

professors, administrators, and students. Here, the number of people I interviewed is hard to add up because I drew on conversations over decades of working in a university.

For my chapter on work, I spoke with a range of professionals including lawyers, doctors, architects, consultants, and members of the financial services community. In a software company I call HeartTech, a design firm I call Stoddard, and a consulting company I call Ready-Learn, I was able to run focus groups as well as have individual interviews with a wide range of employees, from engineers and programmers to financial executives, architects, and administrative assistants. For the chapter on work I spoke with 202 individuals.

When I talk about the conversations of the public square, my emphasis is the emerging political sensibilities of those who grew up with smartphones, and I return primarily to my data on adolescents and young adults.

- 16 **We have built machines that speak:** I have been studying our conversations with intelligent machines for over three decades. Hundreds of subjects, child and adult, have been involved in this work. For a review of earlier studies, see my *Alone Together: Why We Expect More from Technology and Less from Each Other* (New York: Basic Books, 2011).

THE FLIGHT FROM CONVERSATION

- 19 **"My guess—and I think":** The Fletcher School, "Eric Schmidt and Jared Cohen on 'The New Digital Age,'" February 26, 2014, YouTube video, <https://www.youtube.com/watch?v=NYGzB7uveh0>.

February 26, 2014, YouTube video, <https://www.youtube.com/watch?v=NYGzB7uveh0>.

- 19 **"Don't all these little tweets":** *The Colbert Report*, January 17, 2011.

- 21 **Studies show that the mere presence of a phone:** Andrew Przybylski and Netta Weinstein, "Can You Connect with Me Now? How the Presence of Mobile Communication Technology Influences Face-to-Face Conversation Quality," *Journal of Social and Personal Relationships* (2012): 1–10, doi:10.1177/0265407512453827.

- 21 **each feels less connected to the other:** Shalini Misra, Lulu Cheng, Jamie Genevie, et al., "The iPhone Effect: The Quality of In-Person Social Interactions in the Presence of Mobile Devices," *Environment and Behavior* (2014): 124, doi:10.1177/0013916514539755. This study takes the theme of "Can You Connect with Me Now?," a laboratory experiment, and investigates it in a natural setting with similar results.

- 21 **a trend that researchers link to the new presence of digital communications:** Psychologist Sara Konrath collated evidence from seventy-two studies that suggested that empathy levels among U.S. college students are 40 percent lower than they were twenty years ago. She notes that in the past ten years there has been an especially sharp drop. She and her team speculate that this may be due to the increase in mediated communication—"with so much time spent interacting with others *online* rather than in reality, interpersonal dynamics such as empathy might certainly be altered." See Sara Konrath, Edward H. O'Brien, and Courtney Hsing, "Changes in Dispositional Empathy in American College Stu-

