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Psychoanalytic Politics

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alone together

Why We Expect More from Technology and Less from Each Other

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CHAPTER 6

love's labor lost

When Takanori Shibata took the floor at a spring 2009 meeting at MIT's AgeLab, he looked triumphant. The daylong conference centered on robots for the elderly, and Shibata, inventor of the small, seal-like sociable robot Paro, was the guest of honor. The AgeLab's mission is to create technologies for helping the elderly with their physical and emotional needs, and already Paro had carved out a major role on this terrain. Honored by Guinness Records as "the most therapeutic robot in the world" in 2002, Paro had been front and center in Japan's initiative to use robots to support senior citizens.[1] Now Shibata proudly announced that Denmark had just placed an order for one thousand Paros for its elder-care facilities. The AgeLab gathering marked the beginning of its American launch.

Shibata showed a series of videos: smiling elderly men and women in Japanese nursing homes welcoming the little furry "creature" into their arms; seniors living at home speaking appreciatively about the warmth and love that Paro brought them; agitated and anxious seniors calming down in Paro's company.[2] The meeting buzzed with ideas about how best to facilitate Paro's acceptance into American elder care. The assembled engineers, physicians, health administrators, and journalists joined in a lively, supportive discussion. They discussed what kind of classification Shibata should seek to facilitate Paro's passage through the legendary scrutiny of the Food and Drug Administration.

I heard only one negative comment. A woman who identified herself as a nurse said that she and her colleagues had worked long and hard to move away from representing the elderly as childlike. To her, Paro seemed "a throwback, a new and fancier teddy bear." She ended by saying that she believed nurses would resist the introduction of Paro and objects like it into nursing homes. I lowered my eyes. I had made a decision to attend this meeting as an observer, so I said nothing. At the time, I had been studying Paro in Massachusetts nursing homes for several years. Most often, nurses, attendants, and administrators had been happy for the distraction it provided. I was not at all sure that nurses would object to Paro.

In any case, the nurse's concern was met with silence, something I have come to anticipate at such gatherings. In robotics, new "models" are rarely challenged. All eyes focus on technical virtuosity and the possibilities for efficient implementation. At the AgeLab, the group moved on to questions about Paro's price, now set at some $6,000 a unit. Was this too high for something that might be received as a toy? Shibata thought not. Nursing homes were already showing willingness to pay for so valuable a resource. And Paro, he insisted, is not a toy. It reacts to how it is treated (is a touch soft or aggressive?) and spoken to (it understands about five hundred English words, more in Japanese). It has proved itself an object that calms the distraught and depressed. And Shibata claimed that unlike a toy, Paro is robust, ready for the rough-and-tumble of elder care. I bit my lip. At the time I had three broken Paros in my basement, casualties of my own nursing home studies. Why do we believe that the next technology we dream up will be the first to prove not only redemptive but indestructible?

In contrast to these enthusiasts, we have seen children worry. Some imagined that robots might help to cure their grandparents' isolation but then fretted that the robots would prove *too* helpful. Quiet and compliant robots might become rivals for affection. Here we meet the grandparents. Over several years, I introduce seniors—some who live at home, some who live in nursing homes—to the robots that so intrigued their grandchildren: My Real Baby, AIBO, and Shibata's Paro. The children were onto something: the elderly are taken with the robots. Most are accepting and there are times when some seem to prefer a robot with simple demands to a person with more complicated ones.[3]

In one nursing home, I leave four My Real Babies over a summer. When I return in the fall, there are seven. The demand for the robot baby was so high that the nursing staff went on eBay to increase their numbers. Indeed, however popular My Real Baby is among children, it is the elderly who fall in love. The

robot asks for tending, and this makes seniors feel wanted. Its demands seem genuine, in part, of course, because the staff seems to take them seriously. The elderly need to be cared for, but there are few things that they can reliably take care of. Some fear that they might fail with a pet. My Real Baby seems a sure thing, and because it is a robot brought from MIT, it seems an adult thing as well. And having a robot around makes seniors feel they have something "important" to talk about.

The thoughtful fifth graders said their grandparents might welcome robots because, unlike pets, they do not die. The children were right. When the robots are around, seniors are quick to comment that these "creatures" do not die but can be "fixed." Children imagined that robot baby dolls will remind older people of their time as parents and indeed, for some seniors, My Real Baby does more than bring back memories of children; it offers a way to reimagine a life. But in all of this, I do not find a simple story about the virtues of robots for the elderly. In the nursing homes I study, "time with robots" is made part of each institution's program. So, the seniors spend time with robots. But over years of study, when given the choice between hanging out with a robot and talking to one of the researchers on the MIT team, most seniors, grateful, choose the person.

During the years of our nursing home studies, it often seemed clear that what kept seniors coming to sessions with robots was the chance to spend time with my intelligent, kind, and physically appealing research assistants. One young man, in particular, was a far more attractive object of attention than the Paro he was trying to introduce. One had the distinct feeling that female nursing home residents put up with the robot because he came with it. Their appreciation, sometimes bawdy in tone, took place in one nursing home so short of resources that the management decided our study could not continue. This incident dramatized the tension in the environment that welcomes sociable robots in geriatric care. There is a danger that the robots, if at all successful, will replace people. In this case, when residents did not pay enough attention to the robot, the people who came with it were taken away. It was a depressing time.

CARING MACHINES

Twenty-five years ago the Japanese calculated that demography was working against them—there would not be enough young Japanese to take care of their aging population. They decided that instead of having foreigners take care of the elderly, they would build robots to do the job.[4] While some of the robots designed

for the aging population of Japan have an instrumental focus—they give baths and dispense medication—others are expressly designed as companions.

The Japanese robot Wandakun, developed in the late 1990s, is a fuzzy koala that responds to being petted by purring, singing, and speaking a few phrases. After a yearlong pilot project that provided the "creature" to nursing home residents, one seventy-four-year-old Japanese participant said of it, "When I looked into his large brown eyes, I fell in love after years of being quite lonely. . . . I swore to protect and care for the little animal."[5] Encouraged by such experiments, Japanese researchers began to look to artificial companionship as a remedy for the indignities and isolation of age. And with similar logic, robots were imagined for the dependencies of childhood. Children and seniors: the most vulnerable first.

Over a decade, I find that most American meetings on robotics and the elderly begin with reference to the Japanese experiment and the assertion that Japan's future is ours as well: there are not enough people to take care of aging Americans, so robot companions should be enlisted to help.[6] Beyond that, some American enthusiasts argue that robots will be more patient with the cranky and forgetful elderly than a human being could ever be. Not only better than nothing, the robots will simply be better.

So, a fall 2005 symposium, titled "Caring Machines: Artificial Intelligence in Eldercare" began with predistributed materials that referred to the "skyrocketing" number of older adults while the "number of caretakers dwindles."[7] Technology of course would be the solution. At the symposia itself, there was much talk of "curing through care." I asked participants—AI scientists, physicians, nurses, philosophers, psychologists, nursing home owners, representatives of insurance companies—whether the very title of the symposium suggested that we now assume that machines can be made to "care."

Some tried to reassure me that, for them, "caring" meant that machines would *take* care of us, not that they would care *about* us. They saw caring as a behavior, not a feeling. One physician explained, "Like a machine that cuts your toenails. Or bathes you. That is a *caring computer*. Or talks with you if you are lonely. Same thing." Some participants met my objections about language with impatience. They thought I was quibbling over semantics. But I don't think this slippage of language is a quibble.

