

# Notes

## INTRODUCTION: THE NORTH AND SOUTH OF TEMPERAMENT

- 1 **Montgomery, Alabama. December 1, 1955:** For an excellent biography of Rosa Parks, see Douglas Brinkley, *Rosa Parks: A Life* (New York: Penguin, 2000). Most of the material in *Quiet* about Parks is drawn from this work.

A note about Parks: Some have questioned the singularity of her actions, pointing out that she'd had plenty of civil rights training before boarding that bus. While this is true, there's no evidence, according to Brinkley, that Parks acted in a premeditated manner that evening, or even as an activist; she was simply being herself. More important for *Quiet's* purposes, her personality did not prevent her from being powerful; on the contrary, it made her a natural at nonviolent resistance.

- 2 **"north and south of temperament":** Winifred Gallagher (quoting J. D. Higley), "How We Become What We Are," *The Atlantic Monthly*, September 1994. (Higley was talking about boldness and inhibition, not extroversion and introversion per se, but the concepts overlap in many ways.)
- 3 **governs how likely we are to exercise:** Robert M. Stelmack, "On Personality and Arousal: A Historical Perspective on Eysenck and Zuckerman," in Marvin Zuckerman and Robert M. Stelmack, eds., *On the Psychobiology of Personality: Essays in Honor of Marvin Zuckerman* (San Diego: Elsevier, 2004), 22. See also Caroline Davis et al., "Motivations to Exercise as a Function of Personality Characteristics, Age, and Gender," *Personality and Individual Differences* 19, no. 2 (1995): 165–74.
- 3 **commit adultery:** Daniel Nettle, *Personality: What Makes You the Way You Are* (New York: Oxford University Press, 2007), p. 100. See also David P. Schmitt, "The Big Five Related to Risky Sexual Behaviour Across 10 World Regions: Differential Personality Associations of Sexual Promiscuity and Relationship Infidelity," *European Journal of Personality* 18, no. 4 (2004): 301–19.

- 3 **function well without sleep:** William D. S. Killgore et al., “The Trait of Introversion-Extraversion Predicts Vulnerability to Sleep Deprivation,” *Journal of Sleep Research* 16, no. 4 (2007): 354–63. See also Daniel Taylor and Robert M. McFatter, “Cognitive Performance After Sleep Deprivation: Does Personality Make a Difference?” *Personality and Individual Differences* 34, no. 7 (2003): 1179–93; and Andrew Smith and Andrea Maben, “Effects of Sleep Deprivation, Lunch, and Personality on Performance, Mood, and Cardiovascular Function,” *Physiology and Behavior* 54, no. 5 (1993): 967–72.
- 3 **learn from our mistakes:** See chapter 7.
- 3 **place big bets in the stock market:** See chapter 7.
- 3 **be a good leader:** See chapter 2.
- 3 **and ask “what if”:** See chapters 3 and 7.
- 3 **exhaustively researched subjects:** As of May 2, 2010, in the PSYCINFO database, there were 9,194 entries on “extraversion,” 6,111 on “introversion,” and 12,494 on the overlapping subject of “neuroticism.” There were fewer entries for the other “Big 5” personality traits: openness to experience, conscientiousness, and agreeableness. Similarly, as of June 14, 2010, a Google scholar search found about 64,700 articles on “extraversion,” 30,600 on “extroversion,” 55,900 on “introversion,” and 53,300 on “neuroticism.” The psychologist William Graziano, in an e-mail dated July 31, 2010, refers to introversion/extroversion as “the 300 lb. gorilla of personality, meaning that it is big and cannot be ignored easily.”
- 3 **in the Bible:** See “A Note on Terminology.”
- 3 **some evolutionary psychologists:** See chapter 6.
- 3 **one third to one half of Americans are introverts:** Rowan Bayne, in *The Myers-Briggs Type Indicator: A Critical Review and Practical Guide* (London: Chapman and Hall, 1995), 47, finds the incidence of introversion at 36 percent, which is in turn determined from Isabel Myers’s own study from 1985. A more recent study, published by the Center for Applications of Psychological Type Research Services in 1996, sampled 914,219 people and found that 49.3 percent were extroverts and 50.7 percent were introverts. See “Estimated Frequencies of the Types in the United States Population,” a brochure published by the Center for Application of Psychological Type (CAPT) in 1996 and 2003. That the percentage of introverts found by these studies rose from 36 percent to 50.7 percent doesn’t necessarily mean that there are now more introverts in the United States, according to CAPT. It may be “simply a reflection of the populations sampled and included.” In fact, a wholly separate survey, this one using the Eysenck Personality Inventory and Eysenck Personality Questionnaire rather than the Myers-Briggs test, indicates that extraversion scores have increased over time (from 1966 to 1993) for both men and women: see Jean M. Twenge, “Birth Cohort

- Changes in Extraversion: A Cross-Temporal Meta-Analysis, 1966–1993,” *Personality and Individual Differences* 30 (2001): 735–48.
- 4 **United States is among the most extroverted of nations:** This has been noted in two studies: (1) Juri Allik and Robert R. McCrae, “Toward a Geography of Personality Traits: Patterns of Profiles Across 36 Cultures,” *Journal of Cross-Cultural Psychology* 35 (2004): 13–28; and (2) Robert R. McCrae and Antonio Terracciano, “Personality Profiles of Cultures: Aggregate Personality Traits,” *Journal of Personality and Social Psychology* 89:3 (2005): 407–25.
- 4 **Talkative people, for example:** William B. Swann Jr. and Peter J. Rentfrow, “Blirtatiousness: Cognitive, Behavioral, and Physiological Consequences of Rapid Responding,” *Journal of Personality and Social Psychology* 81, no. 6 (2001): 1160–75.
- 4 **Velocity of speech counts:** Howard Giles and Richard L. Street Jr., “Communicator Characteristics and Behavior,” in M. L. Knapp and G. R. Miller, eds., *Handbook of Interpersonal Communication*, 2nd ed. (Thousand Oaks, CA: Sage, 1994), 103–61. (But note some good news for introverts: slow speech can be perceived as honest and benevolent, according to other studies.)
- 5 **the voluble are considered smarter:** Delroy L. Paulhus and Kathy L. Morgan, “Perceptions of Intelligence in Leaderless Groups: The Dynamic Effects of Shyness and Acquaintance,” *Journal of Personality and Social Psychology* 72, no. 3 (1997): 581–91.
- 5 **one informal study:** Laurie Helgoe, *Introvert Power: Why Your Inner Life Is Your Hidden Strength* (Naperville, IL: Sourcebooks, 2008), 3–4.
- 5 **the theory of gravity:** Gale E. Christianson, *Isaac Newton* (Oxford University Press, Lives and Legacies Series, 2005).
- 5 **the theory of relativity:** Walter Isaacson, *Einstein: His Life and Universe* (New York: Simon & Schuster, 2007), 4, 12, 18, 2, 31, etc.
- 5 **W. B. Yeats’s “The Second Coming”:** Michael Fitzgerald, *The Genesis of Artistic Creativity: Asperger’s Syndrome and the Arts* (London: Jessica Kingsley, 2005), 69. See also Ira Progoff, *Jung’s Psychology and Its Social Meaning* (London: Routledge, 1999), 111–12.
- 5 **Chopin’s nocturnes:** Tad Szulc, *Chopin in Paris: The Life and Times of the Romantic Composer* (New York: Simon & Schuster, 2000), 69.
- 5 **Proust’s *In Search of Lost Time*:** Alain de Botton, *How Proust Can Change Your Life* (New York: Vintage International), 1997.
- 5 **Peter Pan:** Lisa Chaney, *Hide-and-Seek with Angels: A Life of J. M. Barrie* (New York: St. Martin’s Press, 2005), 2.
- 5 **Orwell’s 1984 and *Animal Farm*:** Fitzgerald, *The Genesis of Artistic Creativity*, 89.

- 5 **Charlie Brown:** David Michaelis, *Schulz and Peanuts: A Biography* (New York: Harper, 2007).
- 5 **Schindler's List, E.T., and Close Encounters of the Third Kind:** Joseph McBride, *Steven Spielberg: A Biography* (New York: Simon & Schuster, 1997), 57, 68.
- 5 **Google:** Ken Auletta, *Googled: The End of the World as We Know It* (New York: Penguin, 2009), 32
- 5 **Harry Potter:** Interview of J. K. Rowling by Shelagh Rogers and Lauren McCormick, Canadian Broadcasting Corp., October 26, 2000.
- 5 **"Neither  $E=mc^2$  nor Paradise Lost":** Winifred Gallagher, *I.D.: How Heredity and Experience Make You Who You Are* (New York: Random House, 1996), 26.
- 6 **vast majority of teachers believe:** Charles Meisgeier et al., "Implications and Applications of Psychological Type to Educational Reform and Renewal," *Proceedings of the First Biennial International Conference on Education of the Center for Applications of Psychological Type* (Gainesville, FL: Center for Applications of Psychological Type, 1994), 263–71.
- 10 **Carl Jung had published a bombshell:** Carl G. Jung, *Psychological Types* (Princeton, NJ: Princeton University Press, 1971; originally published in German as *Psychologische Typen* [Zurich: Rascher Verlag, 1921]), see esp. 330–37.
- 10 **the majority of universities and Fortune 100 companies:** E-mail to the author, dated July 9, 2010, from Leah L. Walling, director, Marketing Communications and Product Marketing, CPP, Inc.
- 11 **introverts and extroverts differ in the level of outside stimulation . . . Many have a horror of small talk:** See Part Two: "Your Biology, Your Self?"
- 11 **introvert is not a synonym for hermit:** Introversion is also very different from Asperger's syndrome, the autism spectrum disorder that involves difficulties with social interactions such as reading facial expressions and body language. Introversion and Asperger's both can involve feeling overwhelmed in social settings. But unlike people with Asperger's, introverts often have strong social skills. Compared with the one third to one half of Americans who are introverts, only one in five thousand people has Asperger's. See National Institute of Neurological Disorders and Stroke, Asperger Syndrome Fact Sheet, [http://www.ninds.nih.gov/disorders/asperger/detail\\_asperger.htm](http://www.ninds.nih.gov/disorders/asperger/detail_asperger.htm).
- 12 **the distinctly introverted E. M. Forster:** Sunil Kumar, *A Companion to E. M. Forster*, vol. 1 (New Delhi: Atlantic Publishers and Distributors, 2007).
- 12 **"human love at its height":** E. M. Forster, *Howards End* (London: Edward Arnold, 1910).

- 12 **Shyness is the fear of social disapproval:** Elaine N. Aron et al., “Adult Shyness: The Interaction of Temperamental Sensitivity and an Adverse Childhood Environment,” *Personality and Social Psychology Bulletin* 31 (2005): 181–97.
- 12 **they sometimes overlap:** Many articles address this question. See, for example, Stephen R. Briggs, “Shyness: Introversion or Neuroticism?” *Journal of Research in Personality* 22, no. 3 (1988): 290–307.
- 14 **“Such a man would be in the lunatic asylum”:** William McGuire and R. F. C. Hall, *C. G. Jung Speaking: Interviews and Encounters* (Princeton, NJ: Princeton University Press, 1977), 304.
- 14 **Finland is a famously introverted nation:** Aino Sallinen-Kuparinen et al., *Willingness to Communicate, Communication Apprehension, Introversion, and Self-Reported Communication Competence: Finnish and American Comparisons*. *Communication Research Reports*, 8 (1991): 57.
- 14 **Many introverts are also “highly sensitive”:** See chapter 6.

