

- [9. Prefrontal cortex: Antonio Damasio, *Descartes' Error: Emotion, Reason and the Human Brain* (New York: Grosset/Putnam, 1994).

PART TWO: THE NATURE OF EMOTIONAL INTELLIGENCE

Chapter 3. When Smart Is Dumb

1. Jason H.'s story was reported in "Warning by a Valedictorian Who Faced Prison," in *The New York Times* (June 23, 1992).
2. One observer notes: Howard Gardner, "Cracking Open the IQ Box," *The American Prospect*, Winter 1995.
3. Richard Herrnstein and Charles Murray, *The Bell Curve: Intelligence and Class Structure in American Life* (New York: Free Press, 1994), p. 66.
4. George Vaillant, *Adaptation to Life* (Boston: Little, Brown, 1977). The average SAT score of the Harvard group was 584, on a scale where 800 is tops. Dr. Vaillant, now at Harvard University Medical School, told me about the relatively poor predictive value of test scores for life success in this group of advantaged men.
5. J. K. Felsman and G. E. Vaillant, "Resilient Children as Adults: A 40-Year Study," in E. J. Anderson and B. J. Cohler, eds., *The Invulnerable Child* (New York: Guilford Press, 1987).
6. Karen Arnold, who did the study of valedictorians with Terry Denny at the University of Illinois, was quoted in *The Chicago Tribune* (May 29, 1992).
7. Project Spectrum: Principal colleagues of Gardner in developing Project Spectrum were Mara Krechevsky and David Feldman.
8. I interviewed Howard Gardner about his theory of multiple intelligences in "Rethinking the Value of Intelligence Tests," in *The New York Times Education Supplement* (Nov. 3, 1986) and several times since.
9. The comparison of IQ tests and Spectrum abilities is reported in a chapter, coauthored with Mara Krechevsky, in Howard Gardner, *Multiple Intelligences: The Theory in Practice* (New York: Basic Books, 1993).
10. The nutshell summary is from Howard Gardner, *Multiple Intelligences*, p. 9.
11. Howard Gardner and Thomas Hatch, "Multiple Intelligences Go to School," *Educational Researcher* 18, 8 (1989).
12. The model of emotional intelligence was first proposed in Peter Salovey and John D. Mayer, "Emotional intelligence," *Imagination, Cognition, and Personality* 9 (1990), pp. 185–211.
13. Practical intelligence and people skills: Robert J. Sternberg, *Beyond I.Q.* (New York: Cambridge University Press, 1985).
14. The basic definition of "emotional intelligence" is in Salovey and Mayer, "Emotional Intelligence," p. 189. Another early model of emotional intelligence is in Reuven Bar-On,

“The Development of a Concept of Psychological Well-Being,” Ph.D. dissertation, Rhodes University, South Africa, 1988.

15. IQ vs. emotional intelligence: Jack Block, University of California at Berkeley, unpublished manuscript, February, 1995. Block uses the concept “ego resilience” rather than emotional intelligence, but notes that its main components include emotional self-regulation, an adaptive impulse control, a sense of self-efficacy, and social intelligence. Since these are main elements of emotional intelligence, ego resilience can be seen as a surrogate measure for emotional intelligence, much like SAT scores are for IQ. Block analyzed data from a longitudinal study of about a hundred men and women in their teen years and early twenties, and used statistical methods to assess the personality and behavioral correlates of high IQ independent of emotional intelligence, and emotional intelligence apart from IQ. There is, he finds, a modest correlation between IQ and ego resilience, but the two are independent constructs.