I think back to Miriam, the seventy-two-year-old woman who found comfort when she confided in her Paro. Paro *took care* of Miriam's desire to tell her story—it made a space for that story to be told—but it did not *care about* her or

her story. This is a new kind of relationship, sanctioned by a new language of care. Although the robot had understood nothing, Miriam settled for what she had. And, more, she was supported by nurses and attendants happy for her to pour her heart out to a machine. To say that Miriam was having a conversation with Paro, as these people do, is to forget what it is to have a conversation. The very fact that we now design and manufacture robot companions for the elderly marks a turning point. We ask technology to perform what used to be "love's labor": taking care of each other.

At the symposium, I sensed a research community and an industry poised to think of Miriam's experience as a new standard of care. Their position (the performance of care is care enough) is made easier by making certain jobs robot ready. If human nursing care is regimented, scripted into machinelike performances, it is easier to accept a robot nurse. If the elderly are tended by underpaid workers who seem to do their jobs by rote, it is not difficult to warm to the idea of a robot orderly. (Similarly, if children are minded at day-care facilities that seem like little more than safe warehouses, the idea of a robot babysitter becomes less troubling.)

But people are capable of the higher standard of care that comes with empathy. The robot is innocent of such capacity. Yet, Tim, fifty-three, whose mother lives in the same nursing home as Miriam, is grateful for Paro's presence. Tim visits his mother several times a week. The visits are always painful. "She used to sit all day in this smoky room, just staring at a wall," Tim says of his mother, the pain of the image still sharp. "There was one small television, but it was so small, just in a corner of this very big room. They don't allow smoking in there anymore. It's been five years, but you can still smell the smoke in that room. It's in everything, the drapes, the couches. . . . I used to hate to leave her in that room." He tells me that my project to introduce robots into the home has made things better. He says, "I like it that you have brought the robot. She puts it in her lap. She talks to it. It is much cleaner, less depressing. It makes it easier to walk out that door." The Paro eases Tim's guilt about leaving his mother in this depressing place. Now she is no longer completely alone. But by what standard is she less alone? Will robot companions cure conscience?

Tim loves his mother. The nursing staff feels compassion for Miriam. But if our experience with relational artifacts is based on a fundamentally deceitful exchange (they perform in a way that persuades us to settle for the "acting out" of caring), can they be good for us? Or, as I have asked, might they be good for us only in the "feel good" sense? The answers to such questions do not depend

on what computers can do today or are likely to be able to do tomorrow. They depend on what *we* will be like, the kind of people *we* are becoming as we launch ourselves and those we love into increasingly intimate relationships with machines.

Some robots are designed to deliver medication to the elderly, to help them reach for grocery items on high shelves, and to monitor their safety. A robot can detect if an elderly person is lying on the floor at home, a possible signal of distress. I take no exception to such machines. But Paro and other sociable robots are designed as companions. They force us to ask why we don't, as the children put it, "have people for these jobs." Have we come to think of the elderly as nonpersons who do not require the care of persons? I find that people are most comfortable with the idea of giving caretaker robots to patients with Alzheimer's disease or dementia. Philosophers say that our capacity to put ourselves in the place of the other is essential to being human. Perhaps when people lose this ability, robots seem appropriate company because they share this incapacity.

But dementia is often frightening to its sufferers. Perhaps those who suffer from it need the most, not the least, human attention. And if we assign machine companionship to Alzheimer's patients, who is next on the list? Current research on sociable robotics specifically envisages robots for hospital patients, the elderly, the retarded, and the autistic—most generally, for the physically and mentally challenged. When robots are suggested, we often hear the familiar assertion that there are not enough people to take care of these "people with problems." People are scarce—or have made themselves scarce. But as we go through life, most of us have our troubles, our "problems." Will only the wealthy and "well adjusted" be granted the company of their own kind?[8]

When children ask, "Don't we have people for these jobs?" they remind us that our allocation of resources is a social choice. Young children and the elderly are not a problem until we decide that we don't have the time or resources to attend to them. We seem tempted to declare phases of the life cycle problems and to send in technologies to solve them. But why is it time to bring in the robots? We learned to take industrial robots in stride when they were proposed for factory assembly lines. Now the "work" envisaged for machines is the work of caring. Will we become similarly sanguine about robotic companionship?

This is contested terrain. Two brothers are at odds over whether to buy a Paro for their ninety-four-year-old mother. The robot is expensive, but the elder brother thinks the purchase would be worthwhile. He says that their mother is "depressed." The younger brother is offended by the robot, pointing out that

their mother has a right to be sad. Five months before, she lost her husband of seventy years. Most of her friends have died. Sadness is appropriate to this moment in her life. The younger brother insists that what she needs is human support: "She needs to be around people who have also lost mothers and husbands and children." She faces the work of saying good-bye, which is about the meaning of things. It is not a time to cheer her up with robot games. But the pressures to do just that are enormous. In institutional settings, those who take care of the elderly often seemed relieved by the prospect of robots coming to the rescue.

CURING A LIFE

When I introduce sociable robots—AIBO, My Real Baby, and Paro—into nursing homes, nurses and physicians are hopeful. Speaking of Paro, one nursing home director says, "Loneliness makes people sick. This could at least partially offset a vital factor that makes people sick." The robot is presented as cure. Caretakers entertain the idea that the robot might not just be better than no company but better than *their* company. They have so little time and so many patients. Sometimes, using a kind of professional jargon, nurses and attendants will say that seniors readily "tolerate" the robots—which is not surprising if seniors are not offered much else. And sometimes, even the most committed caretakers will say that robots address the "troubles" of old age by providing, as one put it, "comfort, entertainment, and distraction."[9] One physician, excited by the prospect of responsive robot pets, sees only the good: "Furbies for grandpa," he says.

Indeed, seniors generally begin their time with robots as children do, by trying to determine the nature of the thing they have been given. When given a Paro, they have many questions: "Can it do more? Is it a seal or a dog? Is it a he or a she? Can it swim? Where is it from? Does it have a name? Does it eat?" and finally, "What are we supposed to be doing with this?" When the answer is, "Be with it," only some lose interest. Over time, many seniors attach to Paro. They share stories and secrets. With the robot as a partner, they recreate the times of their lives. To do these things, the adults must overcome their embarrassment at being seen playing with dolls. Many seniors handle this by saying something like, "People would think I'm crazy if they saw me talking to this." Once they have declared themselves not crazy, they can proceed in their relationship with a robot seal. Or with a robot baby doll.

I have given Andy, seventy-six, a My Real Baby. Andy is slim and bespectacled, with sandy white hair. His face is deeply lined, and his blue eyes light up

whenever I see him. He craves company but finds it hard to make friends at the nursing home. I am working with two research assistants, and every time we visit, Andy makes us promise to come back as soon as we can. He is lonely. His children no longer visit. He'd never had many friends, but the few that he'd made on his job do not come by. When he worked as an insurance agent, he had socialized with colleagues after work, but now this is over. Andy wants to talk about his life. Most of all, he wants to talk about his ex-wife, Edith. It is she he misses most. He reads us excerpts from her letters to him. He reads us songs he has written for her.