#### CHAPTER 1: THE RISE OF THE “MIGHTY LIKEABLE FELLOW”

- 19–**The date: 1902 . . . held him back as a young man:** Giles Kemp and Edward Clafin, *Dale Carnegie: The Man Who Influenced Millions* (New York: St. Martin’s Press, 1989). The 1902 date is an estimate based on the rough contours of Carnegie’s biography.
- 20 **“In the days when pianos and bathrooms were luxuries”:** Dale Carnegie, *The Quick and Easy Way to Effective Speaking* (New York: Pocket Books, 1962; revised by Dorothy Carnegie from *Public Speaking and Influencing Men in Business*, by Dale Carnegie).
- 21 **a Culture of Character to a Culture of Personality:** Warren Susman, *Culture as History: The Transformation of American Society in the Twentieth Century* (Washington, DC: Smithsonian Institution Press, 2003), 271–85. See also Ian A. M. Nicholson, “Gordon Allport, Character, and the ‘Culture of Personality,’ 1897–1937,” *History of Psychology* 1, no. 1 (1998): 52–68.
- 21 **The word *personality* didn’t exist:** Susman, *Culture as History*, 277: The modern idea of personality emerged in the early twentieth century and came into its own only in the post–World War I period. By 1930, according to the early personality psychologist Gordon W. Allport, interest in personality had reached “astonishing proportions.” See also Sol Cohen, “The Mental Hygiene Movement, the Development of Personality and the School: The Medicalization of American Education,” *History of Education Quarterly* 32, no. 2 (1983), 123–49.
- 22 **In 1790, only 3 percent . . . a third of the country were urbanites:** Alan Berger, *The City: Urban Communities and Their Problems* (Dubuque, IA: Wil-

- liam C. Brown Co., 1978). See also Warren Simpson Thompson et al., *Population Trends in the United States* (New York: Gordon and Breach Science Publishers, 1969).
- 22 **“We cannot all live in cities”**: David E. Shi, *The Simple Life: Plain Living and High Thinking in American Culture* (Athens, GA: University of Georgia Press, 1985), 154.
- 22 **“The reasons why one man gained a promotion”**: Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920–1940* (Berkeley: University of California Press, 1985), 209.
- 22 **The Pilgrim’s Progress**: John Bunyan, *The Pilgrim’s Progress* (New York: Oxford University Press, 2003). See also Elizabeth Haiken, *Venus Envy: A History of Cosmetic Surgery* (Baltimore: Johns Hopkins University Press, 1997), 99.
- 22 **a modest man who did not . . . “offend by superiority”**: Amy Henderson, “Media and the Rise of Celebrity Culture,” *Organization of American Historians Magazine of History* 6 (Spring 1992).
- 22 **A popular 1899 manual**: Orison Swett Marden, *Character: The Grandest Thing in the World* (1899; reprint, Kessinger Publishing, 2003), 13.
- 22–**But by 1920, popular self-help guides . . . “That is the beginning of a**  
 23 **reputation for personality”**: Susman, *Culture as History*, 271–85.
- 23 **Success magazine and The Saturday Evening Post**: Carl Elliott, *Better Than Well: American Medicine Meets the American Dream* (New York: W. W. Norton, 2003), 61.
- 23 **a mysterious quality called “fascination”**: Susman, 279.
- 23 **“People who pass us on the street”**: Hazel Rawson Cades, “A Twelve-to-Twenty Talk,” *Women’s Home Companion*, September 1925: 71 (cited by Haiken, p. 91).
- 24 **Americans became obsessed with movie stars**: In 1907 there were five thousand movie theaters in the United States; by 1914 there were 180,000 theaters and counting. The first films appeared in 1894, and though the identities of screen actors were originally kept secret by the film studios (in keeping with the ethos of a more private era), by 1910 the notion of a “movie star” was born. Between 1910 and 1915 the influential filmmaker D. W. Griffith made movies in which he juxtaposed close-ups of the stars with crowd scenes. His message was clear: here was the successful personality, standing out in all its glory against the undifferentiated nobodies of the world. Americans absorbed these messages enthusiastically. The vast majority of biographical profiles published in *The Saturday Evening Post* and *Collier’s* at the dawn of the twentieth century were about politicians, businessmen, and professionals. But by the 1920s and 1930s, most profiles were written about entertainers like Gloria Swanson and Charlie Chaplin. (See

- Susman and Henderson; see also Charles Musser, *The Emergence of Cinema: The American Screen to 1907* [Berkeley: University of California Press, 1994], 81; and Daniel Czitrom, *Media and the American Mind: From Morse to McLuhan* [Chapel Hill: University of North Carolina Press, 1982, p. 42].)
- 24 **“EATON’S HIGHLAND LINEN”**: Marchand, *Advertising the American Dream*, 11.
- 24 **“ALL AROUND YOU PEOPLE ARE JUDGING YOU SILENTLY”**: Jennifer Scanlon, *Inarticulate Longings: The Ladies’ Home Journal, Gender, and the Promises of Consumer Culture* (Routledge, 1995), 209.
- 24 **“CRITICAL EYES ARE SIZING YOU UP RIGHT NOW”**: Marchand, *Advertising the American Dream*, 213.
- 24 **“EVER TRIED SELLING YOURSELF TO YOU?”**: Marchand, 209.
- 24 **“LET YOUR FACE REFLECT CONFIDENCE, NOT WORRY!”**: Marchand, *Advertising the American Dream*, 213.
- 25 **“longed to be successful, gay, triumphant”**: This ad ran in *Cosmopolitan*, August 1921: 24.
- 25 **“How can I make myself more popular?”**: Rita Barnard, *The Great Depression and the Culture of Abundance: Kenneth Fearing, Nathanael West, and Mass Culture in the 1930s* (Cambridge, UK: Cambridge University Press, 1995), 188. See also Marchand, *Advertising the American Dream*, 210.
- 25–**both genders displayed some reserve . . . sometimes called “frigid”**: Patricia A. McDaniel, *Shrinking Violets and Caspar Milquetoasts: Shyness, Power, and Intimacy in the United States, 1950–1995* (New York: New York University Press, 2003), 33–43.
- 26 **In the 1920s an influential psychologist . . . “Our current civilization . . . seems to place a premium upon the aggressive person”**: Nicholson, “Gordon Allport, Character, and the Culture of Personality, 1897–1937,” 52–68. See also Gordon Allport, “A Test for Ascendance-Submission,” *Journal of Abnormal & Social Psychology* 23 (1928): 118–36. Allport, often referred to as a founding figure of personality psychology, published “Personality Traits: Their Classification and Measurement” in 1921, the same year Jung published *Psychological Types*. He began teaching his course “Personality: Its Psychological and Social Aspects” at Harvard University in 1924; it was probably the first course in personality ever taught in the United States.
- 26 **Jung himself . . . “all the current prejudices against this type”**: C. G. Jung, *Psychological Types* (Princeton, NJ: Princeton University Press, 1990; reprint of 1921 edition), 403–5.
- 26–**The IC, as it became known . . . “the backbone along with it”**: Haiken, 27 *Venus Envy*, 111–14.
- 27 **Despite the hopeful tone of this piece . . . “A healthy personality for every child”**: McDaniel, *Shrinking Violets*, 43–44.

- 27 **Well-meaning parents . . . agreed:** Encyclopedia of Children and Childhood in History and Society: “Shyness,” <http://www.faqs.org/childhood/Re-So/Shyness.html>.
- 27 **Some discouraged their children . . . learning to socialize:** David Riesman, *The Lonely Crowd* (Garden City, NY: Doubleday Anchor, reprinted by arrangement with Yale University Press, 1953), esp. 79–85 and 91. See also “The People: Freedom—New Style,” *Time*, September 27, 1954.
- 27 **Introverted children . . . “suburban abnormalities”:** William H. Whyte, *The Organization Man* (New York: Simon & Schuster, 1956; reprint, Philadelphia: University of Pennsylvania Press, 2002), 382, 384.
- 28 **Harvard’s provost Paul Buck:** Jerome Karabel, *The Chosen: The Hidden History of Admission and Exclusion at Harvard, Yale, and Princeton* (Boston: Houghton Mifflin, 2005), 185, 223.
- 28 **“We see little use for the “brilliant” introvert”:** Whyte, *The Organization Man*, 105.
- 28 **This college dean . . . “it helps if they make a good impression”:** Whyte, *The Organization Man*, 212.
- 28 **“We’re selling, just selling, IBM”:** Hank Whittemore, “IBM in Westchester—The Low Profile of the True Believers.” *New York*, May 22, 1972. The singing ended in the 1950s, according to this article. For the full words to “Selling IBM,” see <http://www.digibarn.com/collections/songs/ibm-songs>.
- 29 **The rest of the organization men . . . read the Equanil ad:** Louis Menand, “Head Case: Can Psychiatry Be a Science?” *The New Yorker*, March 1, 2010.
- 29 **The 1960s tranquilizer Serentil:** Elliott, *Better Than Well*, xv.
- 29 **Extroversion is in our DNA:** Kenneth R. Olson, “Why Do Geographic Differences Exist in the Worldwide Distribution of Extraversion and Openness to Experience? The History of Human Emigration as an Explanation,” *Individual Differences Research* 5, no. 4 (2007): 275–88. See also Chuansheng Chen, “Population Migration and the Variation of Dopamine D4 Receptor (DRD4) Allele Frequencies Around the Globe,” *Evolution and Human Behavior* 20 (1999): 309–24.
- 29 **the Romans, for whom the worst possible punishment:** Mihalyi Csikszentmihalyi, *Flow: The Psychology of Optimal Experience* (New York: Harper Perennial, 1990), 165.
- 30 **Even the Christianity of early American religious revivals:** Long before that silver-tongued Chautauqua speaker turned Dale Carnegie’s world upside down, religious revivals were taking place under huge tents all over the country. Chautauqua itself was inspired by these “Great Awakenings,” the first in the 1730s and 1740s, and the second in the early decades of the nineteenth century. The Christianity on offer in the Awakenings was new and theatrical; its leaders were sales-oriented, focused on packing followers

under their great tents. Ministers' reputations depended on how exuberant they were in speech and gesture.

The star system dominated Christianity long before the concept of movie stars even existed. The dominant evangelist of the First Great Awakening was a British showman named George Whitefield who drew standing-room-only crowds with his dramatic impersonations of biblical figures and unabashed weeping, shouting, and crying out. But where the First Great Awakening balanced drama with intellect and gave birth to universities like Princeton and Dartmouth, the Second Great Awakening was even more personality-driven; its leaders focused purely on drawing crowds. Believing, as many megachurch pastors do today, that too academic an approach would fail to pack tents, many evangelical leaders gave up on intellectual values altogether and embraced their roles as salesmen and entertainers. "My theology! I didn't know I had any!" exclaimed the nineteenth-century evangelist D. L. Moody.

This kind of oratory affected not only styles of worship, but also people's ideas of who Jesus *was*. A 1925 advertising executive named Bruce Fairchild Barton published a book called *The Man Nobody Knows*. It presented Jesus as a superstar sales guy who "forged twelve men from the bottom ranks of business into an organization that conquered the world." This Jesus was no lamb; this was "the world's greatest business executive" and "The Founder of Modern Business." The notion of Jesus as a role model for business leadership fell on extraordinarily receptive ears. *The Man Nobody Knows* became one of the best-selling nonfiction books of the twentieth century, according to Powell's Books. See Adam S. McHugh, *Introverts in the Church: Finding Our Place in an Extroverted Culture* (Downers Grove, IL: IVP Books, 2009), 23–25. See also Neal Gabler, *Life: The Movie: How Entertainment Conquered Reality* (New York: Vintage Books, 1998), 25–26.

- 30 **early Americans revered action:** Richard Hofstadter, *Anti-Intellectualism in American Life* (New York: Vintage Books, 1962); see, for example, pp. 51 and 256–57.
- 30 **The 1828 presidential campaign:** Neal Gabler, *Life: The Movie*, 28.
- 30 **John Quincy Adams, incidentally:** Steven J. Rubenzer et al., "Assessing the U.S. Presidents Using the Revised NEO Personality Inventory," *Assessment* 7, no. 4 (2000): 403–20.
- 30 **"Respect for individual human personality":** Harold Stearns, *America and the Young Intellectual* (New York: George H. Duran Co., 1921).
- 30 **"It is remarkable how much attention":** Henderson, "Media and the Rise of Celebrity Culture."
- 31 **wandered lonely as a cloud:** William Wordsworth, "I Wandered Lonely as a Cloud," 1802.

