceutical industry and membership dues, the APA's major source of income.

30. Gary Greenberg, *The Book of Woe: The DSM and the Unmaking of Psychiatry* (New York: Penguin, 2013), 239.

31. In an open letter to the APA David Elkins, the chairman of one of the divisions of the American Psychological Association, complained that DSM-V was based on shaky evidence, carelessness with the public health, and the conceptualizations of mental disorder as primarily medical phenomena." His letter attracted nearly five thousand signatures. The president of the American Counseling Association sent a letter on behalf of its 115,000 DSM-buying members to the president of the APA, also objecting to the quality of the science behind DSM-5—and "urge(d) the APA to make public the work of the scientific review committee it had appointed to review the proposed changes, as well as to allow an evaluation of "all evidence and data by external, independent groups of experts."

32. Thomas Insel had formerly done research on the attachment hormone oxytocin in non-human primates.

33. National Institute of Mental Health, "NIMH Research Domain Criteria (RDoC),"

<http://www.nimh.nih.gov/research-priorities/rdoc/nimh-research-domain-criteria-rdoc.shtml>.

34. *The Development of the Person: The Minnesota Study of Risk and Adaptation from Birth to Adulthood* (New York: Guilford Press, 2005).

35. B. A. van der Kolk, "Developmental Trauma Disorder: Toward a Rational Diagnosis for Children with Complex Trauma Histories," *Psychiatric Annals* 35, no. 5 (2005): 401–8; W.

D'Andrea, et al., "Understanding Interpersonal Trauma in Children: Why We Need a

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(2012): 187–200. J. D. Ford, et al., "Clinical Significance of a Proposed Developmental Trauma Disorder Diagnosis: Results of an International Survey of Clinicians," *Journal of Clinical Psychiatry* 74, no. 8 (2013): 841–849. Up-to-date results from the Developmental Trauma Disorder field trial study are available on our Web site: www.traumacenter.org.

36. J. J. Heckman, "Skill Formation and the Economics of Investing in Disadvantaged Children,"

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37. D. Olds, et al., "Long-Term Effects of Nurse Home Visitation on Children's Criminal and Antisocial Behavior: 15-Year Follow-up of a Randomized Controlled Trial," *JAMA* 280, no. 14 (1998): 1238–44. See also J. Eckenrode, et al., "Preventing Child Abuse and Neglect with a

Program of Nurse Home Visitation: The Limiting Effects of Domestic Violence," *JAMA* 284, no. 11 (2000): 1385–91; D. I. Lowell, et al., "A Randomized Controlled Trial of Child FIRST: A

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"A Meta-Analysis of the Effects of Psychotherapy with Sexually Abused Children and Adolescents," *Clinical Psychology Review* 30, no. 5 (July 2010): 517–35; J. E. Taylor and S. T.

Harvey, "A Meta-Analysis of the Effects of Psychotherapy with Adults Sexually Abused in Childhood," *Clinical Psychology Review* 30, no. 6 (August 2010): 749–67; Olds, Henderson,

Chamberlin, & Tatelbaum, 1986; B. C. Stolbach, et al., "Complex Trauma Exposure and Symptoms in Urban Traumatized Children: A Preliminary Test of Proposed Criteria for

Developmental Trauma Disorder," *Journal of Traumatic Stress* 26, no. 4 (August 2013): 483–

91.

CHAPTER 11: UNCOVERING SECRETS: THE PROBLEM OF TRAUMATIC MEMORY

1. Unlike clinical consultations, in which doctor-patient confidentiality applies, forensic evaluations are public documents to be shared with lawyers, courts, and juries. Before doing a forensic evaluation I inform clients of that and warn them that nothing they tell me can be kept confidential.

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7. Hysteria as defined by Free Dictionary, <http://www.thefreedictionary.com/hysteria>.
8. A. Young, *The Harmony of Illusions: Inventing Post-traumatic Stress Disorder* (Princeton University Press, 1997). See also H. F. Ellenberger, *The Discovery of the Unconscious: The History and Evolution of Dynamic Psychiatry* (Basic Books, 2008).
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12. J. L. Herman, *Trauma and Recovery* (New York: Basic Books, 1997), 15.
13. A. Young, *Harmony of Illusions*. See also J. M. Charcot, *Clinical Lectures on Certain Diseases of the Nervous System*, vol. 3 (London: New Sydenham Society, 1888).
14. http://en.wikipedia.org/wiki/File:Jean-Martin_Charcot_chronophotography.jpg
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16. Onno van der Hart introduced me to the work of Janet and probably is the greatest living scholar of his work. I had the good fortune of closely collaborating with Onno on summarizing Janet's fundamental ideas. B. A. van der Kolk and O. van der Hart, "Pierre Janet and the Breakdown of Adaptation in Psychological Trauma," *American Journal of Psychiatry* 146 (1989): 1530–40; B. A. van der Kolk and O. van der Hart, "The Intrusive Past: The Flexibility

of Memory and the Engraving of Trauma,” *Imago* 48 (1991): 425–54.

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18. P. Janet, *Psychological Healing* (New York: Macmillan, 1925); p 660.