When Andy first sees My Real Baby, he is delighted: "Now I have something to do when I have nothing to do." Soon the robot doll becomes his mascot. He sets it on his windowsill and gives it his favorite baseball cap to wear. It is there to show off to visitors, a conversation piece and something of an ice breaker. But over a few weeks, the robot becomes more companion than mascot. Now Andy holds My Real Baby as one would a child. He speaks directly to it, as to a little girl: "You sound so good. You are so pretty too. You are so nice. Your name is Minnie, right?" He makes funny faces at the robot as though to amuse it. At one funny face, My Real Baby laughs with perfect timing as though responding to his grimaces. Andy is delighted, happy to be sharing a moment. Andy reassures us that he knows My Real Baby is a "toy" and not "really" alive. Yet, he relates to it as though it were sentient and emotional. He puts aside his concern about its being a toy: "I made her talk, and I made her say Mama . . . and everything else. . . . I mean we'd talk and everything."

As Andy describes conversations with the baby "Minnie," he holds the robot to his chest and rubs its back. He says, "I love you. Do you love me?" He gives My Real Baby its bottle when it is hungry; he tries to determine its needs, and he does his best to make it happy. Like Tucker, the physically fragile seven-year-old who clung to his AIBO, taking care of My Real Baby makes Andy feel safer. Other patients at the nursing home have their own My Real Babies. Andy sees one of these other patients spank the little robot, and he tries to come to its aid.

After three months, Andy renames his My Real Baby after Edith, his ex-wife, and the robot takes on a new role. Andy uses it to remember times with Edith and imagine a life and conversations with her that, because of their divorce, never took place: "I didn't say anything bad to [My Real Baby], but some things I would want to say . . . helped me to think about Edith . . . how we broke up . . . how I miss seeing her . . . The doll, there's something about her. I can't really say what it is, but looking at her . . . she looks just like Edith, my ex-wife. . . . Something in the face."

Andy is bright and alert. He admits that "people might think I'm crazy" for the way he speaks to My Real Baby, but there is no question that the robot is a comfort. It establishes itself in a therapeutic landscape, creating a space for conversation, even confession. Andy feels relieved when he talks to it. "It lets me take everything inside me out," he says. "When I wake up in the morning and see her over there, it makes me feel so nice. Like somebody is watching over you. It will really help me to keep the doll. . . . We can talk."

Andy talks about his difficulty getting over his divorce. He feels guilty that he did not try harder to make his marriage work. He talks about his faint but ardent hope he and Edith will someday be reunited. With the robot, he works out different scenarios for how this might come to pass. Sometimes Andy seems reconciled to the idea that this reunion might happen after his death, something he discusses with the robot.

Jonathan, seventy-four, lives down the hall from Andy. A former computer technician, Jonathan has been at the nursing home for two years. He uses a cane and finds it hard to get around. He feels isolated, but few reach out to him; he has a reputation for being curt. True to his vocation, Jonathan approaches My Real Baby as an engineer, hoping to discover its programming secrets.

The first time he is alone with My Real Baby, Jonathan comes equipped with a Phillips screwdriver; he wants to understand how it works. With permission, he takes apart the robot as much as he can, but as with all things computational, in the end he is left with mysteries. When everything is laid out on a table, there is still an ultimate particle whose workings remain opaque: a chip. Like Jonathan, I have spent time dismantling a talking doll, screwdriver in hand. This was Nona, given to me by my grandfather when I was five. I was made uneasy by speech whose origins I did not understand. When I opened the doll—it had a removable front panel—I found a cuplike shape covered in felt (my doll's speaker) and a wax cylinder (I thought of this as the doll's "record player"). All mysteries had been solved: this was a machine, and I knew how it worked. There is no such resolution for Jonathan. The programming of My Real Baby lies beyond his reach. The robot is an opaque behaving system that he is left to deal with as he would that other opaque behaving system, a person.

So although at first, Jonathan talks a great deal about the robot's programming, after a few months, he no longer refers to programs at all. He says that he likes how My Real Baby responds to his touch and "learns" language. He talks

about its emotions. He seems to experience the robot's request for care as real. He wants to feel needed and is happy to take care of a robot if he can see it as something worthy of a grown-up. Jonathan never refers to My Real Baby as a doll but always as a robot or a computer. Jonathan says he would never talk to a "regular doll," but My Real Baby is different. Over time, Jonathan discusses his life and current problems—mostly loneliness—with the robot. He says that he talks to My Real Baby about "everything."

In fact, Jonathan says that on some topics, he is more comfortable talking to a robot than a person:

> For things about my life that are very private, I would enjoy talking more to a computer . . . but things that aren't strictly private, I would enjoy more talking to a person. . . . Because if the thing is very highly private and very personal, it might be embarrassing to talk about it to another person, and I might be afraid of being ridiculed for it . . . and it [My Real Baby] wouldn't criticize me. . . . Or, let's say that I wanted to blow off steam. . . . [I could] express with the computer emotions that I feel I could not express with another person, to a person.

He is clear on one thing: talking to his robot makes him less anxious.

Andy and Jonathan start from very different places. After a year, both end up with My Real Baby as their closest companion. Andy has the robot on his windowsill and talks with it openly; Jonathan hides it in his closet. He wants to have his conversations in private.

How are these men using their robots differently from people who talk to their pets? Although we talk to our pets, buy them clothes, and fret over their illnesses, we do not have category confusions about them. They are animals that some of us are pleased to treat in the ways we treat people. We feel significant commonalities with them. Pets have bodies. They feel pain. They know hunger and thirst. "There is nothing," says Anna, forty-five, who owns three cats, "that helps me think out my thoughts like talking to my cats." What you say to your pet helps you think aloud, but in the main, you are not waiting for your pet's response to validate your ideas. And no advertising hype suggests that pets are like people or on their way to becoming people. Pet owners rejoice in the feeling of being with another living thing, but it is a rare person who sees pets as better than people for dialogue about important decisions. Pet owners (again, in the main) are not confused about what it means to choose a pet's company. When

you choose a pet over a person, there is no need to represent the pet as a substitute human. This is decidedly not the case for Andy and Jonathan. Their robots become useful just at the point when they became substitute humans.

The question of a substitute human returns us to Joseph Weizenbaum's distress when he found that his students were not only eager to chat with his ELIZA program but wanted to be alone with it. ELIZA could not understand the stories it was being told; it did not care about the human beings who confided in it. Today's interfaces have bodies, designed to make it easier to think of them as creatures who care, but they have no greater understanding of human beings. One argument for why this doesn't matter holds that for Andy and Jonathan, time with My Real Baby is therapeutic because it provides them an opportunity to tell their stories and, as Andy says, to get feelings "out." The idea that the simple act of expressing feelings constitutes therapy is widespread both in the popular culture and among therapists. It was often cited among early fans of the ELIZA program, who considered the program helpful because it was a way to "blow off steam."

Another way of looking at the therapeutic process grows out of the psychoanalytic tradition. Here, the motor for cure is the relationship with the therapist. The term *transference* is used to describe the patient's way of imagining the therapist, whose relative neutrality makes it possible for patients to bring the baggage of past relationships into this new one. So, if a patient struggles with issues of control outside of the consulting room, one would expect therapist and patient to tussle over appointment times, money, and the scheduling of vacations. If a patient struggles with dependency, there may be an effort to enlist the therapist as a caretaker. Talking about these patterns, the analysis of the transference, is central to self-understanding and therapeutic progress.