- 31 **repaired in solitude to Walden Pond:** Henry David Thoreau, *Walden*, 1854.
- 31 **Americans who considered themselves shy:** Bernardo Carducci and Philip G. Zimbardo, "Are You Shy?" *Psychology Today*, November 1, 1995.
- 31 **"Social anxiety disorder" . . . one in five of us:** M. B. Stein, J. R. Walker, and D. R. Forde, "Setting Diagnostic Thresholds for Social Phobia: Considerations from a Community Survey of Social Anxiety," *American Journal of Psychiatry* 151 (1994): 408–42.
- 31 **The most recent version of the *Diagnostic and Statistical Manual*:** American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. (DSM-IV), 2000. See 300.23, "Social Phobia (Social Anxiety Disorder)": "The diagnosis is appropriate only if the avoidance, fear, or anxious anticipation of encountering the social or performance situation interferes significantly with the person's daily routine, occupational functioning, or social life, or if the person is markedly distressed about having the phobia. . . . In feared social or performance situations, individuals with Social Phobia experience concerns about embarrassment and are afraid that others will judge them to be anxious, weak, 'crazy,' or stupid. They may fear public speaking because of concern that others will notice their trembling hands or voice or they may experience extreme anxiety when conversing with others because of fear that they will appear inarticulate. . . . The fear or avoidance must interfere significantly with the person's normal routine, occupational or academic functioning, or social activities or relationships, or the person must experience marked distress about having the phobia. For example, a person who is afraid of speaking in public would not receive a diagnosis of Social Phobia if this activity is not routinely encountered on the job or in the classroom and the person is not particularly distressed about it."
- 31 **"It's not enough . . . to be able to sit at your computer":** Daniel Goleman, *Working with Emotional Intelligence* (New York: Bantam, 2000), 32.
- 32 **a staple of airport bookshelves and business best-seller lists:** See, for example, <http://www.nationalpost.com/Business+Bestsellers/3927572/story.html>.
- 32 **"all talking is selling and all selling involves talking":** Michael Erard, *Um: Slips, Stumbles, and Verbal Blunders, and What They Mean* (New York: Pantheon, 2007), 156.
- 32 **more than 12,500 chapters in 113 countries:** <http://www.toastmasters.org/MainMenuCategories/WhatisToastmasters.aspx> (accessed September 10, 2010).
- 32 **The promotional video:** <http://www.toastmasters.org/DVDclips.aspx> (accessed July 29, 2010). Click on "Welcome to Toastmasters! The entire 15 minute story."

## CHAPTER 2: THE MYTH OF CHARISMATIC LEADERSHIP

- 35 **President Clinton . . . 50 million other people:** These names and statistics are according to Tony Robbins's website and other promotional materials as of December 19, 2009.
- 35 **some \$11 billion a year:** Melanie Lindner, "What People Are Still Willing to Pay For," *Forbes*, January 15, 2009. The \$11 billion figure is for 2008 and is, according to Marketdata Enterprises, a research firm. This amount was forecast to grow by 6.2 percent annually through 2012.
- 37 **chairman of seven privately held companies:** This figure is according to Robbins's website.
- 38 **"hyperthymic" temperament:** Hagop S. Akiskal, "The Evolutionary Significance of Affective Temperaments," *Medscape CME*, published June 12, 2003, updated June 24, 2003.
- 40 **superhuman physical size:** Steve Salerno made this point in his book *Sham* (New York: Crown Publishers, 2005), 75. He also made the later point about Robbins's remark that he was once so poor that he kept his dishes in the bathtub.
- 44 **Founded in 1908 . . . "educating leaders who make a difference in the world":** Harvard Business School website, September 11, 2010.
- 44 **President George W. Bush . . . were HBS grads:** Philip Delves Broughton, *Ahead of the Curve: Two Years at Harvard Business School* (New York: Penguin, 2008), 2. See also [www.reuters.com](http://www.reuters.com), Factbox: Jeffrey Skilling, June 24, 2010.
- 48 **will graduate into a business culture:** Stanford Business School professor of applied psychology Thomas Harrell tracked Stanford MBAs who graduated between 1961 and 1965, and published a series of studies about them. He found that high earners and general managers tended to be outgoing and extroverted. See, e.g., Thomas W. Harrell and Bernard Alpert, "Attributes of Successful MBAs: A 20-Year Longitudinal Study," *Human Performance* 2, no. 4 (1989): 301-322.
- 48 **"'Here everyone knows that it's important to be an extrovert'":** Reggie Garrison et al., "Managing Introversion and Extroversion in the Workplace," Wharton Program for Working Professionals (WPWP) (Philadelphia: University of Pennsylvania, Spring 2006).
- 49 **BOSS TO TED AND ALICE:** Here I must apologize: I can't recall the company that ran this ad, and haven't been able to locate it.
- 49 **"DEPART FROM YOUR INHIBITIONS":** <http://www.advertolog.com/amtrak/print-outdoor/depart-from-your-inhibitions-2110505/> (accessed September 11, 2010).
- 49 **a series of ads for the psychotropic drug Paxil:** Christopher Lane, *How*

*Normal Behavior Became a Sickness* (New Haven: Yale University Press, 2007), 127, 131.

- 51 **We perceive talkers as smarter:** Delroy L. Paulhus and Kathy L. Morgan, “Perceptions of Intelligence in Leaderless Groups: The Dynamic Effects of Shyness and Acquaintance,” *Journal of Personality and Social Psychology* 72, no. 3 (1997): 581–91. See also Cameron Anderson and Gavin Kilduff, “Why Do Dominant Personalities Attain Influence in Face-to-Face Groups? The Competence Signaling Effects of Trait Dominance,” *Journal of Personality and Social Psychology* 96, no. 2 (2009): 491–503.
- 51 **two strangers met over the phone:** William B. Swann Jr. and Peter J. Rentfrow, “Blirtatiousness: Cognitive, Behavioral, and Physiological Consequences of Rapid Responding,” *Journal of Personality and Social Psychology* 81, no. 6 (2001): 1160–75.
- 51 **We also see talkers as leaders:** Simon Taggar et al., “Leadership Emergence in Autonomous Work Teams: Antecedents and Outcomes,” *Personnel Psychology* 52, no. 4 (Winter 1999): 899–926. (“The person that speaks most is likely to be perceived as the leader.”)
- 51 **The more a person talks, the more other group members:** James Surowiecki, *The Wisdom of Crowds* (New York: Doubleday Anchor, 2005), 187.
- 51 **It also helps to speak fast:** Howard Giles and Richard L. Street Jr., “Communicator Characteristics and Behavior,” in M. L. Knapp and G. R. Miller, eds., *Handbook of Interpersonal Communication*, 2nd ed. (Thousand Oaks, CA: Sage, 1994), 103–61.
- 51 **college students were asked to solve math problems:** Cameron Anderson and Gavin Kilduff, “Why Do Dominant Personalities Attain Influence in Face-to-Face Groups? The Competence-Signaling Effects of Trait Dominance.”
- 52 **A well-known study out of UC Berkeley:** Philip Tetlock, *Expert Political Judgment* (Princeton, NJ: Princeton University Press, 2006).
- 52 **“the Bus to Abilene”:** Kathrin Day Lassila, “A Brief History of Groupthink: Why Two, Three or Many Heads Aren’t Always Better Than One,” *Yale Alumni Magazine*, January/February 2008.
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### CHAPTER 3: WHEN COLLABORATION KILLS CREATIVITY

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casual ways, for example by analyzing their personal hobbies or by asking them to play creativity games like writing a story about a picture. It's likely that extroverts would do better in high-arousal settings like these. It's also possible, as the psychologist Uwe Wolfradt suggests, that the relationship between introversion and creativity is "discernable at a higher level of creativity only." (Uwe Wolfradt, "Individual Differences in Creativity: Personality, Story Writing, and Hobbies," *European Journal of Personality* 15, no. 4, [July/August 2001]: 297–310.)

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#### CHAPTER 4: IS TEMPERAMENT DESTINY?

- A general note on this chapter:** Chapter 4 discusses the psychologist Jerome Kagan’s work on high reactivity, which some contemporary psychologists would consider to lie at the intersection of introversion and another trait known as “neuroticism.” For the sake of readability, I have not elucidated that distinction in the text.
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- 100 **reserved Tom and extroverted Ralph:** Jerome Kagan, *Galen’s Prophecy* (New York: Basic Books, 1998), 158–61.
- 101 **Some say that temperament is the foundation:** See <http://www.selfgrowth.com/articles/Warfield3.html>.
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- 103 **how a group of kids should share a coveted toy:** Winifred Gallagher (quoting Kagan), “How We Become What We Are.” *The Atlantic Monthly*, September 1994.
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- 104 **extroversion and introversion are physiologically:** David G. Winter, *Personality: Analysis and Interpretation of Lives* (New York: McGraw-Hill, 1996), 511–16.
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- 109 **"The university is filled with introverts":** Interview with the author, June 15, 2006.
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- 110 **kids acquire their sense of right and wrong:** Grazyna Kochanska and R. A. Thompson, "The Emergence and Development of Conscience in Toddlerhood and Early Childhood," in *Parenting and Children's Internalization of Values*, edited by J. E. Grusec and L. Kuczynski (New York: John Wiley and Sons), 61. See also Grazyna Kochanska, "Toward a Synthesis of Parental Socialization and Child Temperament in Early Development of Conscience," *Child Development* 64 no. 2 (1993): 325–47; Grazyna Kochanska and Nazan Aksan, "Children's Conscience and Self-Regulation," *Journal of Personality* 74, no. 6 (2006): 1587–1617; Grazyna Kochanska et al., "Guilt and Effortful Control: Two Mechanisms That Prevent Disruptive Developmental Trajectories," *Journal of Personality and Social Psychology* 97, no. 2 (2009): 322–33.
- 111 **tragedy of a bold and exuberant temperament:** Gallagher, *I.D.*, 46–50.
- 111 **dubbed "the orchid hypothesis":** David Dobbs, "The Science of Success," *The Atlantic* magazine, 2009. See also Jay Belsky et al., "Vulnerability Genes or Plasticity Genes?" *Molecular Psychiatry*, 2009: 1–9; Michael Pluess and Jay Belsky, "Differential Susceptibility to Rearing Experience: The Case of Childcare," *The Journal of Child Psychology and Psychiatry* 50, no. 4 (2009): 396–404; Pluess and Belsky, "Differential Susceptibility to Rearing Experience: Parenting and Quality Child Care," *Developmental Psychology* 46, no. 2 (2010): 379–90; Jay Belsky and Michael Pluess, "Beyond Diathesis Stress: Differential Susceptibility to Environmental Influences," *Psychological Bulletin* 135, no. 6 (2009): 885–908; Bruce J. Ellis and W. Thomas Boyce, "Bio-

- logical Sensitivity to Context,” *Current Directions in Psychological Science* 17, no. 3 (2008): 183–87.
- 111 **with depression, anxiety, and shyness:** Aron, *Psychotherapy and the Highly Sensitive Person*, 3. See also A. Engfer, “Antecedents and Consequences of Shyness in Boys and Girls: A 6-year Longitudinal Study,” in *Social Withdrawal, Inhibition, and Shyness in Childhood*, edited by K. H. Rubin and J. B. Asendorpf (Hillsdale, NJ: Lawrence Erlbaum, 1993), 49–79; W. T. Boyce et al., “Psychobiologic Reactivity to Stress and Childhood Respiratory Illnesses: Results of Two Prospective Studies,” *Psychosomatic Medicine* 57 (1995): 411–22; L. Gannon et al., “The Mediating Effects of Psychophysiological Reactivity and Recovery on the Relationship Between Environmental Stress and Illness,” *Journal of Psychosomatic Research* 33 (1989): 165–75.
- 111 **Indeed, about a quarter of Kagan’s high-reactive kids:** E-mail from Kagan to the author, June 22, 2010.
- 111 **good parenting, child care, and a stable home environment:** See, for example, Belsky et al., “Vulnerability Genes or Plasticity Genes?”, 5. See also Pluess and Belsky, “Differential Susceptibility to Rearing Experience: The Case of Childcare,” 397.
- 112 **kind, conscientious:** Aron, *The Highly Sensitive Child*.
- 112 **They don’t necessarily turn into class presidents:** Author interview with Jay Belsky, April 28, 2010.
- 112 **world of rhesus monkeys:** Stephen J. Suomi, “Early Determinants of Behaviour: Evidence from Primate Studies,” *British Medical Bulletin* 53, no. 1 (1997): 170–84 (“high-reactive infants cross-fostered to nurturant females actually appeared to be behaviourally precocious. . . . These individuals became especially adept at recruiting and retaining other group members as allies in response to agonistic encounters and, perhaps as a consequence, they subsequently rose to and maintained top positions in the group’s dominance hierarchy. . . . Clearly, high-reactivity need not always be associated with adverse short- and long-term outcomes,” p. 180). See also this video on the *Atlantic Monthly* website: (<http://www.theatlantic.com/magazine/archive/2009/12/the-science-of-success/7761/>), in which Suomi tells us that “the monkeys who had that same short allele and grew up with good mothers had no problems whatsoever. They turned out as well or better than monkeys who had the other version of this gene.” (Note also that the link between the short allele of the SERT gene and depression in humans is well discussed but somewhat controversial.)
- 112 **thought to be associated with high reactivity and introversion:** Seth J. Gillihan et al., “Association Between Serotonin Transporter Genotype and