Chapter 4. Know Thyself

1. My usage of *self-awareness* refers to a self-reflexive, introspective attention to one’s own experience, sometimes called *mindfulness*.
2. See also: Jon Kabat-Zinn. *Wherever You Go, There You Are* (New York: Hyperion, 1994).
3. The observing ego: An insightful comparison of the psychoanalyst’s attentional stance and self-awareness appears in Mark Epstein’s *Thoughts Without a Thinker* (New York: Basic Books, 1995). Epstein notes that if this ability is cultivated deeply, it can drop the self-consciousness of the observer and become a “more flexible and braver ‘developed ego,’ capable of embracing all of life.”
4. William Styron, *Darkness Visible: A Memoir of Madness* (New York: Random House, 1990), p. 64.
5. John D. Mayer and Alexander Stevens, “An Emerging Understanding of the Reflective (Meta) Experience of Mood,” unpublished manuscript (1993).
6. Mayer and Stevens, “An Emerging Understanding.” Some of the terms for these emotional self-awareness styles are my own adaptations of their categories.
7. The intensity of emotions: Much of this work was done by or with Randy Larsen, a former graduate student of Diener’s now at the University of Michigan.
8. Gary, the emotionally bland surgeon, is described in Hillel I. Swiller, “Alexithymia: Treatment Utilizing Combined Individual and Group Psychotherapy,” *International Journal for Group Psychotherapy* 38, 1 (1988), pp. 47–61.
9. *Emotional illiterate* was the term used by M. B. Freedman and B. S. Sweet, “Some Specific Features of Group Psychotherapy,” *International Journal for Group Psychotherapy* 4 (1954), pp. 335–68.

10. The clinical features of alexithymia are described in Graeme J. Taylor, "Alexithymia: History of the Concept," paper presented at the annual meeting of the American Psychiatric Association in Washington, DC (May 1986).
11. The description of alexithymia is from Peter Sifneos, "Affect, Emotional Conflict, and Deficit: An Overview," *Psychotherapy-and-Psychosomatics* 56 (1991), pp. 116–22.
12. The woman who did not know why she was crying is reported in H. Warnes, "Alexithymia, Clinical and Therapeutic Aspects," *Psychotherapy-and-Psychosomatics* 46 (1986), pp. 96–104.
13. Role of emotions in reasoning: Damasio, *Descartes' Error*.
14. Unconscious fear: The snake studies are described in Kagan, *Galen's Prophecy*.

Chapter 5. Passion's Slaves

1. For details on the ratio of positive to negative feelings and well-being, see Ed Diener and Randy J. Larsen, "The Experience of Emotional Well-Being," in Michael Lewis and Jeannette Haviland, eds., *Handbook of Emotions* (New York: Guilford Press, 1993).
2. I interviewed Diane Tice about her research on how well people shake off bad moods in December 1992. She published her findings on anger in a chapter she wrote with her husband, Roy Baumeister, in Daniel Wegner and James Pennebaker, eds., *Handbook of Mental Controls: 5* (Englewood Cliffs, NJ: Prentice-Hall, 1993).
3. Bill collectors: also described in Arlie Hochschild, *The Managed Heart* (New York: Free Press, 1980).
4. The case against anger, and for self-control, is based largely on Diane Tice and Roy F. Baumeister, "Controlling Anger: Self-Induced Emotion Change," in Wegner and Pennebaker, *Handbook of Mental Control*. But see also Carol Tavris, *Anger: The Misunderstood Emotion* (New York: Touchstone, 1989).
5. The research on rage is described in Dolf Zillmann, "Mental Control of Angry Aggression," in Wegner and Pennebaker, *Handbook of Mental Control*.
6. The soothing walk: quoted in Tavris, *Anger: The Misunderstood Emotion*, p. 135.
7. Redford Williams's strategies for controlling hostility are detailed in Redford Williams and Virginia Williams, *Anger Kills* (New York: Times Books, 1993).
8. Venting anger does not dispel it: see, for example, S. K. Mallick and B. R. McCandless, "A Study of Catharsis Aggression," *Journal of Personality and Social Psychology* 4 (1966). For a summary of this research, see Tavris, *Anger: The Misunderstood Emotion*.
9. When lashing out in anger is effective: Tavris, *Anger: The Misunderstood Emotion*.
10. The work of worrying: Elizabeth Roemer and Thomas Borkovec, "Worry: Unwanted Cognitive Activity That Controls Unwanted Somatic Experience," in Wegner and Pennebaker, *Handbook of Mental Control*.