- dents over Time: A Meta-Analysis," *Personality and Social Psychology Review* 15, no. 2 (May 2011): 180–98, doi:10.1177/1088868310377395.
- 22 **when children hear less adult talk:** D. A. Christakis, J. Gilkerson, J. A. Richards, et al., "Audible Television and Decreased Adult Words, Infant Vocalizations, and Conversational Turns: A Population-Based Study," *Archives of Pediatrics and Adolescent Medicine* 163, no. 6 (June 2009): 554–58, doi:10.1001/archpediatrics.2009.61.
- 23 **In-person conversation led to the most emotional connection:** In this study, not surprisingly, video chat was second and audio chat third in providing feelings of connection. L. E. Sherman, M. Michikyan, and Patricia Greenfield, "The Effects of Text, Audio, Video, and In-Person Communication on Bonding Between Friends," *Cyberpsychology: Journal of Psychosocial Research on Cyberspace* 7, no. 2, article 1 (2013), doi:10.5817/CP2013-2-3.
- 23 **we become most human to each other:** The philosopher Emmanuel Levinas writes that the presence of a face calls forth the human ethical compact. See *Alterity and Transcendence*, Michael B. Smith, trans. (London: Athlone, 1999).
- 23 **will only know how to be lonely:** This idea is treated in the work of psychoanalyst Donald W. Winnicott; see especially "The Capacity to Be Alone," *International Journal of Psychoanalysis* 39, no. 5 (September–October 1958): 416–20.
- 24 **our culture of continual performance:** Brené Brown's TED presentation on the power of vulnerability is one of the most viewed TED talks. Delivered in June 2010, by February 2015 it had been watched on the TED site over 20 million times. http://www.ted.com/talks/brene_brown_on_vulnerability?language=en.
- 25 **depression and social anxiety:** Mark W. Becker, Reem Alzahabi, and Christopher J. Hopwood, "Media Multitasking Is Associated with Symptoms of Depression and Social Anxiety," *Cyberpsychology, Behavior, and Social Networking* 16, no. 2 (November 5, 2012): 132–35, doi:10.1089/cyber.2012.0291.
- 25 **difficulty reading human emotions:** Media psychologist Clifford Nass at Stanford was working on social media and empathy before his death in 2013. See Elizabeth Cohen, reporting on Clifford Nass's research: "Does Life Online Give You 'Popcorn Brain'?", CNN, June 23, 2011, <http://www.cnn.com/2011/HEALTH/06/23/tech.popcorn.brain.ep/index.html>. When multitaskers are shown pictures of faces, they have a hard time identifying what the people in the pictures are feeling. When you read stories to multitaskers, they have difficulty identifying the emotions of the people in the stories and saying what they would do to make the people in the stories feel better. See Clifford Nass, "Is Facebook Stunting Your Child's Growth?", *Pacific Standard*, April 23, 2012, <http://www.psmag.com/culture/is-facebook-stunting-your-childs-growth-40577>. See also Eyal Ophir, Clifford Nass, and Anthony Wagner, "Cognitive Control in Media Multitaskers," *PNAS (Early Edition)* 106, no. 37 (2009): 1–5, doi:10.1073/pnas.0903620106.
- 25 **greater self-esteem and an improved ability to deal with others:** Roy Pea, Clifford Nass, Lyn Meheula, et al.,

- "Media Use, Face-to-Face Communication, Media Multitasking, and Social Well-Being Among 8- to 12-Year-Old Girls," *Developmental Psychology* 48, no. 2 (2012): 327–36, doi:10.1037/a0027030.
- 27 **the presence of a phone on the landscape:** The study in which even a phone turned off on a table "changes the topic" is Przybylski and Weinstein, "Can You Connect with Me Now?" As noted, a second study took the theme of "Can You Connect with Me Now?," a laboratory experiment, and investigated it in a natural setting with similar results. It was in this second study that the phone on the landscape led to lesser feelings of empathic connection between people in the conversation. Misra, Cheng, Genevie, et al., "The iPhone Effect."
- 28 **Are we depriving them of skills:** We know that children from different socioeconomic backgrounds develop different language abilities. Those from less advantaged backgrounds know fewer words and have slower language-processing speeds. They start out behind in their ability to express themselves. If parents from all walks of life don't feel that conversation is important, all children will begin life with a language deficit and a deficit in the interpersonal skills that we learn through language. See Anne Fernald, Virginia A. Marchman, and Adriana Weisleder, "SES Differences in Language Processing Skill and Vocabulary Are Evident at Eighteen Months," *Developmental Science* 16, no. 2 (2013): 234–48.
- 30 **"continuous partial attention":** This term was coined by technology expert Linda Stone. See "Continuous Partial Attention," <http://lindastone.net/qa/continuous-partial-attention>.
- 36 **the most powerful path to human connection:** Mark R. Dadds, Jennifer L. Allen, Bonamy R. Oliver, et al., "Love, Eye Contact, and the Developmental Origins of Empathy Versus Psychopathy," *British Journal of Psychiatry* 200 (2012): 191–96, doi: 0.1192/bjp.bp.110.085720.
- 37 **"gradual completion of thoughts while speaking":** There are many translations of this essay and this sentiment. See, for example, Heinrich von Kleist, *On the Gradual Production of Thoughts Whilst Speaking*, David Constantine, ed. and trans. (Indianapolis: Hackett Publishing, 2004), 405.
- 37 **love and politics:** In fact, as an example of how conversation brings us to our best ideas, Kleist uses Mirabeau's declaration of the rights of a nation at the start of the French Revolution. Mirabeau stumbles toward eloquence because he has an interlocutor. You can sense that he thrills his audience and himself.
- 37 **In the new communications culture:** That there is a cognitive and emotional side to our desire for interruption was pointed out by Nicholas Carr. He said: "We want to be interrupted, because each interruption brings us a valuable piece of information. To turn off these alerts is to risk feeling out of touch, or even socially isolated." Carr, following Cory Doctorow, called the experience of being at a computer being "plugged into an ecosystem of interruption technologies." See *The Shallows: What the Internet Is Doing to Our Brains* (New York: W. W. Norton, 2010), 133–34, 91.
- 39 **"Scandal! Caught playing iPhone":** Alex Kantrowitz, "John McCain Unapologetic After Playing iPhone Poker During Syria Hearing," *Forbes*,