- Extraversion,” *Psychiatric Genetics* 17, no. 6 (2007): 351–54. See also M. R. Munafo et al., “Genetic Polymorphisms and Personality in Healthy Adults: A Systematic Review and Meta-Analysis,” *Molecular Psychiatry* 8 (2003): 471–84. And see Cecilie L. Licht et al., “Association Between Sensory Processing Sensitivity and the 5-HTTLPR Short/Short Genotype.”
- 112 **has speculated that these high-reactive monkeys:** Dobbs, “The Science of Success.”
- 112–**adolescent girls with the short allele of the SERT gene . . . less anxiety**  
 13 **on calm days:** Belsky et al., “Vulnerability Genes or Plasticity Genes?”
- 113 **this difference remains at age five:** Elaine Aron, *Psychotherapy and the Highly Sensitive Person*, 240–41.
- 113 **even more resistant than other kids:** Boyce, “Psychobiologic Reactivity to Stress and Childhood Respiratory Illnesses: Results of Two Prospective Studies.” See also W. Thomas Boyce and Bruce J. Ellis, “Biological Sensitivity to Context: I. Evolutionary-Developmental Theory of the Origins and Functions of Stress Reactivity,” *Development and Psychopathology* 27 (2005): 283.
- 113 **The short allele of the SERT gene:** See Judith R. Homberg and Klaus-Peter Lesch, “Looking on the Bright Side of Serotonin Transporter Gene Variation,” *Biological Psychiatry*, 2010.
- 113 **“sailors are so busy—and wisely—looking under the water line”:** Belsky et al., “Vulnerability Genes or Plasticity Genes?”
- 113 **“The time and effort they invest”:** Author interview with Jay Belsky, April 28, 2010.

## CHAPTER 5: BEYOND TEMPERAMENT

- 115 **“Enjoyment appears at the boundary”:** Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience* (New York: Harper Perennial, 1990), 52.
- 115 **windowless room with Dr. Carl Schwartz:** I conducted a series of interviews with Dr. Schwartz between 2006 and 2010.
- 117 **the footprint of a high- or low-reactive temperament:** Carl Schwartz et al., “Inhibited and Uninhibited Infants ‘Grown Up’: Adult Amygdalar Response to Novelty,” *Science* 300, no. 5627 (2003): 1952–53.
- 118 **If you were a high-reactive baby:** For a good overview of the relationship between the amygdala and the prefrontal cortex, see Joseph Ledoux, *The Emotional Brain: The Mysterious Underpinnings of Emotional Life* (New York: Simon & Schuster, 1996), chapters 6 and 8. See also Gregory Berns, *Iconoclast: A Neuroscientist Reveals How to Think Differently* (Boston, MA: Harvard Business Press, 2008), 59–81.

- 118 **self-talk to reassess upsetting situations:** Kevin N. Ochsner et al., “Re-thinking Feelings: An fMRI Study of the Cognitive Regulation of Emotion,” *Journal of Cognitive Neuroscience* 14, no. 8 (2002): 1215–29.
- 118 **scientists conditioned a rat:** Ledoux, *The Emotional Brain*, 248–49.
- 122 **Hans Eysenck:** David C. Funder, *The Personality Puzzle* (New York: W. W. Norton, 2010), 280–83.
- 123 **high arousal levels in the brain:** E-mail from Jerome Kagan to the author, June 23, 2010.
- 123 **many different kinds of arousal:** E-mail from Carl Schwartz to the author, August 16, 2010. Also note that introverts seem not to be in a baseline state of high arousal so much as susceptible to tipping over into that state.
- 123 **excited fans at a soccer game:** E-mail from Jerome Kagan to the author, June 23, 2010.
- 123 **a host of evidence that introverts are more sensitive:** This has been written about in many places. See, for example, Robert Stelmack, “On Personality and Arousal: A Historical Perspective on Eysenck and Zuckerman,” in *On the Psychobiology of Personality: Essays in Honor of Marvin Zuckerman*, edited by Marvin Zuckerman and Robert Stelmack (Pergamon, 2005), 17–28. See also Gerald Matthews et al., *Personality Traits* (Cambridge, UK: Cambridge University Press, 2003), 169–70, 186–89, 329–42. See also Randy J. Larsen and David M. Buss, *Personality Psychology: Domains of Knowledge About Human Nature* (New York: McGraw Hill, 2005), 202–6.
- 124 **lemon juice:** Funder, *The Personality Puzzle*, 281.
- 124 **noise level preferred by the extroverts:** Russell G. Geen, “Preferred Stimulation Levels in Introverts and Extroverts: Effects on Arousal and Performance,” *Journal of Personality and Social Psychology* 46, no. 6 (1984): 1303–12.
- 125 **They can hunt for homes:** This idea comes from Winifred Gallagher, *House Thinking: A Room-by-Room Look at How We Live* (New York: Harper Collins, 2006).
- 125 **introverts function better than extroverts when sleep deprived:** William Kilgore et al., “The Trait of Introversion-Extraversion Predicts Vulnerability to Sleep Deprivation,” *Journal of Sleep Research* 16, no. 4 (2007): 354–63.
- 125 **Drowsy extroverts behind the wheel:** Matthews, *Personality Traits*, 337.
- 126 **Overarousal interferes with attention:** Gerald Matthews and Lisa Dorn, “Cognitive and Attentional Processes in Personality and Intelligence,” in *International Handbook of Personality and Intelligence*, edited by Donald H. Saklofske and Moshe Zeidner (New York: Plenum Press, 1995): 367–96. Or, as the psychologist Brian Little puts it, “extraverts often find that they

are able to handle cramming for speeches or briefings in a way that would be disastrous for introverts.”

127 **a cycle of dread, fear, and shame:** Berns, *Iconoclast*, 59–81.

CHAPTER 6: “FRANKLIN WAS A POLITICIAN, BUT ELEANOR SPOKE OUT OF CONSCIENCE”

130 **“A shy man no doubt dreads the notice”:** Charles Darwin, *The Expressions of the Emotions in Man and Animals* (Charleston, SC: BiblioBazaar, 2007), 259.

130 **Easter Sunday, 1939. The Lincoln Memorial:** My description of the concert is based on film footage of the event.

130 **And it wouldn’t have, without Eleanor Roosevelt . . . to sing at the Lincoln Memorial:** Allida M. Black, *Castling Her Own Shadow: Eleanor Roosevelt and the Shaping of Postwar Liberalism* (New York: Columbia University Press, 1996), 41–44.

131 **“This was something unique”:** *The American Experience: Eleanor Roosevelt* (Public Broadcasting System, Ambrica Productions, 2000). See transcript: <http://www.pbs.org/wgbh/amex/eleanor/filmmore/transcript/transcript1.html>.

131 **They met when he was twenty:** Blanche Wiesen Cook, *Eleanor Roosevelt, Volume One: 1884–1933* (New York: Viking Penguin, 1992), esp. 125–236. See also *The American Experience: Eleanor Roosevelt*.

133 **her first scientific publication in 1997:** Elaine N. Aron and Arthur Aron, “Sensory-Processing Sensitivity and Its Relation to Introversion and Emotionality,” *Journal of Personality and Social Psychology* 3, no. 2 (1997): 345–68.

135–36 **When she was a girl . . . She decided to find out:** The biographical information about Aron comes from (1) interview with the author, August 21, 2008; (2) Elaine N. Aron, *The Highly Sensitive Person: How to Thrive When the World Overwhelms You* (New York: Broadway Books, 1996); (3) Elaine N. Aron, *The Highly Sensitive Person in Love: Understanding and Managing Relationships When the World Overwhelms You* (New York: Broadway Books, 2000).

136 **First Aron interviewed thirty-nine people . . . lightbulb burning a touch too brightly:** Aron and Aron, “Sensory-Processing Sensitivity.” See also E. N. Aron, “Revisiting Jung’s Concept of Innate Sensitiveness,” *Journal of Analytical Psychology* 49 (2004): 337–67. See also Aron, *The Highly Sensitive Person*.

136 **They feel exceptionally strong emotions:** In laboratory studies, looking at pictures designed to create strong positive or negative emotions, they reported feeling more emotionally aroused than nonsensitive people. See

- B. Acevedo, A. Aron, and E. Aron, "Sensory Processing Sensitivity and Neural Responses to Strangers' Emotional States," in A. Aron (Chair), *High Sensitivity, a Personality/Temperament Trait: Lifting the Shadow of Psychopathology*, symposium presented at the Annual Meeting of the American Psychological Association, San Diego, California, 2010. See also Jadzia Jagiellowicz, Arthur Aron, Elaine Aron, and Turhan Canli, "Faster and More Intense: Emotion Processing and Attentional Mechanisms in Individuals with Sensory Processing Sensitivity," in Aron, *High Sensitivity*.
- 136 **scientists at Stony Brook University:** Jadzia Jagiellowicz et al., "Sensory Processing Sensitivity and Neural Responses to Changes in Visual Scenes," *Social Cognitive and Affective Neuroscience*, 2010, doi.10.1093/scan/nsq001.
- 137 **echoes Jerome Kagan's findings:** Jerome Kagan, "Reflection-Impulsivity and Reading Ability in Primary Grade Children," *Child Development* 363, no. 3 (1965): 609–28. See also Ellen Siegelman, "Reflective and Impulsive Observing Behavior," *Child Development* 40, no. 4 (1969): 1213–22.
- 137 **"If you're thinking in more complicated ways":** Interview with the author, May 8, 2010.
- 137 **highly empathic:** Aron and Aron, "Sensory-Processing Sensitivity." See also Aron, "Revisiting Jung's Concept of Innate Sensitiveness." See also Aron, *The Highly Sensitive Person*. And see the following fMRI studies: Acevedo, "Sensory Processing Sensitivity and Neural Responses to Strangers' Emotional States." And see Jadzia Jagiellowicz, "Faster and More Intense: Emotion Processing and Attentional Mechanisms in Individuals with Sensory Processing Sensitivity." Note that many personality psychologists who subscribe to the "Big 5" theory of personality associate empathy not with sensitivity (a construct that is gaining attention, but is relatively less well known than the Big 5), but with a trait known as "Agreeableness" and even extroversion. Aron's work does not challenge these associations, but expands them. One of the most valuable aspects of Aron's work is how radically, and fruitfully, she reinterprets personality psychology.
- 138 **tentatively associated with sensitivity:** Seth J. Gillihan et al., "Association Between Serotonin Transporter Genotype and Extraversion," *Psychiatric Genetics* 17, no. 6 (2007): 351–54. See also M. R. Munafò et al., "Genetic Polymorphisms and Personality in Healthy Adults: A Systematic Review and Meta-Analysis," *Molecular Psychiatry* 8 (2003): 471–84.
- 138 **show them pictures of scared faces:** David C. Funder, *The Personality Puzzle* (New York: W. W. Norton, 2010), citing A. R. Hariri et al., "Serotonin Transporter Genetic Variation and the Response of the Human Amygdala," *Science* 297 (2002): 400–403.
- 138 **faces of people experiencing strong feelings:** Acevedo, "Sensory Process-