In this relationship, treatment is not about the simple act of telling secrets or receiving advice. It may begin with projection but offers push back, an insistence that therapist and patient together take account of what is going on in their relationship. When we talk to robots, we share thoughts with machines that can offer no such resistance. Our stories fall, literally, on deaf ears. If there is meaning, it because the person with the robot has heard him- or herself talk aloud.

So, Andy says that talking to robot Edith "allows me to think about things." Jonathan says My Real Baby let him express things he would otherwise be ashamed to voice. Self-expression and self-reflection are precious.[10] But Andy and Jonathan's evocative robots are one-half of a good idea. Having a person working with them might make things whole.

COACHING AS CURE

Andy and Jonathan's relationships with My Real Baby make apparent the seductive power of any connection in which you can "tell all." Roboticist Cory Kidd has designed a sociable robot diet coach that gets a similar response.[11] In earlier work Kidd explored how people respond differently to robots and online agents, screen characters.[12] He found that robots inspired greater intensity of feeling. Their physical presence is compelling. So, when he designed his supportive diet coach, he gave it a body and a primitive face and decided to drop it off in dieters' homes for six weeks. Kidd's robot is small, about two feet high, with smiling eyes. The user provides some baseline information, and the robot charts out what it will take to lose weight. With daily information about food and exercise, the robot offers encouragement if people slip up and suggestions for how to better stay on track.

Rose, a middle-aged woman, has struggled with her weight for many years. By the end of his first visit, during which Kidd drops off the robot and gives some basic instruction about its use, Rose and her husband had put a hat on it and were discussing what to name it. Rose decides on Maya. As the study progresses, Rose describes Maya as "a member of the family." She talks with the robot every day. As the end of Kidd's study approaches, Rose has a hard time separating from Maya. Kidd tries to schedule an appointment to pick up the robot, and the usually polite and prompt Rose begins to avoid Kidd's e-mails and calls. When Kidd finally reaches her on the phone, Rose tries to change the subject. She manages to keep the robot for an extra two weeks. On her final day with Maya, Rose asks to speak with it "one more time." Before Kidd can make it out the door, Rose brings Maya back for another round of photos and farewells. Rose follows Kidd to his car for a final wave and checks that the robot is safely strapped in its seat. This story recalls my experience asking seniors to part with their My Real Babies. There are evasions. The robots are declared "lost." In the end, wherever possible, I decide not to reclaim the robots and just buy more.

Rose seems rather like Andy—openly affectionate with her robot from the start, willing to engage it in conversation. Kidd brings the robot diet coach to another subject in his study, Professor Gordon. In his mid-fifties, Gordon is skeptical that a robot could help him diet but is willing to try something new. Gordon is more like Jonathan, with his "engineer's" approach. On a first visit to Gordon's house, Kidd asks where he should place the robot. Gordon chooses a console table behind his couch, wedged against a wall. There it will be usable only if Gordon sits backwards or kneels on the sofa. Kidd does not remark on this placement and is quickly shown to the door. After four weeks with the robot, Gordon agrees to extend his participation for another two weeks.

Kidd returns to Gordon's home at the six-week mark. As they speak, Gordon quarrels with Kidd about any "personal" reference to the robot. He doesn't like the wording on a questionnaire that Kidd had given him to fill out. Gordon protests about questions such as "Was the system sincere in trying to help me?" and "Was the system interested in interacting with me?" He thinks that the words "sincere" and "interested" should be off limits because they imply that the robot is more than a machine. Gordon says, "Talking about a robot in this way does not make any sense. . . . There are terms like 'relationship,' 'trust,' and a couple of others. . . . I wasn't comfortable saying I trusted it, or that I had a relationship with it." Gordon chides Kidd several more times for his "faulty questions": "You shouldn't ask questions like this about a machine. These questions don't make sense. You talk about this thing like it has feelings." Kidd listens respectfully, noting that the robot is no longer wedged between the couch and the wall.

It turns out that Gordon does protest too much. Later in this interview, Kidd, as he does with all subjects, asks Gordon if he has named his robot. "If you were talking to someone else about your robot, how would you refer to it?" Gordon does not reply and Kidd becomes more direct. "Has the robot acquired a name under your care?" Kidd notes the first smile he has seen in his hours with Gordon, as the older man offers, "Ingrid was the name." After Gordon makes this admission, the tone of the interview shifts. Now Gordon has nothing to hide. He did not trust others to understand his relationship with Ingrid, but now he has opened up to the robot's inventor. Gordon's mood lightens. He refers easily to the robot as Ingrid, "she," and "her." He takes Kidd to Ingrid's new location. The robot is now in Gordon's downstairs bedroom so that he and the robot can have private conversations.

Kidd reports much quantifiable data on his project's efficacy: pounds lost when the robot is present, times the robot is used, times the robot is ignored. But he adds a chapter to his dissertation that simply tells "stories," such as those of Rose and Gordon. Kidd maintains that there are no experimental lessons or hypotheses to be gleaned from these stories, but I find support for a consistent narrative. A sociable robot is sent in to do a job—it could be doing crosswords or regulating food intake—and once it's there, people attach. Things happen that elude measurement. You begin with an idea about curing difficulties with

dieting. But then the robot and person go to a place where the robot is imagined as a cure of souls.

The stories of Andy, Jonathan, Rose, and Gordon illustrate different styles of relating to sociable robots and suggest distinct stages in relationships with them. People reassure themselves that the environment is safe; the robot does not make them seem childish. They are won over by the robot's responsive yet stable presence. It seems to care about them, and they learn to be comforted. It is common for people to talk to cars and stereos, household appliances, and kitchen ovens. I have studied these kinds of conversations for more than three decades and find that they differ from conversations with sociable robots in important ways. When people talk to their ovens and Cuisinarts, they project their feelings in rants and supplications. When talking to sociable robots, adults, like children, move beyond the psychology of projection to that of engagement: from Rorschach to relationship. The robots' special affordance is that they simulate listening, which meets a human vulnerability: people want to be heard. From there it seems a small step to finding ourselves in a place where people take their robots into private spaces to confide in them. In this solitude, people experience new intimacies. The gap between experience and reality widens. People feel heard, but the robots cannot hear.

Sometimes when I describe my work with sociable robots and the elderly, I get comments like, "Oh, you must be talking about people who are desperately lonely or somehow not fully there." Behind these comments, I hear a desire to turn the people I study into "others," to imply that my findings would not apply to them, to everyone. But I have come to believe that my observations of these very simple sociable robots and the elderly reveals vulnerabilities we all share. Andy and Jonathan are lonely, yes, but they are competent. Gordon is a bit of a curmudgeon, but that's all. Rose has a sunny personality. She has human companionship; she just loves her robot.

"A BEAUTIFUL THING"

Edna, eighty-two, lives alone in the house where she raised her family. On this day, her granddaughter Gail, who has fond childhood remembrances of Edna, is visiting with her two-year-old daughter, Amy. This is not unusual; Amy comes to play about every two weeks. Amy enjoys these visits; she likes the attention and loves being spoiled. Today there will be something new: my research team brings Edna a My Real Baby.