- September 3, 2013, <http://www.forbes.com/sites/alexkantrowitz/2013/09/03/john-mccain-unapologetic-after-playing-iphone-poker-during-syria-hearing/>.
- 39 **open screens degrade the performance:** Faria Sana, Tina Weston, and Nicholas J. Cepeda, "Laptop Multitasking Hinders Classroom Learning for Both Users and Nearby Peers," *Computers & Education* 62 (March 2013): 24–31, doi:10.1016/j.compedu.2012.10.003.
- 39 **the experience of boredom is directly linked to creativity:** Sandi Mann and Rebekah Cadman, "Does Being Bored Make Us More Creative?," *Creativity Research Journal* 26, no. 2 (2014): 165–73. For an overview on this point, see Scott Adams, "The Heady Thrill of Having Nothing to Do," *Wall Street Journal*, August 6, 2011, <http://online.wsj.com/article/SB10001424053111903454504576486412642177904.html>.
- 39 **What our brains want is new input:** For more on the neural reward systems involved in information-seeking behavior: Kent C. Berridge and Terry E. Robinson, "What Is the Role of Dopamine in Reward: Hedonic Impact, Reward Learning, or Incentive Salience?," *Brain Research Reviews* 28 (1998): 306–69. The public conversation of how the brain itself is changed by online life has been shaped by the work of Nicholas Carr in *The Shallows*. The argument is that the more one lives a life online, the more one is incapable of quiet reverie (and by extension, deep reading and full-attention conversation).
- 40 **emotional life of teenage girls:** Nass studied the online life of young women, aged eight to twelve—a critical time in the building of identity and a stable sense of self. One result of that work was this coauthored paper: Pea, Nass, Meheula, et al., "Media Use, Face-to-Face Communication, Media Multitasking, and Social Well-Being Among 8- to 12-Year-Old Girls."
- 41 **you are not focusing on your own feelings either:** Simon Baron-Cohen, an empathy researcher, made this point: "Empathy often goes hand-in-hand with self-awareness. The people who are good at empathy are not only good at picking up on other people's feelings, but they—they're also good at reflecting on their own behavior." See "Does Empathy Explain Cruelty?," *Science Friday*, September 30, 2011, <http://www.sciencefriday.com/guests/simon-baron-cohen.html#page/full-width-list/1>. For Baron-Cohen's argument on the decline in empathy as a cause of personal and social cruelty, see *The Science of Evil: On Empathy and the Origins of Cruelty* (New York: Basic Books, 2012).
- 41 **capacities for self-reflection:** Nass, "Is Facebook Stunting Your Child's Growth?" For a review of people's tendency to recall negative events more strongly than positive ones: Roy F. Baumeister, Ellen Bratslavsky, and Catrin Finkenauer, "Bad Is Stronger than Good," *Review of General Psychology* 5, no. 4 (2001): 323–70, doi: 10.1037//1089-2680.5.4.323. The work of Antonio Damasio and colleagues suggests that certain emotions—for example, admiration and compassion—actually take longer to process at a neural level than responses to physical pain. See Mary Helen Immordino-Yang, Andrea McColl, Hanna Damasio, et al., "Neural Correlates of Admiration