11. Fear of germs: David Riggs and Edna Foa, "Obsessive-Compulsive Disorder," in David Barlow, ed., *Clinical Handbook of Psychological Disorders* (New York: Guilford Press, 1993).
12. The worried patient was quoted in Roemer and Borkovec, "Worry," p. 221.
13. Therapies for anxiety disorder: see, for example, David H. Barlow, ed., *Clinical Handbook of Psychological Disorders* (New York: Guilford Press, 1993).
14. Styron's depression: William Styron, *Darkness Visible: A Memoir of Madness* (New York: Random House, 1990).
15. The worries of the depressed are reported in Susan Nolen-Hoeksema, "Sex Differences in Control of Depression," in Wegner and Pennebaker, *Handbook of Mental Control*, p. 307.
16. Therapy for depression: K. S. Dobson, "A Meta-analysis of the Efficacy of Cognitive Therapy for Depression," *Journal of Consulting and Clinical Psychology* 57 (1989).
17. The study of depressed people's thought patterns is reported in Richard Wenzlaff, "The Mental Control of Depression," in Wegner and Pennebaker, *Handbook of Mental Control*.
18. Shelley Taylor et al, "Maintaining Positive Illusions in the Face of Negative Information," *Journal of Clinical and Social Psychology* 8 (1989).
19. The repressing college student is from Daniel A. Weinberger, "The Construct Validity of the Repressive Coping Style," in J. L. Singer, ed., *Repression and Dissociation* (Chicago: University of Chicago Press, 1990). Weinberger, who developed the concept of repressors in early studies with Gary F. Schwartz and Richard Davidson, has become the leading researcher on the topic.

Chapter 6. The Master Aptitude

1. The terror of the exam: Daniel Goleman, *Vital Lies, Simple Truths: The Psychology of Self-Deception* (New York: Simon and Schuster, 1985).
2. Working memory: Alan Baddeley, *Working Memory* (Oxford: Clarendon Press, 1986).
3. Prefrontal cortex and working memory: Patricia Goldman-Rakic, "Cellular and Circuit Basis of Working Memory in Prefrontal Cortex of Nonhuman Primates," *Progress in Brain Research*, 85, 1990; Daniel Weinberger, "A Connectionist Approach to the Prefrontal Cortex," *Journal of Neuropsychiatry* 5 (1993).
4. Motivation and elite performance: Anders Ericsson, "Expert Performance: Its Structure and Acquisition," *American Psychologist* (Aug. 1994).
5. Asian IQ advantage: Herrnstein and Murray, *The Bell Curve*.
6. IQ and occupation of Asian-Americans: James Flynn, *Asian-American Achievement Beyond IQ* (New Jersey: Lawrence Erlbaum, 1991).
7. The study of delay of gratification in four-year-olds was reported in Yuichi Shoda, Walter Mischel, and Philip K. Peake, "Predicting Adolescent Cognitive and Self-regulatory Competencies From Preschool Delay of Gratification," *Developmental Psychology*, 26, 6

(1990), pp. 978–86.