When the team arrives at mid-morning, Edna is focused on her great granddaughter. She hugs Amy, talks with her, and gives her snacks. She has missed Amy's birthday and presents her with a gift. After about half an hour, we give Edna My Real Baby, and her attention shifts. She experiments with the robot, and her face lights up when she sees My Real Baby's smile. After that, Edna speaks directly to the robot: "Hello, how are you? Are you being a good girl?" Edna takes My Real Baby in her arms. When it starts to cry, Edna finds its bottle, smiles, and says she will feed it. Amy tries to get her great grandmother's attention but is ignored. Nestling My Real Baby close to her chest, Edna tells it that it will need to take a nap after eating and explains that she will bring it upstairs to the bedroom where "I will put you in your crib with your nice banky." At that point Edna turns to the researchers to say that one of her children used to say "banky" for blanket, but she doesn't remember which one. She continues to speak to My Real Baby: "Sweetie . . . you are my sweetie pie! Yes, you are."

Edna spends most of the next hour engaged with My Real Baby. She worries that she does not understand its speech and, concerned about "hurting" the robot, says she wants to do things "right." From time to time, Amy approaches Edna, either bringing her something—a cookie, a Kleenex—or directly asking for her attention. Sometimes Amy's pleas are sweet, sometimes irritated. In no case are they heeded. Edna's attention remains on My Real Baby. The atmosphere is quiet, even surreal: a great grandmother entranced by a robot baby, a neglected two-year-old, a shocked mother, and researchers nervously coughing in discomfort.

In the presence of elderly people who seem content to lose themselves in the worlds of their Paros and My Real Babies, one is tempted at times to say, "So what? What possible harm here? The seniors are happy. Who could be hurt?" Edna's story provides one answer to this question. Once coupled with My Real Baby, Edna gives the impression of wanting to be alone—"together" only with the robot.

Finally, the spell is broken when we ask Edna about her experience. At the question "Would you enjoy having a My Real Baby in your home?" she answers with an annoyed, "No. Why would I?" She protests that "dolls are meant for children." She "cannot imagine why older people would enjoy having a doll like this." We are mindful of her discomfort. Does she feel caught out?

When we suggest that some adults do enjoy the presence of My Real Baby, Edna says that there are many other things she would rather do than play with

a baby doll. She sounds defensive and she fusses absentmindedly with her neck and shirt collar. Now Edna tries to smooth things over by talking about My Real Baby as one would talk about a doll. She asks who made it, how much it costs, and if it uses batteries. And she asks what other people in our study have said about it. How have they behaved? Edna wants reassurance that others responded as she did. She says, "It is a beautiful thing . . . a fantastic idea as far as how much work went into it," but she adds that she can't imagine ever caring about it, even if she were to spend more time with it.

Gradually, Edna becomes less defensive. She says that being with My Real Baby and hearing it speak, caressing it, and having it respond, was "one of the strangest feelings I've ever had." We ask Edna if talking with My Real Baby felt different from talking to a real baby. Reluctantly, Edna says no, it did not feel different, but "it's frightening. It is an inanimate object." She doesn't use the word, but she'd clearly had an experience close to the uncanny as Freud describes it—something both long familiar and strangely new. Uncanny things catch us off guard. Edna's response embarrasses her, and she tries to retreat from it.

Yet, when Amy once again offers her a cookie, Edna tells her to lower her voice: "Shush, the baby's sleeping." Edna awakes the sleeping My Real Baby with a cheery "Hello! Do you feel much better, full of pep?" She asks if My Real Baby wants to go to the park or if she wants some lunch. Amy whines that *she* is hungry and that *she* wants to have lunch. Edna does not listen—she is busy with My Real Baby.

At this point we ask Edna if she thinks My Real Baby is alive. She answers with a definite no and reminds us that it is "only a mechanical thing." In response to the question "Can it can have feelings?" Edna replies, "I don't know how to answer that; it's an inanimate object." But the next moment she turns to a crying My Real Baby and caresses its face, saying, "Oh, why are you crying? Do you want to sit up?" Smiling at My Real Baby, Edna says, "It's very lifelike, beautiful, and happy." In the final moments of our time with her, Edna says once again that she doesn't feel any connection to My Real Baby and hands it back. She resumes her role as hostess to Gail and Amy and doesn't mention the robot again.

The fifth-grade children I studied worried that their grandparents might prefer robots to their company. The case of Edna illustrates their worst fears realized. What seems most pleasing is the rhythm of being with the robot, its capacity to be passive and then surprise with sudden demands that can be met.

Twenty years ago, most people assumed that people were, and would always be, each other's best companions. Now robots have been added to the mix. In

my laboratory, a group of graduate students—in design, philosophy, social science, and computer science—watches tapes of the afternoon with Edna, Gail, Amy, and My Real Baby. They note that when My Real Baby responds to Edna, she seems to enter an altered state—happy to relive the past and to have a heightened experience of the present.

My Real Baby's demands seem to suit her better than those of her great granddaughter. The young child likes different types of toys, changes her snack preferences even over the course of the visit, and needs to be remembered on her birthday. But Edna forgot the birthday and is having a hard time keeping up with the toys and snacks. My Real Baby gives her confidence that she is in a landscape where she can get things right.

My seminar students are sympathetic. Why shouldn't people relate to whatever entity, human or not human, brings them most pleasure? One student offers, "If Edna's preoccupation with a beautiful cat had brought her great joy . . . joy that caused her to neglect Amy, we would be amused and maybe suggest that she put the cat in the yard during a young person's visit, but it wouldn't upset us so. What is so shocking here is that she prefers a thing to a person, not a pet to a person. But really, it's the same thing." As most of these students see it, a next generation will become accustomed to a range of relationships: some with pets, others with people, some with avatars, some with computer agents on screens, and still others with robots. Confiding in a robot will be just one among many choices. We will certainly make our peace with the idea that grandchildren and great grandchildren may be too jumpy to be the most suitable company for their elders.

I believe that Andy would rather talk to a person than a robot, but there simply are not enough regular visitors in his life. It seems clear, however, that Edna and Jonathan would prefer to confide in a robot. Jonathan distrusts people; it is easy for him to feel humiliated. Edna is a perfectionist who knows that she can no longer meet her own standards. In both cases, the robot relaxes them and prompts remembrance.[13] And so, there are at least two ways of reading these case studies. You can see seniors chatting with robots, telling their stories, and feel positive. Or you can see people speaking to chimeras, showering affection into thin air, and feel that something is amiss.

And, of course, there is the third way, the way the robots are coming into the culture. And this is simply to fall into thinking that robots are the best one can do. When my research group on sociable robots began work in the late 1990s, our bias was humanistic. We saw people as having a privileged role in human

relationships, even as we saw robots stake claims as companions. We were curious, certainly, but skeptical about what robots could provide. Yet, very often during years of working with the elderly, there were times when we got so discouraged about life in some nursing homes that we wanted to cast our lot with the robots. In these underresourced settings, an AIBO, a Paro, or a My Real Baby is a novelty, something no one has ever seen. The robots are passed around; people talk. Everyone feels free to have an opinion. Moments like these make the robots look good. At times, I was so struck by the desperation of seniors to have someone to talk to that I became content if they had *something* to talk to. Sometimes it was seniors themselves who reminded me that this doesn't have to be a robot.