- ing Sensitivity and Neural Responses to Strangers' Emotional States." See also Jadzia Jagiellowicz, "Faster and More Intense: Emotion Processing and Attentional Mechanisms in Individuals with Sensory Processing Sensitivity."
- 138– **In 1921, FDR contracted polio . . . how suffering Americans felt:**  
 40 Cook, *Eleanor Roosevelt, Volume One*, 125–236. See also *The American Experience: Eleanor Roosevelt*.
- 140– **A kind woman hands a toy to a toddler . . . "prosocial relationships**  
 41 **with parents, teachers, and friends":** Grazyna Kochanska et al., "Guilt in Young Children: Development, Determinants, and Relations with a Broader System of Standards," *Child Development* 73, no. 2 (March/April 2002): 461–82. See also Grazyna Kochanska and Nazan Aksan, "Children's Conscience and Self-Regulation," *Journal of Personality* 74, no. 6 (2006): 1587–1617. See also Grazyna Kochanska et al., "Guilt and Effortful Control: Two Mechanisms That Prevent Disruptive Developmental Trajectories," *Journal of Personality and Social Psychology* 97, no. 2 (2009): 322–33.
- 141 **a 2010 University of Michigan study:** S. H. Konrath et al., "Changes in Dispositional Empathy in American College Students Over Time: A Meta-Analysis," *Personality and Social Psychology Review*, August 2010, e-publication ahead of print (accessed at <http://www.ncbi.nlm.nih.gov/pubmed/20688954>).
- 141 **related to the prevalence of social media:** Pamela Paul, "From Students, Less Kindness for Strangers?" *New York Times*, June 25, 2010.
- 141 **when her peers were teased:** Elaine Aron, *The Highly Sensitive Child* (New York: Random House, 2002), 18, 282–83.
- 141 **the novelist Eric Malpass:** Eric Malpass, *The Long Long Dances* (London: Corgi, 1978).
- 142 **High-reactive introverts sweat more:** V. De Pascalis, "On the Psychophysiology of Extraversion," in *On the Psychobiology of Personality: Essays in Honor of Marvin Zuckerman*, edited by Marvin Zuckerman and Robert M. Stelmack (San Diego: Elsevier, 2004), 22. See also Randy J. Larsen and David M. Buss, *Personality Psychology: Domains of Knowledge About Human Nature* (New York: McGraw-Hill, 2005), 199.
- 142 **sociopaths lie at the extreme end:** Van K. Tharp et al., "Autonomic Activity During Anticipation of an Averse Tone in Noninstitutionalized Sociopaths," *Psychophysiology* 17, no. 2 (1980): 123–28. See also Joseph Newman et al., "Validating a Distinction Between Primary and Secondary Psychopathy with Measures of Gray's BIS and BAS Constructs," *Journal of Abnormal Psychology* 114 (2005): 319–23.

- 142 **sociopaths have damaged amygdalae:** Yaling Yang et al., “Localization of Deformations Within the Amygdala in Individuals with Psychopathy,” *Archives of General Psychiatry* 66, no. 9 (2009), 986–94.
- 142 **Lie detectors . . . are partially skin conductance tests:** They also measure breathing, pulse rate, and blood pressure.
- 143 **supercool pulse rate during liftoff:** Winifred Gallagher, *I.D.: How Heredity and Experience Make You Who You Are* (New York: Random House, 1996), 24.
- 143 **Corine Dijk:** Corine Dijk and Peter J. De Jong, “The Remedial Value of Blushing in the Context of Transgressions and Mishaps,” *Emotion* 9, no. 2 (2009): 287–91.
- 144 **“A blush comes online in two or three seconds”:** Benedict Carey, “Hold Your Head Up: A Blush Just Shows You Care,” *New York Times*, June 2, 2009: D5.
- 144 **“Because it is impossible to control”:** Ibid.
- 144 **Keltner has tracked the roots of human embarrassment . . . than to mind too little:** Dacher Keltner, *Born to Be Good: The Science of a Meaningful Life* (New York: W. W. Norton, 2009), 74–96.
- 145 **“The type that is ‘sensitive’ or ‘reactive.’ . . . ‘opportunity only knocks once’”:** Elaine Aron, “Revisiting Jung’s Concept of Innate Sensitiveness,” 337–67.
- 145 **twenty-seven attributes associated:** Author interview with Elaine Aron, August 21, 2008.
- 145 **other 30 percent are extroverts:** Aron, *Psychotherapy and the Highly Sensitive Person*, 5.
- 146 **More than a hundred species . . . what’s going on around them:** Max Wolf et al., “Evolutionary Emergence of Responsive and Unresponsive Personalities,” *Proceedings of the National Academy of Sciences* 105, no. 41 (2008): 15825–30. See also Aron, *Psychotherapy and the Highly Sensitive Person*, 2.
- 146 **animals had parties:** David Sloan Wilson, *Evolution for Everyone: How Darwin’s Theory Can Change the Way We Think About Our Lives* (New York: Bantam Dell, 2007), 110.
- 146 **trade-off theory of evolution:** Daniel Nettle, “The Evolution of Personality Variation in Humans and Other Animals,” *American Psychologist* 61, no. 6 (2006): 622–31.
- 147 **When Wilson dropped metal traps:** Wilson, *Evolution for Everyone*, 100–114.
- 147 **Trinidadian guppies:** Nettle, “The Evolution of Personality Variation in Humans and Other Animals,” 624. See also Shyrl O’Steen et al., “Rapid Evolution of Escape Ability in Trinidadian Guppies,” *Evolution* 56, no. 4 (2002): 776–84. Note that another study found that bold fish do better

- with predators (but these were cichlids in fish tanks, not pike in streams): Brian R. Smith and Daniel T. Blumstein, "Behavioral Types as Predictors of Survival in Trinidadian Guppies," *Behavioral Ecology* 21, no. 5 (2010): 65–73.
- 148 **nomads who inherited:** Dan Eisenberg et al., "Dopamine Receptor Genetic Polymorphisms and Body Composition in Undernourished Pastoralists: An Exploration of Nutrition Indices Among Nomadic and Recently Settled Ariaal Men of Northern Kenya," *BMC Evolutionary Biology* 8, no. 173 (2008), doi:10.1186/1471-2148-8-173. See also: <http://machineslikeus.com/news/adhd-advantage-nomadic-tribesmen>.
- 148 **extroverts have more sex partners . . . commit more crimes.** Nettle, "The Evolution of Personality Variation in Humans and Other Animals," 625. See also Daniel Nettle, *Personality: What Makes You the Way You Are* (New York: Oxford University Press, 2007).
- 148 **As Jung speculated almost a century ago:** Carl Jung, *Psychological Types*, vol. 6 of *The Collected Works of C. G. Jung* (Princeton, NJ: Princeton University Press, 1971), 559.
- 148 **whose traits promote group survival:** See, for example, Nicholas Wade, "The Evolution of the God Gene," *New York Times*, November 15, 2009.
- 148 **"Suppose a herd of antelope":** Elaine Aron, "Book Review: Unto Others: The Evolution and Psychology of Unselfish Behavior," January 2007, *Comfort Zone Online*: <http://www.hsperson.com/pages/3Feb07.htm>.
- 149 **"hawk" and "dove" members:** Elaine Aron, "A Future Headline: 'HSPs, the Key to Human Survival?'" August 2007, *Comfort Zone Online*: <http://www.hsperson.com/pages/1Aug07.htm>.
- 149 **Great tit birds:** Nettle, "The Evolution of Personality Variation in Humans and Other Animals," 624–25. See also Sloan Wilson, *Evolution for Everyone*, 110.
- 149 **"If you send an introvert into a reception":** David Remnick, "The Wilderness Campaign," *The New Yorker*, September 13, 2004.
- 150 **"Most people in politics draw energy":** John Heilemann, "The Comeback Kid," *New York* magazine, May 21, 2006.
- 151 **"It's about the survival of the planet":** Benjamin Svetkey, "Changing the Climate," *Entertainment Weekly*, July 14, 2006.
- 154 **"warrior kings" and "priestly advisers":** Aron, "Revisiting Jung's Concept of Innate Sensitiveness."

CHAPTER 7: WHY DID WALL STREET CRASH AND WARREN  
BUFFETT PROSPER?

- 155 **Just after 7:30 a.m.:** Alan's story and the description of Dorn and her house are based on a series of telephone and e-mail interviews with the author, conducted between 2008 and 2010.
- 157 **Financial history is full of examples:** There are also many examples from military history. "Hurrah, boys, we've got them!" General Custer famously shouted at the battle of Little Bighorn in 1876—just before his entire unit of two hundred men was wiped out by three thousand Sioux and Cheyenne. General MacArthur advanced in the face of repeated Chinese threats of attack during the Korean War, costing almost 2 million lives with little strategic gain. Stalin refused to believe that the Germans would invade Russia in 1941, even after *ninety* warnings of an impending attack. See Dominic D. P. Johnson, *Overconfidence and War: The Havoc and Glory of Positive Illusions* (Cambridge, MA: Harvard University Press, 2004).
- 157 **The AOL–Time Warner merger:** Nina Monk, *Fools Rush In: Steve Case, Jerry Levin, and the Unmaking of AOL Time-Warner* (New York: HarperCollins, 2005).
- 158 **They protect themselves better from the downside:** The psychology professor Richard Howard, in an interview with the author on November 17, 2008, notes that introverts tend to down-regulate positive emotions and extroverts tend to up-regulate them.
- 158 **our limbic system:** Note that these days many scientists dislike the phrase "limbic system." This is because no one really knows which parts of the brain this term refers to. The brain areas included in this system have changed over the years, and today many use the term to mean brain areas that have something to do with emotion. Still, it's a useful shorthand.
- 159 **"No, no, no! Don't do that":** See, for example, Ahmad R. Hariri, Susan Y. Bookheimer, and John C. Mazziotta, "Modulating Emotional Responses: Effects of a Neocortical Network on the Limbic Systems," *NeuroReport* 11 (1999): 43–48.
- 159 **what makes an extrovert an extrovert:** Richard E. Lucas and Ed Diener, "Cross-Cultural Evidence for the Fundamental Features of Extraversion," *Journal of Personality and Social Psychology* 79, no. 3 (2000): 452–68. See also Michael D. Robinson et al., "Extraversion and Reward-Related Processing: Probing Incentive Motivation in Affective Priming Tasks," *Emotion* 10, no. 5 (2010): 615–26.
- 159 **greater economic, political, and hedonistic ambitions:** Joshua Wilt and William Revelle, "Extraversion," in *Handbook of Individual Differences in Social Behavior*, edited by Mark R. Leary and Rich H. Hoyle (New York: Guilford Press, 2009), 39.

- 159 **The key seems to be positive emotion:** See Lucas and Diener, "Cross-Cultural Evidence for the Fundamental Features of Extraversion." See also Daniel Nettle, *Personality: What Makes You the Way You Are* (New York: Oxford University Press, 2007).
- 160 **The basis of buzz:** Richard Depue and Paul Collins, "Neurobiology of the Structure of Personality: Dopamine, Facilitation of Incentive Motivation, and Extraversion," *Behavioral and Brain Sciences* 22, no. 3 (1999): 491–569. See also Nettle, *Personality: What Makes You the Way You Are*.
- 160 **Dopamine is the "reward chemical":** Depue and Collins, "Neurobiology of the Structure of Personality: Dopamine, Facilitation of Incentive Motivation, and Extraversion." See also Nettle, *Personality: What Makes You the Way You Are*. See also Susan Lang, "Psychologist Finds Dopamine Linked to a Personality Trait and Happiness," *Cornell Chronicle* 28, no. 10 (1996).
- 160 **early findings have been intriguing:** Some of the findings in this line of research have been contradictory or have not been replicated, but together they pose an important avenue of inquiry.
- 160 **In one experiment, Richard Depue:** Depue and Collins, "Neurobiology of the Structure of Personality: Dopamine, Facilitation of Incentive Motivation, and Extraversion."
- 160 **extroverts who win gambling games:** Michael X. Cohen et al., "Individual Differences in Extraversion and Dopamine Genetics Predict Neural Reward Responses," *Cognitive Brain Research* 25 (2005): 851–61.
- 160 **other research has shown that the medial orbitofrontal cortex:** Colin G. DeYoung et al., "Testing Predictions from Personality Neuroscience: Brain Structure and the Big Five," *Psychological Science* 21, no. 6 (2010): 820–28.
- 161 **introverts "have a smaller response" . . . "break a leg to get there":** Nettle, *Personality: What Makes You the Way You Are*.
- 161 **"This is great!":** Michael J. Beatty et al., "Communication Apprehension as Temperamental Expression: A Communibiological Paradigm," *Communication Monographs* 65 (1988): reporting that people with high communication apprehension "value moderate . . . success less than do those low in the trait."
- 161 **"Everyone assumes that it's good to accentuate positive emotions":** Richard Howard interview with the author, November 17, 2008. Howard also pointed to this interesting take by Roy F. Baumeister et al., "How Emotions Facilitate and Impair Self-Regulation," in *Handbook of Emotion Regulation*, edited by James J. Gross (New York: Guilford Press, 2009), 422: "positive emotion can sweep aside the normal restraints that promote civilized behavior."
- 161 **Another disadvantage of buzz:** Note that this sort of risk-taking be-

havior is in what Daniel Nettle (*Personality: What Makes You the Way You Are*, 83) calls “the shared territory” of extroversion and another personality trait, conscientiousness. In some cases conscientiousness is the better predictor.