8. SAT scores of impulsive and self-controlled children: The analysis of SAT data was done by Phil Peake, a psychologist at Smith College.
9. IQ vs. delay as predictors of SAT scores: personal communication from Phil Peake, psychologist at Smith College, who analyzed the SAT data in Walter Mischel's study of delay of gratification.
10. Impulsivity and delinquency: See the discussion in: Jack Block, "On the Relation Between IQ, Impulsivity, and Delinquency," *Journal of Abnormal Psychology* 104 (1995).
11. The worried mother: Timothy A. Brown et al., "Generalized Anxiety Disorder," in David H. Barlow, ed., *Clinical Handbook of Psychological Disorders* (New York: Guilford Press, 1993).
12. Air traffic controllers and anxiety: W. E. Collins et al., "Relationships of Anxiety Scores to Academy and Field Training Performance of Air Traffic Control Specialists," *FAA Office of Aviation Medicine Reports* (May 1989).
13. Anxiety and academic performance: Bettina Seipp, "Anxiety and Academic Performance: A Meta-analysis," *Anxiety Research* 4, 1 (1991).
14. Worriers: Richard Metzger et al., "Worry Changes Decision-making: The Effects of Negative Thoughts on Cognitive Processing," *Journal of Clinical Psychology* (Jan. 1990).
15. Ralph Haber and Richard Alpert, "Test Anxiety," *Journal of Abnormal and Social Psychology* 13 (1958).
16. Anxious students: Theodore Chapin, "The Relationship of Trait Anxiety and Academic Performance to Achievement Anxiety," *Journal of College Student Development* (May 1989).
17. Negative thoughts and test scores: John Hunsley, "Internal Dialogue During Academic Examinations," *Cognitive Therapy and Research* (Dec. 1987).
18. The internists given a gift of candy: Alice Isen et al., "The Influence of Positive Affect on Clinical Problem Solving," *Medical Decision Making* (July-Sept. 1991).
19. Hope and a bad grade: C. R. Snyder et al., "The Will and the Ways: Development and Validation of an Individual-Differences Measure of Hope," *Journal of Personality and Social Psychology* 60, 4 (1991), p. 579.
20. I interviewed C. R. Snyder in *The New York Times* (Dec. 24, 1991).
21. Optimistic swimmers: Martin Seligman, *Learned Optimism* (New York: Knopf, 1991).
22. A realistic vs. naive optimism: see, for example, Carol Whalen et al., "Optimism in Children's Judgments of Health and Environmental Risks," *Health Psychology* 13 (1994).
23. I interviewed Martin Seligman about optimism in *The New York Times* (Feb. 3, 1987).
24. I interviewed Albert Bandura about self-efficacy in *The New York Times* (May 8, 1988).
25. Mihaly Csikszentmihalyi, "Play and Intrinsic Rewards," *Journal of Humanistic Psychology* 15, 3 (1975).

26. Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience*, 1st ed. (New York: Harper and Row, 1990).
27. "Like a waterfall": *Newsweek* (Feb. 28, 1994).
28. I interviewed Dr. Csikszentmihalyi in *The New York Times* (Mar. 4, 1986).
29. The brain in flow: Jean Hamilton et al., "Intrinsic Enjoyment and Boredom Coping Scales: Validation With Personality, Evoked Potential and Attention Measures," *Personality and Individual Differences* 5, 2 (1984).
30. Cortical activation and fatigue: Ernest Hartmann, *The Functions of Sleep* (New Haven: Yale University Press, 1973).
31. I interviewed Dr. Csikszentmihalyi in *The New York Times* (Mar. 22, 1992).
32. The study of flow and math students: Jeanne Nakamura, "Optimal Experience and the Uses of Talent," in Mihaly Csikszentmihalyi and Isabella Csikszentmihalyi, *Optimal Experience: Psychological Studies of Flow in Consciousness* (Cambridge: Cambridge University Press, 1988).

Chapter 7. The Roots of Empathy

1. Self-awareness and empathy: see, for example, John Mayer and Melissa Kirkpatrick, "Hot Information-Processing Becomes More Accurate With Open Emotional Experience," University of New Hampshire, unpublished manuscript (Oct. 1994); Randy Larsen et al., "Cognitive Operations Associated With Individual Differences in Affect Intensity," *Journal of Personality and Social Psychology* 53 (1987).
2. Robert Rosenthal et al., "The PONS Test: Measuring Sensitivity to Nonverbal Cues," in P. McReynolds, ed., *Advances in Psychological Assessment* (San Francisco: Jossey-Bass, 1977).
3. Stephen Nowicki and Marshall Duke, "A Measure of Nonverbal Social Processing Ability in Children Between the Ages of 6 and 10," paper presented at the American Psychological Society meeting (1989).
4. The mothers who acted as researchers were trained by Marian Radke-Yarrow and Carolyn Zahn-Waxler at the Laboratory of Developmental Psychology, National Institute of Mental Health.
5. I wrote about empathy, its developmental roots, and its neurology in *The New York Times* (Mar. 28, 1989).
6. Instilling empathy in children: Marian Radke-Yarrow and Carolyn Zahn-Waxler, "Roots, Motives and Patterns in Children's Prosocial Behavior," in Ervin Staub et al., eds., *Development and Maintenance of Prosocial Behavior* (New York: Plenum, 1984).
7. Daniel Stern, *The Interpersonal World of the Infant* (New York: Basic Books, 1987), p. 30.
8. Stern, op. cit.
9. The depressed infants are described in Jeffrey Pickens and Tiffany Field, "Facial