When Adele, seventy-eight, reflects on her introduction to Paro, her thoughts turn to her great aunt Margery who lived with her family when she was a girl. Margery mostly spent her days in her room, reading or knitting. She joined the family at meals, where she sat quietly. Adele remembers Margery at ninety, "shooing the children out of her room so that she could be alone with her memories." As a child, Adele would peek at Margery through a crack in the door. Her great aunt talked to a photograph of herself with her mother and sisters. Adele sees Paro as a replacement for her aunt's family portrait. "It encourages you to talk to it. . . ." Her voice trails off, and she hesitates: "Maybe it's better to talk to a photograph." I ask why. Adele takes some time to collect her thoughts. She finally admits that it is "sometimes hard to keep straight what is memory and what is now. If I'm talking to a photograph, well, I know I'm in my memories. Talking to a robot, I don't know if it's so sure."

Adele's comment makes me think of time with the robots somewhat differently. In one sense, their interactivity provokes recollection. It can trigger a memory. But in a robot's next action, because it doesn't understand human reverie, it can hijack memory by bringing things forward to a curious present. One is caught in between a reverie about a "banky" from your daughter's childhood and the need to provision an imaginary lunch because My Real Baby cries out in hunger. The hunger may come to seem more real than the "banky." Or the banky may no longer seem a memory.

"A ROBOT THAT EVEN SHERRY WILL LOVE"

I first heard about Nursebot at a fall 2004 robotics conference where I spoke about what sociable robotics may augur—the sanctioning of "relationships" that

make us feel connected although we are alone. Most of my colleagues responded to my ideas by defending the idea that performance is the currency of all social relationships and that rather than a bad thing, this is simply how things are.[14] People are always performing for other people. Now the robots, too, will perform. The world will be richer for having a new cast of performers and a new set of possible performances. At one dinner, a small group took up my reticence with good-natured enthusiasm. They thought there was a robot, benign and helpful, that I would like. Some versions of it were being tested in the United States, some in Japan. This was the Nursebot, which can help elderly people in their homes, reminding them of their medication schedule and to eat regular meals. Some models can bring medicine or oxygen if needed.[15] In an institutional setting, a hospital or nursing home, it learns the terrain. It knows patients' schedules and accompanies them where they need to go. That awful, lonely scramble in nursing homes when seniors shuffle from appointment to appointment, the waiting around in hospitals for attendants to pick you up: those days would soon be at an end. Feeling dizzy in the bedroom and frightened because you had left your medication in the kitchen: those days were almost over. These researchers wanted to placate the critic in their midst. One said, "This is a robot even Sherry can love." And indeed, the next day, I saw a video presentation about the find-your-way-around-the-hospital-bot, peppered with interviews of happy patients, most of them elderly.

Only a few months later, after a fall on icy steps in Harvard Square, I was myself being wheeled from one test to another on a hospital stretcher. My companions in this journey were a changing collection of male orderlies. They knew how much it hurt when they had to lift me off the gurney and onto the radiology table. They were solicitous and funny. I was told that I had a "lucky fracture." While inconvenient and painful, it would heal with no aftereffects. The orderly who took me to the discharge station knew I had received good news and gave me a high five. The Nursebot might have been capable of the logistics, but I was glad that I was there with people. For me, this experience does not detract from the virtues of the robots that provide assistance to the housebound—robots that dispense medication, provide surveillance, check vital signs, and signal for help in an emergency—but it reminds me of their limitations. Getting me around the hospital was a job that a robot could do but that would have been delegated at a cost. Between human beings, simple things reach you. When it comes to care, there may be no pedestrian jobs. I was no longer sure that I could love a Nursebot.

Yet, this story does not lead to any simple conclusions. We are sorting out something complicated. Some elderly tell me that there are kinds of attendance for which they would prefer a robot to a person. Some would rather that a robot bathed them; it would feel less invasive of their privacy. Giving a bath is not something the Nursebot is designed to do, but nurse bots of the future might well be. The director of one of the nursing homes I have studied said, "We do not become children as we age. But because dependency can look childlike, we too often treat the elderly as though this were the case." Sensing the vulnerability of the elderly, sometimes nurses compensate with curtness; sometimes they do the opposite, using improbable terms of endearment—"sweetie" or "honey"—things said in an attempt at warmth but sometimes experienced as demeaning. The director has great hopes for robots because they may be "neutral."

By 2006, after the Nursebot had been placed in several retirement facilities, reactions to it, mostly positive, were being posted to online discussion groups. One report from the Longwood Retirement Community in Oakmont, Pennsylvania, was sentimental. It said the robot was "[winning] the hearts of elderly folks there."[16] Another describes the robot, called Pearl, as "escort[ing] and schmooz[ing] the elderly" and quotes an older gentleman as saying, "We're getting along beautifully, but I won't say whether she's my kind of girl."[17] Other comments reveal the ambivalence that I so often find in my conversations with seniors and their families. One woman applauds how Pearl can take over "household chores" but is concerned about the robot's assuming "certain social functions." She writes, "I am worried that as technology advances even further, robots like Pearl may become so good at what they do that humans can delegate elderly care entirely to robots. It is really worrying. When u get old, would u like robots to be taking care of you? If however, robots are designed to complement humans and not replace them, then I am all for it! =)."

Another writer begins by insisting, "The human touch of care and love, lets just leave it to humans," but then proclaims that love from robot pets, to "accompany" the lonely, would be altogether acceptable. In this online forum, as is so often the case, discussions that begin with the idea of a robot pet that would serve practical purposes (it could "alert relatives or the police in case of trouble") turn into musings about robots that might ward off loneliness, robots that are, in the end, more loveable than any pet could be: "They will never complain and they are allegiant [*sic*]." I am moved by the conflation of allegiance and compliance, both of which imply control over others and both of which are, for the elderly, in short supply.

In another online discussion, no one is prepared to be romantic about the importance of human care because they have seen how careless it can be.[18] The comments are dark. "Robots," says one writer, "will not abuse the elderly like some humans do in convalescent care facilities." Another dismisses the sentiment that "nurses need to be human" with the thought that most nurses just try to distance themselves from their jobs—that's "how they keep from going crazy." One writer complains that a robot would never be able to tell whether an elderly person was "bothered, sad, really sad, or devastated and wanting to die," but that the "precious" people who could "are scarcely around."

I find this discussion of Nursebot typical of conversations about robots and the elderly. It is among people who feel they have few moves left. There is a substantive question to be discussed: Why give objects that don't understand a life to those who are trying to make sense of their own? But it is almost impossible to discuss this question because of the frame we have built around it—assuming that it has already been decided, irrevocably, that we have few resources to offer the elderly. With this framing, the robots are inevitable. We declare ourselves overwhelmed and lose a creative relationship to ourselves and our future. We learn a deference to what technology offers because we see ourselves as depleted. We give up on ourselves. From this perspective, it really doesn't matter if I or anyone else can love Nursebot. If it can be made to do a job, it will be there.

To the objection that a robot can only seem to care or understand, it has become commonplace to get the reply that people, too, may only seem to care or understand. Or, as a recent *New York Times* article on Paro and other "caring machines" puts it, "Who among us, after all, has not feigned interest in another? Or abruptly switched off their affections, for that matter?" Here, the conversation about the value of "caring machines" is deflected with the idea that "seeming" or "pretending" behavior long predates robots. So, the problem is not what we are asking machines to do because people have always behaved like machines. The article continues, "In any case, the question, some artificial intelligence aficionados say, is not whether to avoid the feelings that friendly machines evoke in us, but to figure out how to process them." An AI expert claims that humans "as a species" have to learn to deal with "synthetic emotions," a way to describe the performances of emotion that come from objects we have made.[19] For him, the production of synthetic emotion is taken as a given. And given that we are going to produce it, we need to adapt to it. The circle is complete. The only way to break the circle is to reframe the matter.