- and Compassion," *PNAS* 10, no. 19 (2009): 8021–26. In environments of mediated communication, this matters because interactions happen too quickly to elicit empathic responses. This study's lead researcher, Immordino-Yang, a former junior-high teacher, summed up this finding in an interview: "If things are happening too fast, you may not ever fully experience emotions about other people's psychological states and that would have implications for your morality." A team led by Antonio Damasio also uncovered a link between compassion and the default mode network, the same region that is activated when people are alone with their thoughts. Admiration for virtue as well as compassion for social or psychological pain are processed in the default mode. Both are slower-processed responses, the kind that we are speeding ourselves out of in a life of good news. See Rick Nauert, "Twitter Tweets, Texting May Lack Compassion," *Psych Central*, April 14, 2009, <http://psychcentral.com/news/2009/04/14/twitter-tweets-texting-may-lack-compassion/5317.html>.
- 42 "a sentimental education": Nass, "Is Facebook Stunting Your Child's Growth?"
- 42 every six and a half minutes: This statistic is from a widely reported study of mobile phone usage commissioned by Nokia in 2013. For example, see "Mobile Users Can't Leave Their Phone Alone for Six Minutes and Check It up to 150 Times a Day," *Mail Online*, <http://www.dailymail.co.uk/news/article-2276752/Mobile-users-leave-phone-minutes-check-150-times-day.html>.
- 42 There are now baby bouncers: This is known as the iPad Apptivity Seat, made by Fisher-Price. Here is how it is described on Amazon: "It's a grow-with-me seat for baby that's soothing, entertaining, and has a touch of technology, too." It should be noted that the seat did draw pushback from the public. <http://www.commercialfreechildhood.org/action/tell-fisher-price-no-ipad-bouncy-seats-infants>.
- 42 within five minutes of waking up: Marketers rely on this fact—these numbers come from a report co-released by Ipsos MediaCT and Wikia (a web hosting and wiki farm site): "Generation Z: The Limitless Generation Study of 1,200 Teen Wikia Users by Wikia and Ipsos MediaCT," PR NewsWire, March 19, 2013, http://www.wikia.com/Generation_Z:_A_Look_at_the_Technology_and_Media_Habits_of_Today's_Teens.
- 42 send one hundred texts a day: Amanda Lenhardt, "Teens, Smartphones, and Texting," Pew Research Center's Internet & American Life Project, March 19, 2012, <http://www.pewinternet.org/2012/03/19/teens-smartphones-texting>.
- 42 sleep with their phones: Amanda Lenhardt, Rich Ling, Scott Campbell, et al., "Teens and Mobile Phones," Pew Research Center's Internet & American Life Project, April 20, 2010, <http://www.pewinternet.org/2010/04/20/teens-and-mobile-phones>.
- 42 do not "unplug," ever: "Generation Z: The Limitless Generation Study of 1200 Teen Wikia Users by Wikia and Ipsos MediaCT," PR NewsWire.
- 42 six or seven simultaneous streams: This finding is from research conducted by the LEGO company. It was