Expressivity in Infants of Depressed Mothers,” *Developmental Psychology* 29, 6 (1993).

10. The study of violent rapists’ childhoods was done by Robert Prentky, a psychologist in Philadelphia.
11. Empathy in borderline patients: Lee C. Park et al., “Giftedness and Psychological Abuse in Borderline Personality Disorder: Their Relevance to Genesis and Treatment,” *Journal of Personality Disorders* 6 (1992).
12. Leslie Brothers, “A Biological Perspective on Empathy,” *American Journal of Psychiatry* 146, 1 (1989).
13. Brothers, “A Biological Perspective,” p. 16.
14. Physiology of empathy: Robert Levenson and Anna Ruef, “Empathy: A Physiological Substrate,” *Journal of Personality and Social Psychology* 63, 2 (1992).
15. Martin L. Hoffman, “Empathy, Social Cognition, and Moral Action,” in W. Kurtines and J. Gerwitz, eds., *Moral Behavior and Development: Advances in Theory, Research, and Applications* (New York: John Wiley and Sons, 1984).
16. Studies of the link between empathy and ethics are in Hoffman, “Empathy, Social Cognition, and Moral Action.”
17. I wrote about the emotional cycle that culminates in sex crimes in *The New York Times* (Apr. 14, 1992). The source is William Pithers, a psychologist with the Vermont Department of Corrections.
18. The nature of psychopathy is described in more detail in an article I wrote in *The New York Times* on July 7, 1987. Much of what I write here comes from the work of Robert Hare, a psychologist at the University of British Columbia, an expert on psychopaths.
19. Leon Bing, *Do or Die* (New York: HarperCollins, 1991).
20. Wife batterers: Neil S. Jacobson et al., “Affect, Verbal Content, and Psychophysiology in the Arguments of Couples With a Violent Husband,” *Journal of Clinical and Consulting Psychology* (July 1994).
21. Psychopaths have no fear—the effect is seen as criminal psychopaths are about to receive a shock: One of the more recent replications of the effect is Christopher Patrick et al., “Emotion in the Criminal Psychopath: Fear Image Processing,” *Journal of Abnormal Psychology* 103 (1994).

Chapter 8. The Social Arts

1. The exchange between Jay and Len was reported by Judy Dunn and Jane Brown in “Relationships, Talk About Feelings, and the Development of Affect Regulation in Early Childhood,” Judy Garber and Kenneth A. Dodge, eds., *The Development of Emotion Regulation and Dysregulation* (Cambridge: Cambridge University Press, 1991). The dramatic flourishes are my own.