- 161–**extroverts are more likely than introverts to be killed while driving . . .**  
 62 **remarry:** Nettle, *Personality: What Makes You the Way You Are*. See also Timo Lajunen, “Personality and Accident Liability: Are Extroversion, Neuroticism and Psychoticism Related to Traffic and Occupational Fatalities?” *Personality and Individual Differences* 31, no. 8 (2001): 1365–73.
- 162 **extroverts are more prone than introverts to overconfidence:** Peter Schaefer, “Overconfidence and the Big Five,” *Journal of Research in Personality* 38, no. 5 (2004): 473–80.
- 162 **better off with more women:** See, for example, Sheelah Kolhatkar, “What if Women Ran Wall Street?” *New York Magazine*, March 21, 2010.
- 162 **a strong predictor of financial risk-taking:** Camelia M. Kuhnen and Joan Y. Chiao, “Genetic Determinants of Financial Risk Taking,” *PLoS ONE* 4(2): e4362. doi:10.1371/journal.pone.0004362 (2009). See also Anna Dreber et al., “The 7R Polymorphism in the Dopamine Receptor D4 Gene (DRD4) Is Associated with Financial Risk Taking in Men.” *Evolution and Human Behavior* 30, no. 2 (2009): 85–92.
- 162 **When faced with a low probability of winning:** J. P. Roiser et al., “The Effect of Polymorphism at the Serotonin Transporter Gene on Decision-making, Memory and Executive Function in Ecstasy Users and Controls,” *Psychopharmacology* 188 (2006): 213–27.
- 162 **Another study, of sixty-four traders:** Mark Fenton O’Creevy et al., *Traders: Risks, Decisions, and Management in Financial Markets* (Oxford, UK: Oxford University Press, 2005), 142–43.
- 163 **delaying gratification, a crucial life skill:** Jonah Lehrer, “Don’t,” *The New Yorker*, May 18, 2009. See also Jacob B. Hirsh et al., “Positive Mood Effects on Delay Discounting,” *Emotion* 10, no. 5 (2010): 717–21. See also David Brooks, *The Social Animal* (New York: Random House, 2011), 124.
- 163 **scientists gave participants the choice:** Samuel McClure et al., “Separate Neural Systems Value Immediate and Delayed Monetary Rewards,” *Science* 306 (2004): 503–7.
- 163 **A similar study suggests:** Hirsch, “Positive Mood Effects on Delay Discounting.”
- 163 **Yet it was just this kind of risk-reward miscalculation:** Wall Street’s judgment was clouded by a strange brew of (1) lemming-like behavior, (2) the opportunity to earn large transaction fees, (3) the fear of losing market share to competitors, and (4) the inability to properly balance opportunity against risk.

- 164 **Too much power was concentrated in the hands of aggressive risk-takers:** Interview with the author, March 5, 2009.
- 164 **“For twenty years, the DNA”:** Fareed Zakaria, “There Is a Silver Lining,” *Newsweek*, October 11, 2008.
- 164 **Vincent Kaminski:** Steven Pearlstein, “The Art of Managing Risk,” *The Washington Post*, November 8, 2007. See also Alexei Barrionuevo, “Vincent Kaminski: Sounding the Alarm But Unable to Prevail,” in “10 Enron Players: Where They Landed After the Fall,” *The New York Times*, January 29, 2006. And see Kurt Eichenwald, *Conspiracy of Fools: A True Story* (New York: Broadway, 2005), 250.
- 165 **Imagine that you’ve been invited to Newman’s lab:** C. M. Patterson and Joseph Newman, “Reflectivity and Learning from Aversive Events: Toward a Psychological Mechanism for the Syndromes of Disinhibition,” *Psychological Review* 100 (1993): 716–36. Carriers of the s-variant of the 5HTTLPR polymorphism (which is associated with introversion and sensitivity) have also been shown to be faster to learn to avoid penalizing stimuli in passive avoidance tasks. See E. C. Finger et al., “The Impact of Tryptophan Depletion and 5-HTTLPR Genotype on Passive Avoidance and Response Reversal Instrumental Learning Tasks,” *Neuropsychopharmacology* 32 (2007): 206–15.
- 166 **introverts are “geared to inspect”:** John Brebner and Chris Cooper, “Stimulus or Response-Induced Excitation: A Comparison of the Behavior of Introverts and Extroverts,” *Journal of Research in Personality* 12, no. 3 (1978): 306–11.
- 166 **more likely you are to learn:** Indeed, it’s been shown that one of the crucial ways that we learn is to analyze our mistakes. See Jonah Lehrer, *How We Decide* (New York: Houghton Mifflin Harcourt, 2009), 51.
- 166–67 **If you force extroverts to pause . . . how to behave around warning signals in the future:** Interview with the author, November 13, 2008. Another way to understand why some people worry about risks and others ignore them is to go back to the idea of brain networks. In this chapter I focused on the dopamine-driven reward system and its role in delivering life’s goodies. But there’s a mirror-image brain network, often called the loss avoidance system, whose job is to call our attention to risk. If the reward network chases shiny fruit, the loss avoidance system worries about bad apples.

The loss avoidance system, like the reward network, is a double-edged sword. It can make people anxious, unpleasantly anxious, so anxious that they sit out bull markets while everyone else gets rich. But it also causes them to take fewer stupid risks. This system is mediated in part by a neurotransmitter called serotonin—and when people are given drugs

like Prozac (known as selective serotonin reuptake inhibitors) that affect the loss avoidance system, they become more blasé about danger. They also become more gregarious. These features coincide uncannily, points out the neurofinance expert Dr. Richard Peterson, with the behavior of irrationally exuberant investors. “The characteristics of decreased threat perception and increased social affiliation [resulting from drugs like Prozac] mirror the decreased risk perception and herding of excessively bullish investors,” he writes. “It is as if bubble investors are experiencing a partial deactivation of their brains’ loss avoidance systems.”

- 167 **relative performance of introverts and extroverts:** Dalip Kumar and Asha Kapila, “Problem Solving as a Function of Extraversion and Masculinity,” *Personality and Individual Differences* 8, no. 1 (1987): 129–32.
- 167 **Extroverts get better grades:** Adrian Furnham et al., “Personality, Cognitive Ability, and Beliefs About Intelligence as Predictors of Academic Performance,” *Learning and Individual Differences* 14 (2003): 49–66. See also Isabel Briggs Myers and Mary H. McCaulley, *MBTI Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator* (Palo Alto, CA: Consulting Psychologists Press, 1985), 116; see also the Myers 1980 study referred to in Allan B. Hill, “Developmental Student Achievement: The Personality Factor,” *Journal of Psychological Type* 9, no. 6 (2006): 79–87.
- 167 **141 college students’ knowledge:** Eric Rolffhus and Philip Ackerman, “Assessing Individual Differences in Knowledge: Knowledge, Intelligence, and Related Traits,” *Journal of Educational Psychology* 91, no. 3 (1999): 511–26.
- 167 **disproportionate numbers of graduate degrees:** G. P. Maccaid, M. H. McCaulley, and R. I. Kainz, *Atlas of Type Tables* (Gainesville, FL: Center for Applications of Psychological Type, 1986), pp. 483–85. See also Hill, “Developmental Student Achievement.”
- 167 **outperform extroverts on the Watson-Glaser:** Joanna Moutafi, Adrian Furnham, and John Crump, “Demographic and Personality Predictors of Intelligence: A Study Using the NEO Personality Inventory and the Myers-Briggs Type Indicator,” *European Journal of Personality* 17, no. 1 (2003): 79–84.
- 168 **Introverts are not smarter than extroverts:** Author interview with Gerald Matthews, November 24, 2008. See also D. H. Saklofske and D. D. Kostura, “Extraversion-Introversion and Intelligence,” *Personality and Individual Differences* 11, no. 6 (1990): 547–51.
- 168 **those performed under time or social pressure:** Gerald Matthews and Lisa Dorn, “Cognitive and Attentional Processes in Personality and Intel-

- ligence,” in *International Handbook of Personality and Intelligence*, edited by Donald H. Saklofske and Moshe Zeidner (New York: Plenum Press, 1995), 367–96. See also Gerald Matthews et al., *Personality Traits* (Cambridge, UK: Cambridge University Press, 2003), ch. 12.
- 168 **also direct their attention differently . . . are asking “what if”:** Debra L. Johnson et al., “Cerebral Blood Flow and Personality: A Positron Emission Tomography Study,” *The American Journal of Psychiatry* 156 (1999): 252–57. See also Lee Tilford Davis and Peder E. Johnson, “An Assessment of Conscious Content as Related to Introversi-on-Extroversion,” *Imagination, Cognition and Personality* 3, no. 2 (1983).
- 168 **a difficult jigsaw puzzle to solve:** Colin Cooper and Richard Taylor, “Personality and Performance on a Frustrating Cognitive Task,” *Perceptual and Motor Skills* 88, no. 3 (1999): 1384.
- 168 **a complicated series of printed mazes:** Rick Howard and Maeve McKillen, “Extraversion and Performance in the Perceptual Maze Test,” *Personality and Individual Differences* 11, no. 4 (1990): 391–96. See also John Weinman, “Noncognitive Determinants of Perceptual Problem-Solving Strategies,” *Personality and Individual Differences* 8, no. 1 (1987): 53–58.
- 169 **Raven Standard Progressive Matrices:** Vidhu Mohan and Dalip Kumar, “Qualitative Analysis of the Performance of Introverts and Extroverts on Standard Progressive Matrices,” *British Journal of Psychology* 67, no. 3 (1976): 391–97.
- 169 **personality traits of effective call-center employees:** Interview with the author, February 13, 2007.
- 170 **if you were staffing an investment bank:** Interview with the author, July 7, 2010.
- 170 **men who are shown erotic pictures:** Camelia Kuhnen et al., “Nucleus Accumbens Activation Mediates the Influence of Reward Cues on Financial Risk Taking,” *NeuroReport* 19, no. 5 (2008): 509–13.
- 171 **all introverts are constantly . . . vigilant about threats:** Indeed, many contemporary personality psychologists would say that threat-vigilance is more characteristic of a trait known as “neuroticism” than of introversion per se.
- 171 **threat-vigilance is more characteristic of a trait:** But harm avoidance is correlated with both introversion and neuroticism (both traits are associated with Jerry Kagan’s “high reactivity” and Elaine Aron’s “high sensitivity”). See Mary E. Stewart et al., “Personality Correlates of Happiness and Sadness: EPQ-R and TPQ Compared,” *Personality and Individual Differences* 38, no. 5 (2005): 1085–96.
- 171 **“If you want to determine”:** can be found at <http://www.psy.miami.edu/>

- faculty/ccarver/sclBISBAS.html. I first came across this scale in Jonathan Haidt's excellent book, *The Happiness Hypothesis: Finding Modern Truth in Ancient Wisdom* (New York: Basic Books, 2005), 34.
- 172 **"become independent of the social environment"**: Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience* (New York: Harper Perennial, 1990), 16.
- 172 **"Psychological theories usually assume"**: Mihaly Csikszentmihalyi, *The Evolving Self: A Psychology for the Third Millennium* (New York: Harper Perennial, 1994), xii.
- 173 **you probably find that your energy is boundless**: The same goes for happiness. Research suggests that buzz and other positive emotions seem to come a little easier to extroverts, and that extroverts as a group are happier. But when psychologists compare happy extroverts with happy introverts, they find that the two groups share many of the same characteristics—self-esteem; freedom from anxiety; satisfaction with their life work—and that those features predict happiness more strongly than extroversion itself does. See Peter Hills and Michael Argyle, "Happiness, Introversion-Extraversion and Happy Introverts," *Personality and Individual Differences* 30 (2001): 595–608.
- 173 **"Release Your Inner Extrovert"**: *BusinessWeek* online column, November 26, 2008.
- 173 **Chuck Prince**: For an account of Chuck Prince's persona, see, for example, Mara Der Hovanesian, "Rewiring Chuck Prince," *Bloomberg BusinessWeek*, February 20, 2006.
- 174 **Seth Klarman**: For information on Klarman, see, for example, Charles Klein, "Klarman Tops Griffin as Investors Hunt for 'Margin of Safety,'" *Bloomberg BusinessWeek*, June 11, 2010. See also Geraldine Fabrikant, "Manager Frets Over Market but Still Outdoes It," *New York Times*, May 13, 2007.
- 175 **Michael Lewis**: Michael Lewis, *The Big Short: Inside the Doomsday Machine* (New York: W. W. Norton, 2010).
- 176 **Warren Buffett**: Warren Buffett's story, as related in this chapter, comes from an excellent biography: Alice Schroeder, *The Snowball: Warren Buffett and the Business of Life* (New York: Bantam Books, 2008).
- 177 **"inner scorecard"**: Some psychologists would relate Warren Buffett's self-direction not necessarily to introversion but to a different phenomenon called "internal locus of control."