- brought to my attention by Sasha Strauss's presentation at the Milken Institute's conference in May 2014.
- 42 "Capturing the 'Cool Factor' in Consumer Tech," *Currency of Ideas*, May 2014, <http://currency-of-ideas.tumblr.com/post/84355392003/capturing-the-cool-factor-in-consumer-tech>.
- 42 likely to be using four at a time: The top 25 percent of Stanford students are using four media at one time whenever they are using media. Clifford Nass, "The Myth of Multitasking," narrated by Ira Flatow, *Talk of the Nation*, National Public Radio, May 10, 2013, <http://www.npr.org/2013/05/10/182861382/the-myth-of-multitasking>.
- 42 degrades our performance: Ophir, Nass, and Wagner, "Cognitive Control in Media Multitaskers." New research suggests that a small percentage of the population—1 to 2 percent—are able to multitask. For the other 98 to 99 percent of the world, every new task degrades performance, and there is a further irony: The more you multitask, the worse you get at multitasking. Maria Konnikova, "Multitask Masters," *The New Yorker*, May 7, 2014, [http://www.newyorker.com/online/blogs/maria-konnikova/2014/05/multitask-masters.html?utm_source=tny&utm_medium=email&utm_campaign=dailymail&mbid=nl_Daily%20\(173\)](http://www.newyorker.com/online/blogs/maria-konnikova/2014/05/multitask-masters.html?utm_source=tny&utm_medium=email&utm_campaign=dailymail&mbid=nl_Daily%20(173)).
- 42 it makes us less productive: Zheng Wang and John M. Tchernev, "The 'Myth' of Media Multitasking: Reciprocal Dynamics of Media Multitasking, Personal Needs, and Gratifications," *Journal of Communication* 62 (2012): 493–513, doi: 10.1111/j.1460-2466.2012.01641.x.
- 42 depression, social anxiety: Becker, Alzahabi, and Hopwood, "Media Multitasking Is Associated with Symptoms of Depression and Social Anxiety."
- 42 problems with self-esteem: Pea, Nass, Meheula, et al. "Media Use: Face-to-Face Communication, Media Multitasking, and Social Well-Being Among 8- to 12-Year-Old-Girls."
- 43 "the seeking drive": Washington State University neuroscientist Jaak Panskepp coined this term. Jaak Panskepp, *Affective Neuroscience: The Foundations of Human and Animal Emotions* (Oxford: Oxford University Press, 1998), 151. For a generalist's concerned view about the neuroscience of technology use, see Emily Yoffe, "Seeking How the Brain Hardwires Us to Love Google, Twitter, and Texting. And Why That's Dangerous," *Slate*, August 12, 2009, http://www.slate.com/articles/health_and_science/science/2009/08/seeking.html.
- 44 design for vulnerability: I owe this evocative phrase to a conversation with Emily Carlin.
- 44 "a deliberate action": Giles M. Phillips, "Are Mobile Users More Vigilant?," *Proceedings of the 2014 ACM Conference on Web Science* (2014): 289–90, doi:10.1145/2615569.2615642.
- 44 health and emotional well-being: There are signs that within the technology industry, a new generation of designers is converging on this theme. See, for example, Justin Rosenstein, the inventor of Facebook's "like" button, and Tristan Harris, currently working at Google, arguing for design that does not seize and capture our attention but helps us live our fullest lives. This is design that would measure the success of an app, as Harris puts it, not by time spent but by "time well spent." See Rosenstein in May