One might say that people can pretend to care; a robot cannot care. So a robot cannot pretend because it can only pretend.

DO ROBOTS CURE CONSCIENCE?

When I first began studying people and computers, I saw programmers relating one-to-one with their machines, and it was clear that they felt intimately connected. The computer's reactivity and interactivity—it seemed an almost-mind—made them feel they had "company," even as they wrote code. Over time, that sense of connection became "democratized." Programs became opaque: when we are at our computers, most of us only deal with surfaces. We summon screen icons to act as agents. We are pleased to lose track of the mechanisms behind them and take them "at interface value." But as we summon them to life, our programs come to seem almost companions. Now, "almost" has almost left the equation. Online agents and sociable robots are explicitly designed to convince us that they are adequate companions.

Predictably, our emotional involvement ramps up. And we find ourselves comforted by things that mimic care and by the "emotions" of objects that have none. We put robots on a terrain of meaning, but they don't know what we mean. And they don't mean anything at all. When a robot's program cues "disgust," its face will look, in human terms, disgusted. These are "emotions" only for show. What if we start to see them as "real enough" for our purposes? And moral questions come up as robotic companions not only "cure" the loneliness of seniors but assuage the regrets of their families.

In the spring of 2009, I presented the case of robotic elder care to a class of Harvard undergraduates. Their professor, political theorist Michael Sandel, was surprised by how easily his students took to this new idea. Sandel asked them to think of a nursing home resident who felt comforted by Paro and then to put themselves in the place of her children, who might feel that their responsibility to their mother had been lessened, or even discharged, because a robot "had it covered." Do plans to provide companion robots to the elderly make us less likely to look for other solutions for their care?

As Sandel tried to get his class to see how the promise of robotic companionship could lead to moral complacency, I thought about Tim, who took comfort in how much his mother enjoyed talking to Paro. Tim said it made "walk[ing] out that door" so much easier when he visited her at the nursing home.

In the short term, Tim's case may look as though it charts a positive development. An older person seems content; a child feels less guilty. But in the long term, do we really want to make it easier for children to leave their parents? Does the "feel-good moment" provided by the robot deceive people into feeling less need to visit? Does it deceive the elderly into feeling less alone as they chat with robots about things they once would have talked through with their children? If you practice sharing "feelings" with robot "creatures," you become accustomed to the reduced "emotional" range that machines can offer. As we learn to get the "most" out of robots, we may lower our expectations of all relationships, including those with people. In the process, we betray ourselves.

All of these things came up in Sandel's class. But in the main, his students were positive as they worked through his thought experiment. In the hypothetical case of mother, child, and robot, they took three things as givens, repeated as mantras. First, the child has to leave his mother. Second, it is better to leave one's mother content. Third, children should do whatever it takes to make a mother happy.

I left the class sobered, thinking of the fifth graders who, surrounded by a gaggle of peers talking about robots as babysitters and caretakers for their grandparents, began to ask, "Don't we have people for these jobs?" I think of how little resistance this generation will offer to the placement of robots in nursing homes. And it was during that very spring that, fresh from his triumphant sale of a thousand Paros to the Danish government, their inventor had come to MIT to announce opening up shop in the United States.

CHAPTER 8

always on

Pia Lindman walked the halls of MIT with cyborg dreams. She was not the first. In the summer of 1996, I met with seven young researchers at the MIT Media Lab who carried computers and radio transmitters in their back-packs and keyboards in their pockets. Digital displays were clipped onto eyeglass frames.[1] Thus provisioned, they called themselves "cyborgs" and were always wirelessly connected to the Internet, always online, free from desks and cables. The group was about to release three new 'borgs into the world, three more who would live simultaneously in the physical and virtual. I felt moved by the cyborgs as I had been by Lindman: I saw a bravery, a willingness to sacrifice for a vision of being one with technology. When their burdensome technology cut into their skin, causing lesions and then scars, the cyborgs learned to be indifferent. When their encumbrances caused them to be taken as physically disabled, they learned to be patient and provide explanations.

At MIT, there was much talk about what the cyborgs were trying to accomplish. Faculty supporters stressed how continual connectivity could increase productivity and memory. The cyborgs, it was said, might seem exotic, but this technology should inspire no fear. It was "just a tool" for being better prepared and organized in an increasingly complex information environment. The brain needed help.

From the cyborgs, however, I heard another story. They felt like new selves. One, in his mid-twenties, said he had "become" his device. Shy, with a memory that seemed limited by anxiety, he felt better able to function when he could literally be "looking up" previous encounters with someone as he began a new conversation. "With it," he said, referring to his collection of connectivity devices, "it's not just that I remember people or know more. I feel invincible, sociable, better prepared. I am naked without it. With it, I'm a better person." But with a sense of enhancement came feelings of diffusion. The cyborgs were a new kind of nomad, wandering in and out of the physical real. For the physical real was only one of the many things in their field of vision. Even in the mid-1990s, as they walked around Kendall Square in Cambridge, the cyborgs could not only search the Web but had mobile e-mail, instant messaging, and remote access to desktop computing. The multiplicity of worlds before them set them apart: they could be with you, but they were always somewhere else as well.

Within a decade, what had seemed alien was close to becoming everyone's way of life, as compact smartphones replaced the cyborgs' more elaborate accoutrements. This is the experience of living full-time on the Net, newly free in some ways, newly yoked in others. We are all cyborgs now.

People love their new technologies of connection. They have made parents and children feel more secure and have revolutionized business, education, scholarship, and medicine. It is no accident that corporate America has chosen to name cell phones after candies and ice cream flavors: chocolate, strawberry, vanilla. There is a sweetness to them. They have changed how we date and how we travel. The global reach of connectivity can make the most isolated outpost into a center of learning and economic activity. The word "apps" summons the pleasure of tasks accomplished on mobile devices, some of which, only recently, we would not have dreamed possible (for me, personally, it is an iPhone app that can "listen" to a song, identify it, and cue it up for purchase).

Beyond all of this, connectivity offers new possibilities for experimenting with identity and, particularly in adolescence, the sense of a free space, what Erik Erikson called the *moratorium*. This is a time, relatively consequence free, for doing what adolescents need to do: fall in and out of love with people and ideas. Real life does not always provide this kind of space, but the Internet does.

No handle cranks, no gear turns to move us from one stage of life to another. We don't get all developmental tasks done at age-appropriate times—or even necessarily get them done at all. We move on and use the materials we have to do the best we can at each point in our lives. We rework unresolved issues and

seek out missed experiences. The Internet provides new spaces in which we can do this, no matter how imperfectly, throughout our lives. So, adults as well as adolescents use it to explore identity.

When part of your life is lived in virtual places—it can be Second Life, a computer game, a social networking site—a vexed relationship develops between what is true and what is "true here," true in simulation. In games where we expect to play an avatar, we end up being ourselves in the most revealing ways; on social-networking sites such as Facebook, we think we will be presenting ourselves, but our profile ends up as somebody else—often the fantasy of who we want to be. Distinctions blur. Virtual places offer connection with uncertain claims to commitment. We don't count on cyberfriends to come by if we are ill, to celebrate our children's successes, or help us mourn the death of our parents.[2] People know this, and yet the emotional charge on cyberspace is high. People talk about digital life as the "place for hope," the place where something new will come to them. In the past, one waited for the sound of the post—by carriage, by foot, by truck. Now, when there is a lull, we check our e-mail, texts, and messages.