19. P. Janet, *L’Etat mental des hystériques*, 2nd ed. (Paris: Félix Alcan, 1911; repr. Marseille, France: Lafitte Reprints, 1983). P. Janet, *The Major Symptoms of Hysteria* (London and New York: Macmillan, 1907; repr. New York: Hafner, 1965); P. Janet, *L’evolution de la memoire et de la notion du temps* (Paris: A. Chahine, 1928).

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21. J. Breuer, and S. Freud, “The Physical Mechanisms of Hysterical Phenomena.”

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23. S. Freud, “Three Essays on the Theory of Sexuality,” in the *Standard Edition of the Complete Psychological Works of Sigmund Freud*, vol. 7 (London: Hogarth Press, 1962): 190: The reappearance of sexual activity is determined by internal causes and external contingencies . . . I shall have to speak presently of the internal causes; great and lasting importance attaches at this period to the accidental external [Freud’s emphasis] contingencies. In the foreground we find the effects of seduction, which treats a child as a sexual object prematurely and teaches him, in highly emotional circumstances, how to obtain satisfaction from his genital zones, a satisfaction which he is then usually obliged to repeat again and again by masturbation. An influence of this kind may originate either from adults or from other children. I cannot admit that in my paper on ‘The Aetiology of Hysteria’ (1896c) I exaggerated the frequency or importance of that influence, though I did not then know that persons who remain normal may have had the same experiences in their childhood, and though I consequently overrated the importance of seduction in comparison with the factors of sexual constitution and development. Obviously seduction is not required in order to arouse a child’s sexual life; that can also come about spontaneously from internal causes. S. Freud “Introductory Lectures in Psycho-analysis in *Standard Edition* (1916), 370: Phantasies of being seduced are of particular interest, because so often they are not phantasies but real memories.

24. S. Freud, *Inhibitions Symptoms and Anxiety* (1914), 150. See also Strachey, *Standard Edition of the Complete Psychological Works*.

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CHAPTER 12: THE UNBEARABLE HEAVINESS OF REMEMBERING

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5. Lord Southborough, *Report of the War Office Committee of Enquiry into “Shell-Shock”* (London: His Majesty’s Stationery Office, 1922).

6. Booker Prize winner Pat Barker has written a moving trilogy about the work of army

- psychiatrist W. H. R. Rivers; P. Barker, *Regeneration* (London: Penguin UK, 2008); P. Barker, *The Eye in the Door* (New York: Penguin, 1995); P. Barker, *The Ghost Road* (London: Penguin UK, 2008). Further discussions of the aftermath of World War I can be found in A. Young, *Harmony of Illusions*; and B. Shephard, *A War of Nerves, Soldiers and Psychiatrists 1914–1994* (London: Jonathan Cape, 2000).
7. J. H. Bartlett, *The Bonus March and the New Deal* (1937); R. Daniels, *The Bonus March: An Episode of the Great Depression* (1971).
 8. E. M. Remarque, *All Quiet on the Western Front*, trans. A. W. Wheen (London: GP Putnam's Sons, 1929).
 9. *Ibid.*, pp. 192–93.
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 14. G. Greer and J. Oxenbould, *Daddy, We Hardly Knew You* (London: Penguin, 1990).
 15. A. Kardiner and H. Spiegel, *War Stress and Neurotic Illness* (Oxford, England: Hoeber, 1947).
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CHAPTER 13: HEALING FROM TRAUMA: OWNING YOUR SELF

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[v=2.1.1&rf=http%3A%2F%2Fwww.nextgov.com%2Fhealth%2F2011%2F01%2Fmilitarys-drug-policy-threatens-troops-health-doctors-say%2F48321%2F](http://cdn.nextgov.com/nextgov/interstitial.html?v=2.1.1&rf=http%3A%2F%2Fwww.nextgov.com%2Fhealth%2F2011%2F01%2Fmilitarys-drug-policy-threatens-troops-health-doctors-say%2F48321%2F).

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CHAPTER 14: LANGUAGE: MIRACLE AND TYRANNY

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CHAPTER 15: LETTING GO OF THE PAST: EMDR

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CHAPTER 16: LEARNING TO INHABIT YOUR BODY: YOGA

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- CHAPTER 17: PUTTING THE PIECES TOGETHER: SELF-LEADERSHIP**
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9. M. Minsky, *The Society of Mind* (New York: Simon & Schuster, 1988), 51.
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17. Richard Schwartz, personal communication.
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21. In chapter 17, we saw how essential it is to cultivate a state of steady, calm self-observation, which IFS calls a state of "being in self." Dick Schwartz claims that with persistence anybody can achieve such a state, and indeed, I have seen him help very traumatized people do precisely that. I am not that skilled, and many of my most severely traumatized patients become frantic or spaced out when we approach upsetting subjects. Others feel so chronically out of control that it is difficult to find any abiding sense of "self." In most psychiatric settings people with these problems are given medications to stabilize them. Sometimes that works, but many patients lose their motivation and drive. In our randomized controlled study of neurofeedback, chronically traumatized patients had an approximately 30 percent reduction in PTSD symptoms and a significant improvement in measures of executive function and emotional control (van der Kolk et al., submitted 2014).
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