- 2014, <http://techcrunch.com/video/do-great-things-keynote-by-justin-rosenstein-of-asana/518220046/> and Harris in December 2014, <https://www.youtube.com/watch?v=jT5rRh9AZf4>. Harris hopes that “time well spent” could become a new branding standard, much as the label “organic” is something that consumers look for. Personal communication with author, April 6, 2015.
- 44 **words that mean:** *Oxford English Dictionary* (Oxford University Press, 2015, <http://www.oed.com>). <http://www.oed.com/view/Entry/40748?rskey=URVqon&result=1&isAdvanced=false#eid>.
- 46 **may not even know:** For a review of how universities are trying to put conversation on the curriculum, see “The University: The Social Emotional Well-Being of College Students,” Aspen Ideas Festival, July 1, 2014, <http://www.aspenideas.org/session/social-emotional-well-being-college-students>.
- 47 **spare parts to support our fragile selves:** Writing long before constant connectivity was on the radar, the psychoanalyst Heinz Kohut described fragile people—he called them narcissistic personalities—who are characterized not by a love of self but by a damaged sense of self. They try to shore themselves up by turning other people into what Kohut calls “selfobjects.” In the role of selfobject, another person is experienced as part of oneself, thus in perfect tune with a fragile inner state. New communications technology makes it easier to serve up people as slivers of self, providing a sense that to get what you need from others you have multiple and inexhaustible options. On the psychology that needs these “slivers,” see Paul Orenstein, ed., *The Search for Self: Selected Writings of Heinz Kohut (1950–1978)*, vol. 2 (New York: International Universities Press, 1978).
- 47 **meals shared with their families:** The dinners protect from delinquency and drug addiction. They predict academic success. For a review of this research, see Barbara H. Fiese and Marlene Schwartz, “Reclaiming the Family Table: Mealtimes and Child Health and Well-Being,” Society for Research in Child Development, *Social Policy Report* 22, no. 4 (2008), http://srcd.org/sites/default/files/documents/22-4_fiese.pdf.
- 48 **interrupt dinner ourselves:** The Facebook ad, with its tongue-in-cheek attack on conversation, signals our cultural moment. So does an altogether serious op-ed in the *New York Times*, “Is Family Dinner Overrated?” The article begins with the well-known litany of positive outcomes associated with dinner. And then it points out the obvious: It isn’t dinner that makes the difference, it’s whether parents “use the time to engage with their children and learn about their day-to-day lives.” The author’s summation: “If you aren’t able to make the family meal happen on a regular basis, don’t beat yourself up: just find another way to connect with your kids.”
- The intent of the op-ed is to remind parents that connecting with their children is essential. If you can’t do it at dinner, do it elsewhere. Between the lines, its message reads: Since we all know dinner is important, but we aren’t really eating it together, perhaps we should start connecting elsewhere. That’s fair. But if you take away dinner, you have

- to open up another space. For social scientists to make the point that what matters at dinner is the conversation, not the food, does not mean that dinner doesn't matter. Dinner matters a great deal because it is traditionally the time that our culture set aside for families to talk to one another. Perhaps it is easier to have a fantasy that there will be "another time" to connect with your kids than to do the work of making the kitchen and dining room a "sacred space" for conversation—the first advice I give parents who ask me how to raise a relational child in a digital world. Ann Meier and Kelly Musick, "Is the Family Dinner Overrated?," *New York Times*, June 29, 2012, <http://www.nytimes.com/2012/07/01/opinion/sunday/is-the-family-dinner-overrated.htm>.
- 48 **good for the bottom line:** Benjamin N. Waber, *People Analytics: How Social Sensing Technology Will Transform Business and What It Tells Us About the Future* (Upper Saddle River, NJ: FT Press, 2015), and Benjamin N. Waber, Daniel Olguin Olguin, Taemie Kim, et al., "Productivity Through Coffee Breaks: Changing Social Networks by Changing Break Structure," *Proceedings of the Thirtieth International Sunbelt Social Network Conference*, Trento, Italy (2010), http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1586375.
- 48 **learning more "efficient":** In summer 2011, I attended a retreat for administrators in higher education that was focused on "productivity" in higher education. It was clear that this group saw the problem as how they would respond to demands to "prove" that their system was cost effective. At the center of their deliberations: how
- online courses would help them quantify student participation and student learning according to standard measures.
- 51 **magic of simulated feelings:** And in China, Microsoft has released XiaoIce, a sophisticated artificial intelligence designed to chat with you on your phone. A September 5, 2014, blog post gives the flavor of the ambitions of this project: "By simply adding her to a chat, people can have extended conversations with her. But XiaoIce is much more evolved than the chatbots you might remember. XiaoIce is a sophisticated conversationalist with a distinct personality. She can chime into a conversation with context-specific facts about things like celebrities, sports, or finance but she also has empathy and a sense of humor. Using sentiment analysis, she can adapt her phrasing and responses based on positive or negative cues from her human counterparts. She can tell jokes, recite poetry, share ghost stories, relay song lyrics, pronounce winning lottery numbers and much more. Like a friend, she can carry on extended conversations that can reach hundreds of exchanges in length. . . . Since launch, she has had 0.5 billion conversations. People were amazed . . . by her personality and sense of humor. XiaoIce has been ranked as Weibo's top influencer, and currently has over 850,000 followers on the service." From the blog post of Stefan Weitz, senior director of Bing, "Meet XiaoIce, Cortana's Little Sister," September 5, 2014, <http://blogs.bing.com/search/2014/09/05/meet-xiaoice-cortanas-little-sister>.
- 51 **exemplars of "affective computing":** See, for example, the seminal work in