2. The display rules are in Paul Ekman and Wallace Friesen, *Unmasking the Face* (Englewood Cliffs, NJ: Prentice Hall, 1975).
3. Monks in the heat of battle: the story is told by David Busch in "Culture Cul-de-Sac," *Arizona State University Research* (Spring/Summer 1994).
4. The study of mood transfer was reported by Ellen Sullins in the April 1991 issue of the *Personality and Social Psychology Bulletin*.
5. The studies of mood transmission and synchrony are by Frank Bernieri, a psychologist at Oregon State University; I wrote about his work in *The New York Times*. Much of his research is reported in Bernieri and Robert Rosenthal, "Interpersonal Coordination, Behavior Matching, and Interpersonal Synchrony," in Robert Feldman and Bernard Rime, eds., *Fundamentals of Nonverbal Behavior* (Cambridge: Cambridge University Press, 1991).
6. The entrainment theory is proposed by Bernieri and Rosenthal, *Fundamentals of Nonverbal Behavior*.
7. Thomas Hatch, "Social Intelligence in Young Children," paper delivered at the annual meeting of the American Psychological Association (1990).
8. Social chameleons: Mark Snyder, "Impression Management: The Self in Social Interaction," in L. S. Wrightsman and K. Deaux, *Social Psychology in the '80s* (Monterey, CA: Brooks/Cole, 1981).
9. E. Lakin Phillips, *The Social Skills Basis of Psychopathology* (New York: Grune and Stratton, 1978), p. 140.
10. Nonverbal learning disorders: Stephen Nowicki and Marshall Duke, *Helping the Child Who Doesn't Fit In* (Atlanta: Peachtree Publishers, 1992). See also Byron Rourke, *Nonverbal Learning Disabilities* (New York: Guilford Press, 1989).
11. Nowicki and Duke, *Helping the Child Who Doesn't Fit In*.
12. This vignette, and the review of research on entering a group, is from Martha Putallaz and Aviva Wasserman, "Children's Entry Behavior," in Steven Asher and John Coie, eds., *Peer Rejection in Childhood* (New York: Cambridge University Press, 1990).
13. Putallaz and Wasserman, "Children's Entry Behavior."
14. Hatch, "Social Intelligence in Young Children."
15. Terry Dobson's tale of the Japanese drunk and the old man is used by permission of Dobson's estate. It is also retold by Ram Dass and Paul Gorman, *How Can I Help?* (New York: Alfred A. Knopf, 1985), pp. 167–71.

PART THREE: EMOTIONAL INTELLIGENCE APPLIED

Chapter 9. Intimate Enemies

1. There are many ways to calculate the divorce rate, and the statistical means used will determine the outcome. Some methods show the divorce rate peaking at around 50 percent and then dipping a bit. When divorces are calculated by the total number in a given year, the rate appears to have peaked in the 1980s. But the statistics I cite here calculate not the number of divorces that occur in a given year, but rather the odds that a couple marrying in a given year will eventually have their marriage end in divorce. That statistic shows a climbing rate of divorce over the last century. For more detail: John Gottman, *What Predicts Divorce: The Relationship Between Marital Processes and Marital Outcomes* (Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., 1993).
2. The separate worlds of boys and girls: Eleanor Maccoby and C. N. Jacklin, "Gender Segregation in Childhood," in H. Reese, ed., *Advances in Child Development and Behavior* (New York: Academic Press, 1987).
3. Same-sex playmates: John Gottman, "Same and Cross Sex Friendship in Young Children," in J. Gottman and J. Parker, eds., *Conversation of Friends* (New York: Cambridge University Press, 1986).
4. This and the following summary of sex differences in socialization of emotions are based on the excellent review in Leslie R. Brody and Judith A. Hall, "Gender and Emotion," in Michael Lewis and Jeannette Haviland, eds., *Handbook of Emotions* (New York: Guilford Press, 1993).
5. Brody and Hall, "Gender and Emotion," p. 456.
6. Girls and the arts of aggression: Robert B. Cairns and Beverley D. Cairns, *Lifelines and Risks* (New York: Cambridge University Press, 1994).
7. Brody and Hall, "Gender and Emotion," p. 454.
8. The findings about gender differences in emotion are reviewed in Brody and Hall, "Gender and Emotion."
9. The importance of good communication for women was reported in Mark H. Davis and H. Alan Oathout, "Maintenance of Satisfaction in Romantic Relationships: Empathy and Relational Competence," *Journal of Personality and Social Psychology* 53, 2 (1987), pp. 397–410.
10. The study of husbands' and wives' complaints: Robert J. Sternberg, "Triangulating Love," in Robert Sternberg and Michael Barnes, eds., *The Psychology of Love* (New Haven: Yale University Press, 1988).
11. Reading sad faces: The research is by Dr. Ruben C. Gur at the University of Pennsylvania