#### CHAPTER 8: SOFT POWER

- 181 **Mike Wei**: The interviews with Mike Wei and others from Cupertino, related throughout this chapter, were conducted with the author at various stages between 2006 and 2010.

- 182 **article called “The New White Flight”:** Suein Hwang, “The New White Flight,” *Wall Street Journal*, November 19, 2005.
- 182–53 **were National Merit Scholarship . . . 27 percent higher than the**  
83 **nationwide average:** Monta Vista High School website, as of May 31, 2010.
- 184 **Talking is simply not a focus:** Richard C. Levin, “Top of the Class: The Rise of Asia’s Universities,” *Foreign Affairs*, May/June 2010.
- 185 **the San Jose Mercury News ran an article:** Sarah Lubman, “East West Teaching Traditions Collide,” *San Jose Mercury News*, February 23, 1998.
- 186 **“colleges can learn to listen to their sound of silence”:** Heejung Kim, “We Talk, Therefore We Think? A Cultural Analysis of the Effect of Talking on Thinking,” *Journal of Personality and Social Psychology* 83, no. 4 (2002): 828–42.
- 186 **The Journal of Research in Personality:** Robert R. McCrae, “Human Nature and Culture: A Trait Perspective,” *Journal of Research in Personality* 38 (2004): 3–14.
- 186 **Americans are some of the most extroverted:** See, for example, David G. Winter, *Personality: Analysis and Interpretation of Lives* (New York: McGraw-Hill, 1996), 459.
- 187 **One study comparing eight- to ten-year-old children:** Xinyin Chen et al., “Social Reputation and Peer Relationships in Chinese and Canadian Children: A Cross-Cultural Study,” *Child Development* 63, no. 6 (1992): 1336–43. See also W. Ray Crozier, *Shyness: Development, Consolidation and Change* (Routledge, 2001), 147.
- 187 **Chinese high school students tell researchers:** Michael Harris Bond, *Beyond the Chinese Face: Insights from Psychology* (New York: Oxford University Press, 1991), 62.
- 187 **Another study asked Asian-Americans:** Kim, “We Talk, Therefore We Think?”
- 187 **Asian attitudes to the spoken word:** See, for example, Heejung Kim and Hazel Markus, “Freedom of Speech and Freedom of Silence: An Analysis of Talking as a Cultural Practice,” in *Engaging Cultural Differences in Liberal Democracies*, edited by Richard K. Shweder et al. (New York: Russell Sage Foundation, 2002), 432–52.
- 187 **proverbs from the East:** Some of these come from the epigraph of the article by Heejung Kim and Hazel Markus, cited above.
- 188 **grueling Ming dynasty-era jinshi exam:** Nicholas Kristof, “The Model Students,” *New York Times*, May 14, 2006.
- 189 **pictures of men in dominance poses:** Jonathan Freeman et al., “Culture Shapes a Mesolimbic Response to Signals of Dominance and Subordination that Associates with Behavior,” *NeuroImage* 47 (2009): 353–59.

- 190 **“It is only those from an explicit tradition”:** Harris Bond, *Beyond the Chinese Face*, 53.
- 190 **taijin kyofusho:** Carl Elliott, *Better Than Well: American Medicine Meets the American Dream* (New York: W. W. Norton, 2003), 71.
- 190 **Tibetan Buddhist monks find inner peace:** Marc Kaufman, “Meditation Gives Brain a Charge, Study Finds,” *Washington Post*, January 3, 2005.
- 190 **“Their civility has been well documented”:** Lydia Millet, “The Humblest of Victims,” *New York Times*, August 7, 2005.
- 190 **Westernization of the past several decades:** See, for example, Xinyin Chen et al., “Social Functioning and Adjustment in Chinese Children: The Imprint of Historical Time,” *Child Development* 76, no. 1 (2005): 182–95.
- 193 **One study comparing European-American:** C. S. Huntsinger and P. E. Jose, “A Longitudinal Investigation of Personality and Social Adjustment Among Chinese American and European American Adolescents,” *Child Development* 77, no. 5 (2006): 1309–24. Indeed, the same thing seems to be happening to Chinese kids in *China* as the country Westernizes, according to a series of longitudinal studies measuring changes in social attitudes. While shyness was associated with social and academic achievement for elementary school children as recently as 1990, by 2002 it predicted peer rejection and even depression. See Chen, “Social Functioning and Adjustment in Chinese Children.”
- 194 **The journalist Nicholas Lemann:** “Jews in Second Place,” *Slate*, June 25, 1996.
- 196 **“A . . . E . . . U . . . O . . . I”:** These vowels were presented out of the usual sequence at Preston Ni’s seminar.
- 197 **Gandhi was, according to his autobiography:** The story of Gandhi related in this chapter comes primarily from *Gandhi: An Autobiography: The Story of My Experiments with Truth* (Boston: Beacon Press, 1957), esp. 6, 20, 40–41, 59, 60–62, 90–91.
- 200 **The TIMSS exam:** I originally learned about this from Malcom Gladwell, *Outliers: The Story of Success* (New York: Little Brown and Company, 2008).
- 200 **In 1995, for example, the first year the TIMSS was given:** “Pursuing Excellence: A Study of U.S. Eighth-Grade Mathematics and Science Teaching, Learning Curriculum, and Achievement in International Context, Initial Findings from the Third International Mathematics and Science Study,” U.S. Department of Education, National Center for Education Statistics, *Pursuing Excellence*, NCES 97-198 (Washington, DC: U.S. Government Printing Office, 1996).

- 200 **In 2007, when researchers measured:** TIMSS Executive Summary. The nations whose students fill out more of the questionnaire also tend to have students who do well on the TIMSS test: Erling E. Boe et al., “Student Task Persistence in the Third International Mathematics and Science Study: A Major Source of Achievement Differences at the National, Classroom and Student Levels” (Research Rep. No. 2002-TIMSS1) (Philadelphia: University of Pennsylvania, Graduate School of Education, Center for Research and Evaluation in Social Policy). Note that this study was based on 1995 data.
- 201 **cross-cultural psychologist Priscilla Blinco:** Priscilla Blinco, “Task Persistence in Japanese Elementary Schools,” in *Windows on Japanese Education*, edited by Edward R. Beauchamp (Westport, CT: Greenwood Press, 1991). Malcolm Gladwell wrote about this study in his book *Outliers*.

CHAPTER 9: WHEN SHOULD YOU ACT MORE EXTROVERTED  
THAN YOU REALLY ARE?

- 205 **Meet Professor Brian Little:** The stories about Brian Little throughout this chapter come from numerous telephone and e-mail interviews with the author between 2006 and 2010.
- 206 **Hippocrates, Milton, Schopenhauer, Jung:** Please see A Note on the Words *Introvert* and *Extrovert* for more on this point.
- 206 **Walter Mischel:** For an overview of the person-situation debate, see, for example, David C. Funder, *The Personality Puzzle* (New York: W. W. Norton, 2010), 118–44. See also Walter Mischel and Yuichi Shoda, “Reconciling Processing Dynamics and Personality Dispositions,” *Annual Review of Psychology* 49 (1998): 229–58. In further support of the premise that there truly is such a thing as a fixed personality: We know now that people who score as introverts on personality tests tend to have different physiologies and probably inherit some different genes from those who measure as extroverts. We also know that personality traits predict an impressive variety of important life outcomes. If you’re an extrovert, you’re more likely to have a wide circle of friends, have risky sex, get into accidents, and excel at people-oriented work like sales, human resources, and teaching. (This doesn’t mean that you *will* do these things—only that you’re more *likely* than your typical introvert to do them.) If you’re an introvert, you’re more likely to excel in high school, in college, and in the land of advanced degrees, to have smaller social networks, to stay married to your original partner, and to pursue autonomous work like art, research, math, and engineering. Extroversion and introversion even predict the psychological challenges you might face: depression and anxiety for introverts

(think Woody Allen); hostility, narcissism, and overconfidence for extroverts (think Captain Ahab in *Moby-Dick*, drunk with rage against a white whale).

In addition, there are studies showing that the personality of a seventy-year-old can be predicted with remarkable accuracy from early adulthood on. In other words, despite the remarkable variety of situations that we experience in a lifetime, our core traits remain constant. It's not that our personalities don't evolve; Kagan's research on the malleability of high-reactive people has singlehandedly disproved this notion. But we tend to stick to predictable patterns. If you were the tenth most introverted person in your high school class, your behavior may fluctuate over time, but you probably still find yourself ranked around tenth at your fiftieth reunion. At that class reunion, you'll also notice that many of your classmates will be more introverted than you remember them being in high school: quieter, more self-contained, and less in need of excitement. Also more emotionally stable, agreeable, and conscientious. All of these traits grow more pronounced with age. Psychologists call this process "intrinsic maturation," and they've found these same patterns of personality development in countries as diverse as Germany, the UK, Spain, the Czech Republic, and Turkey. They've also found them in chimps and monkeys.

This makes evolutionary sense. High levels of extroversion probably help with mating, which is why most of us are at our most sociable during our teenage and young adult years. But when it comes to keeping marriages stable and raising children, having a restless desire to hit every party in town may be less useful than the urge to stay home and love the one you're with. Also, a certain degree of introspection may help us age with equanimity. If the task of the first half of life is to put yourself out there, the task of the second half is to make sense of where you've been.