- this field by Rosalind W. Picard, *Affective Computing* (Cambridge, MA: The MIT Press, 2000).
- 52 **function, not a feeling:** For more on this, see Sherry Turkle, *Alone Together: Why We Expect More from Technology and Less from Each Other* (New York: Basic Books, 2011), 106.
- 53 **problem in the first place:** This issue is the theme of technology critic Evgeny Morozov's *To Save Everything, Click Here: The Folly of Technological Solutionism* (New York: Public Affairs, 2013), where he calls this fallacy "solutionism."
- 55 **take a "smartphone-free" night:** For an example of how one company insisted that its consultants take "predictable time off" from their phones during the workweek, see the case of the Boston Consulting Group (BCG), a large international consulting company. Notably, it was important that the program also included time spent talking in your collegial group, your team, to plan work and support the group. See Leslie A. Perlow, *Sleeping with Your Smartphone* (Cambridge, MA: Harvard Business Review Press, 2012).
- 55 **Sabbaths, and sabbaticals:** See, for example, digitaldetox.org. There, the rules are: "No digital technology. No phones, Internet or screens. No FOMO (fear of missing out)."
- 55 **"No one ever pulled out an iPad":** "Steve Jobs didn't let his children use iPhones and here's why." *Inquisitr*, September, 11, 2014, <http://www.inquisitr.com/1468612>. Apple's chief designer, Jonathan Ive, also limits his children's screen time. See Ian Parker, "The Shape of Things to Come," *The New Yorker*, February 23, 2015, <http://www.newyorker.com/magazine/2015/02/23/shape-things-come>.
- 56 **encourage empathic habits:** Sara Konrath, "Harnessing Mobile Media for Good," *Psychology Today*, December 18, 2013, <http://www.psychologytoday.com/blog/the-empathy-gap/201312/harnessing-mobile-media-good>.
- 56 **when we allow ourselves to be vulnerable:** This simple statement is an example of something that people don't always want to acknowledge but know "by heart." As evidence of this, again, see the popularity of Brené Brown's TED talk on the power of vulnerability, viewed 20 million times, http://www.ted.com/talks/brene_brown_on_vulnerability?language=en.

SOLITUDE

- 59 **"being a person":** "Louis C.K. Hates Cell Phones," September 20, 2013, YouTube video, *Conan O'Brien*, posted by Team CoCo, September 20, 2013, <https://www.youtube.com/watch?v=5HbYSc1f1c>.
- 60 **don't want to get a phone for my kids:** *ibid.*
- 60 **important for introverts:** Susan Cain, *Quiet: The Power of Introverts in a World That Can't Stop Talking* (New York: Crown, 2012).
- 61 **"default mode network":** For an overview of the past thirty years of research on the default mode, see Randy L. Buckner, Jessica R. Andrews-Hanna, and Daniel L. Schacter, "The Brain's Default Network: Anatomy, Function, and Relevance to Disease," *Annals of the New York Academy of Sciences* 1124 (2008): 1–38, doi:10.1196/annals.1440.011. The authors write that "the default mode network is active when individuals are engaged in internally focused tasks including autobiographi-