- 207 **social life is performance:** See, for example, Carl Elliott, *Better Than Well: American Medicine Meets the American Dream* (New York: W. W. Norton, 2003), 47.
- 207 **Jack Welch advised in a *BusinessWeek*:** Jack Welch, "Release Your Inner Extrovert," *BusinessWeek* online, November 26, 2008.
- 209 **Free Trait Theory:** For an overview of Free Trait Theory, see, for example, Brian R. Little, "Free Traits, Personal Projects, and Ideo-Tapes: Three Tiers for Personality Psychology," *Psychological Inquiry* 7, no. 4 (1996): 340–44.
- 210 **"To thine own self be true":** Actually, this advice comes not so much from Shakespeare as from his character Polonius in *Hamlet*.
- 212 **research psychologist named Richard Lippa:** Richard Lippa, "Expressive Control, Expressive Consistency, and the Correspondence Between Ex-

- pressive Behavior and Personality,” *Journal of Behavior and Personality* 36, no. 3 (1976): 438–61. Indeed, psychologists have found that some people who claim not to be shy in a written questionnaire are quite adept at concealing those aspects of shyness that they can control consciously, such as talking to members of the opposite sex and speaking for long periods of time. But they often “leak” their shyness unwittingly, with tense body postures and facial expressions.
- 212 **psychologists call “self-monitoring”**: Mark Snyder, “Self-Monitoring of Expressive Behavior,” *Journal of Personality and Social Psychology* 30, no. 4 (1974): 526–37.
- 213 **experience less stress while doing so**: Joyce E. Bono and Meredith A. Vey, “Personality and Emotional Performance: Extraversion, Neuroticism, and Self-Monitoring,” *Journal of Occupational Health Psychology* 12, no. 2 (2007): 177–92.
- 219 **“Restorative niche” is Professor Little’s term**: See, for example, Brian Little, “Free Traits and Personal Contexts: Expanding a Social Ecological Model of Well-Being,” in *Person-Environment Psychology: New Directions and Perspectives*, edited by W. Bruce Walsh et al. (Mahwah, NJ: Lawrence Erlbaum Associates, 2000).
- 220 **“a Free Trait Agreement”**: See, for example, Brian Little and Maryann F. Joseph, “Personal Projects and Free Traits: Mutable Selves and Well Beings,” in *Personal Project Pursuit: Goals, Action, and Human Flourishing*, edited by Brian R. Little et al. (Mahwah, NJ: Lawrence Erlbaum Associates, 2007), 395.
- 223 **“Emotional labor”**: Howard S. Friedman, “The Role of Emotional Expression in Coronary Heart Disease,” in *In Search of the Coronary-Prone: Beyond Type A*, edited by A. W. Siegman et al. (Hillsdale, NJ: Lawrence Erlbaum Associates, 1989), 149–68.
- 223 **people who suppress negative emotions**: Melinda Wenner, “Smile! It Could Make You Happier: Making an Emotional Face—or Suppressing One—Influences Your Feelings,” *Scientific American Mind*, October 14, 2009, <http://www.scientificamerican.com/article.cfm?id=smile-it-could-make-you-happier>.

#### CHAPTER 10: THE COMMUNICATION GAP

- 226 **people who value intimacy highly**: Randy J. Larsen and David M. Buss, *Personality Psychology: Domains of Knowledge About Human Nature* (New York: McGraw-Hill, 2005), 353.
- 226 **“Extroverts seem to need people as a forum”**: E-mail from William Graziano to the author, July 31, 2010.

- 227 **In a study of 132 college students:** Jens B. Asendorff and Susanne Wilpers, "Personality Effects on Social Relationships," *Journal of Personality and Social Psychology* 74, no. 6 (1998): 1531–44.
- 227 **so-called Big Five traits:** Agreeableness is defined later in this chapter. "Openness to Experience" measures curiosity, openness to new ideas, and appreciation for art, invention, and unusual experiences; "Conscientious" people are disciplined, dutiful, efficient, and organized; "Emotional Stability" measures freedom from negative emotions.
- 227 **sit them down in front of a computer screen:** Benjamin M. Wilkowski et al., "Agreeableness and the Prolonged Spatial Processing of Antisocial and Prosocial Information," *Journal of Research in Personality* 40, no. 6 (2006): 1152–68. See also Daniel Nettle, *Personality: What Makes You the Way You Are* (New York: Oxford University Press, 2007), chapter on agreeableness.
- 227 **equally likely to be agreeable:** Under the "Big Five" definitions of personality, extroversion and agreeableness are by definition orthogonal. See, for example, Colin G. DeYoung et al., "Testing Predictions from Personality Neuroscience: Brain Structure and the Big Five," *Psychological Science* 21, no. 6 (2010): 820–28: "Agreeableness appears to identify the collection of traits related to altruism: one's concern for the needs, desires, and rights of others (as opposed to one's enjoyment of others, which appears to be related primarily to Extraversion)."
- 230 **latter are "confrontive copers":** See, for example: (1) Donald A. Loffredo and Susan K. Opt, "Argumentation and Myers-Briggs Personality Type Preferences," paper presented at the National Communication Association Convention, Atlanta, GA; (2) Rick Howard and Maeve McKillen, "Extraversion and Performance in the Perceptual Maze Test," *Personality and Individual Differences* 11, no. 4 (1990): 391–96; (3) Robert L. Geist and David G. Gilbert, "Correlates of Expressed and Felt Emotion During Marital Conflict: Satisfaction, Personality, Process and Outcome," *Personality and Individual Differences* 21, no. 1 (1996): 49–60; (4) E. Michael Nussbaum, "How Introverts Versus Extroverts Approach Small-Group Argumentative Discussions," *The Elementary School Journal* 102, no. 3 (2002): 183–97.
- 230 **An illuminating study by the psychologist William Graziano:** William Graziano et al., "Extraversion, Social Cognition, and the Salience of Aversiveness in Social Encounters," *Journal of Personality and Social Psychology* 49, no. 4 (1985): 971–80.
- 231 **robots interacted with stroke patients:** See Jerome Groopman, "Robots That Care," *The New Yorker*, November 2, 2009. See also Adriana Tapus and Maja Mataric, "User Personality Matching with Hands-Off Robot for

- Post-Stroke Rehabilitation Therapy,” in *Experimental Robotics*, vol. 39 of *Springer Tracts in Advance Robotics* (Berlin: Springer, 2008), 165–75.
- 231 **University of Michigan business school study:** Shirli Kopelman and Ashleigh Shelby Rosette, “Cultural Variation in Response to Strategic Emotions in Negotiations,” *Group Decision and Negotiation* 17, no. 1 (2008): 65–77.
- 232 **In her book Anger:** Carol Tavris, *Anger: The Misunderstood Emotion* (New York: Touchstone, 1982).
- 233 **catharsis hypothesis is a myth:** Russell Geen et al., “The Facilitation of Aggression by Aggression: Evidence against the Catharsis Hypothesis,” *Journal of Personality and Social Psychology* 31, no. 4 (1975): 721–26. See also Tavris, *Anger*.
- 233 **people who use Botox:** Carl Zimmer, “Why Darwin Would Have Loved Botox,” *Discover*, October 15, 2009. See also Joshua Ian Davis et al., “The Effects of BOTOX Injections on Emotional Experience,” *Emotion* 10, no. 3 (2010): 433–40.
- 236 **thirty-two pairs of introverts and extroverts:** Matthew D. Lieberman and Robert Rosenthal, “Why Introverts Can’t Always Tell Who Likes Them: Multitasking and Nonverbal Decoding,” *Journal of Personality and Social Psychology* 80, no. 2 (2006): 294–310.
- 237 **It requires a kind of mental multitasking:** Gerald Matthews and Lisa Dorn, “Cognitive and Attentional Processes in Personality and Intelligence,” in *International Handbook of Personality and Intelligence*, edited by Donald H. Saklofske and Moshe Zeidner (New York: Plenum, 1995), 367–96.
- 237 **interpreting what the other person is saying:** Lieberman and Rosenthal, “Why Introverts Can’t Always Tell Who Likes Them.”
- 238 **experiment by the developmental psychologist Avril Thorne:** Avril Thorne, “The Press of Personality: A Study of Conversations Between Introverts and Extraverts,” *Journal of Personality and Social Psychology* 53, no. 4 (1987): 718–26.

#### CHAPTER 11: ON COBBLERS AND GENERALS

Some of the advice in this chapter is based on interviews I conducted with many caring teachers, school administrators, and child psychologists, and on the following wonderful books:

Elaine Aron, *The Highly Sensitive Child: Helping Our Children Thrive When the World Overwhelms Them* (New York: Broadway Books), 2002.

Bernardo J. Carducci, *Shyness: A Bold New Approach* (New York: Harper Paperbacks, 2000).

Natalie Madorsky Elman and Eileen Kennedy-Moore, *The Unwritten Rules of Friendship* (Boston: Little Brown, 2003).

Jerome Kagan and Nancy Snidman, *The Long Shadow of Temperament* (Cambridge, MA: Harvard University Press, 2004).

Barbara G. Markway and Gregory P. Markway, *Nurturing the Shy Child* (New York: St. Martin's Press, 2005).

Kenneth H. Rubin, *The Friendship Factor* (New York: Penguin, 2002).

Ward K. Swallow, *The Shy Child: Helping Children Triumph Over Shyness* (New York: Time Warner, 2000).

- 241 **Mark Twain once told a story:** This comes from Donald Mackinnon, who believed (but was not 100 percent certain) that Mark Twain told this story. See Donald W. MacKinnon, "The Nature and Nurture of Creative Talent," (Walter Van Dyke Bingham Lecture given at Yale University, New Haven, CT, April 11, 1962).
- 241 **this cautionary tale . . . by Dr. Jerry Miller:** I conducted several in-person and e-mail interviews with Dr. Miller between 2006 and 2010.
- 246 **Emily Miller:** I conducted several interviews with Emily Miller between 2006 and 2010.
- 247 **Elaine Aron:** Elaine N. Aron, *Psychotherapy and the Highly Sensitive Person* (New York: Routledge, 2010), 18–19.
- 249 **Dr. Kenneth Rubin:** Rubin, *The Friendship Factor*.
- 253 **"very little is made available to that learner":** Jill D. Burruss and Lisa Kaenzig, "Introversion: The Often Forgotten Factor Impacting the Gifted," *Virginia Association for the Gifted Newsletter* 21, no. 1 (1999).
- 255 **Experts believe that negative public speaking:** Gregory Berns, *Iconoclast: A Neuroscientist Reveals How to Think Differently* (Boston, MA: Harvard Business Press, 2008), 77.
- 255 **Extroverts tend to like movement:** Isabel Myers et al., *MBTI Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator*, 3rd ed., 2nd printing (Palo Alto, CA: Consulting Psychologists Press, 1998), 261–62. See also Allen L. Hammer, ed., *MBTI Applications: A Decade of Research on the Myers-Briggs Type Indicator* (Palo Alto, CA: Consulting Psychologists Press, 1996).
- 255 **prerequisite to talent development:** See chapter 3, especially on the work of Anders Ericsson.

- 256 **“they are usually very comfortable talking with one or two of their classmates”**: E-mail from Roger Johnson to the author, June 14, 2010.
- 256 **Don’t seat quiet kids in “high interaction” areas**: James McCroskey, “Quiet Children in the Classroom: On Helping Not Hurting,” *Communication Education* 29 (1980).
- 258 **being popular isn’t necessary**: Rubin, *The Friendship Factor*: “Research findings do not suggest that popularity is the golden route to all manner of good things. There simply is not much evidence that it guarantees social or academic success in adolescence, young adulthood, or later life. . . . If your child finds one other child to befriend, and the pair clearly have fun together and enjoy each other’s company and are supportive companions, good for him. Stop worrying. Not every child needs to be part of a big, happy gang. Not every child needs many friends; for some, one or two will do.”
- 259 **intense engagement in and commitment to an activity**: I. McGregor and Brian Little, “Personal Projects, Happiness, and Meaning: On Doing Well and Being Yourself,” *Journal of Personality and Social Psychology* 74, no. 2 (1998): 494–512.
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A NOTE ON THE WORDS *INTROVERT* AND *EXTROVERT*

- 270 **the anthropologist C. A. Valentine**: C. A. Valentine, “Men of Anger and Men of Shame: Lakalai Ethnopsychology and Its Implications for Sociological Theory,” *Ethnology* no. 2 (1963): 441–77. I first learned about this article from David Winter’s excellent textbook, *Personality: Analysis and Interpretation of Lives* (New York: McGraw-Hill, 1996).
- 270 **Aristotle**: *Aristoteles, Problematica Physica* XXX, 1 (Bekker 953A 10 ff.), as translated in Jonathan Barnes, *The Complete Works of Aristotle, the Revised Oxford Translation II* (Princeton, N.J.: Bollingen, 1984).
- 271 **John Milton**: Cited in David G. Winter, *Personality: Analysis and Interpretation of Lives* (New York: McGraw-Hill, 1996), 380–84.
- 271 **Schopenhauer**: Arthur Schopenhauer, “Personality, or What a Man Is,” in *The Wisdom of Life and Other Essays* (New York and London: Dunne, 1901), 12–35 (original work published 1851); cited in Winter, *Personality*, 384–86.