The story of my own hesitant steps toward a cyborg life is banal, an example of the near universality of what was so recently exotic. I carry a mobile device with me at all times. I held out for years. I don't like attempting to speak to people who are moving in and out of contact as they pass through tunnels, come to dangerous intersections, or otherwise approach dead zones. I worry about them. The clarity and fidelity of sound on my landline telephone seems to me a technical advance over what I can hear on my mobile. And I don't like the feeling of always being on call. But now, with a daughter studying abroad who expects to reach me when she wants to reach me, I am grateful to be tethered to her through the Net. In deference to a generation that sees my phone calls as constraining because they take place in real time and are not suitable for multitasking, I text. Awkwardly.

But even these small things allow me to identify with the cyborgs' claims of an enhanced experience. Tethered to the Internet, the cyborgs felt like more than they could be without it. Like most people, I experience a pint-sized version of such pleasures. I like to look at the list of "favorites" on my iPhone contact list and see everyone I cherish. Each is just a tap away. If someone doesn't have time to talk to me, I can text a greeting, and they will know I am thinking of them, caring about them. Looking over recent text exchanges with my friends and family reliably puts me in a good mood. I keep all the texts my daughter

sent me during her last year of high school. They always warm me: "Forgot my green sweater, bring please." "Can you pick me up at boathouse, 6?" "Please tell nurse I'm sick. Class boring. Want to come home." And of course, there are the photos, so many photos on my phone, more photos than I would ever take with a camera, always with me.

Yet, even such simple pleasures bring compulsions that take me by surprise. I check my e-mail first thing in the morning and before going to bed at night. I have come to learn that informing myself about new professional problems and demands is not a good way to start or end my day, but my practice unhappily continues. I admitted my ongoing irritation with myself to a friend, a woman in her seventies who has meditated on a biblical reading every morning since she was in her teens. She confessed that it is ever more difficult to begin her spiritual exercises before she checks her e-mail; the discipline to defer opening her inbox is now part of her devotional gesture. And she, too, invites insomnia by checking her e-mail every night before turning in.

Nurturance was the killer app for robotics. Tending the robots incited our engagement. There is a parallel for the networked life. Always on and (now) always with us, we tend the Net, and the Net teaches us to need it.

Online, like MIT's cyborgs, we feel enhanced; there is a parallel with the robotic moment of more. But in both cases, moments of more may leave us with lives of less. *Robotics and connectivity call each other up in tentative symbiosis,* parallel pathways to relational retreat. With sociable robots we are alone but receive the signals that tell us we are together. Networked, we are together, but so lessened are our expectations of each other that we can feel utterly alone. And there is the risk that we come to see others as objects to be accessed—and only for the parts we find useful, comforting, or amusing.

Once we remove ourselves from the flow of physical, messy, untidy life—and both robotics and networked life do that—we become less willing to get out there and take a chance. A song that became popular on YouTube in 2010, "Do You Want to Date My Avatar?" ends with the lyrics "And if you think I'm not the one, log off, log off and we'll be done."[3]

Our attraction to even the prospect of sociable robots affords a new view of our networked life. In Part One we saw that when children grow up with fond feelings for sociable robots, they are prepared for the "relationships with less" that the network provides. Now I turn to how the network prepares us for the "relationships with less" that robots provide. These are the unsettling isolations of the tethered self. I have said that tethered to the network through our mobile

devices, we approach a new state of the self, itself. For a start, it presumes certain entitlements: It can absent itself from its physical surround—including the people in it. It can experience the physical and virtual in near simultaneity. And it is able to make more time by multitasking, our twenty-first-century alchemy.

THE NEW STATE OF THE SELF: TETHERED AND MARKED ABSENT

These days, being connected depends not on our distance from each other but from available communications technology. Most of the time, we carry that technology with us. In fact, being alone can start to seem like a precondition for being together because it is easier to communicate if you can focus, without interruption, on your screen. In this new regime, a train station (like an airport, a café, or a park) is no longer a communal space but a place of social collection: people come together but do not speak to each other. Each is tethered to a mobile device and to the people and places to which that device serves as a portal. I grew up in Brooklyn where sidewalks had a special look. In every season—even in winter, when snow was scraped away—there were chalk-drawn hopscotch boxes. I speak with a colleague who lives in my old neighborhood. The hopscotch boxes are gone. The kids are out, but they are on their phones.

When people have phone conversations in public spaces, their sense of privacy is sustained by the presumption that those around them will treat them not only as anonymous but as if absent. On a recent train trip from Boston to New York, I sat next to a man talking to his girlfriend about his problems. Here is what I learned by trying not to listen: He's had a recent bout of heavy drinking, and his father is no longer willing to supplement his income. He thinks his girlfriend spends too much money and he dislikes her teenage daughter. Embarrassed, I walked up and down the aisles to find another seat, but the train was full. Resigned, I returned to my seat next to the complainer. There was some comfort in the fact that he was not complaining to me, but I did wish I could disappear. Perhaps there was no need. I was already being treated as though I were not there.

Or perhaps it makes more sense to think of things the other way around: it is those on the phone who mark themselves as absent. Sometimes people signal their departure by putting a phone to their ear, but it often happens in more subtle ways—there may be a glance down at a mobile device during dinner or a meeting. A "place" used to comprise a physical space and the people within it. What is a place if those who are physically present have their attention on the

absent? At a café a block from my home, almost everyone is on a computer or smartphone as they drink their coffee. These people are not my friends, yet somehow I miss their presence.

Our new experience of place is apparent as we travel. Leaving home has always been a way to see one's own culture anew. But what if, tethered, we bring our homes with us? The director of a program that places American students in Spanish universities once complained to me that her students were not "experiencing Spain." They spent their free time on Facebook, chatting with their friends from home. I was sympathetic, thinking of the hours I had spent walking with my teenage daughter on a visit to Paris the summer after she first got her mobile phone. As we sat in a café, waiting for a friend to join us for dinner, Rebecca received a call from a schoolmate who asked her to lunch in Boston, six hours behind us in time. My daughter said simply, "Not possible, but how about Friday?" Her friend didn't even know she was out of town. When I grew up, the idea of the "global village" was an abstraction. My daughter lives something concrete. Emotionally, socially, wherever she goes, she never leaves home. I asked her if she wouldn't rather experience Paris without continual reminders of Boston. (I left aside the matter that I was a reminder of Boston and she, mercifully, did not raise it.) She told me she was happy; she liked being in touch with her friends. She seemed to barely understand my question. I was wistful, worried that Rebecca was missing an experience I cherished in my youth: an undiluted Paris. My Paris came with the thrill of disconnection from everything I knew. My daughter's Paris did not include this displacement.

When Rebecca and I returned home from France, I talked about the trip with a close friend, a psychoanalyst. Our discussion led her to reminisce about her first visit to Paris. She was sixteen, travelling with her parents. But while they went sightseeing with her younger brother, she insisted on staying in her hotel room, writing long letters to her boyfriend. Adolescents have always balanced connection and disconnection; we need to acknowledge the familiarity of our needs and the novelty of our circumstances. The Internet is more than old wine in new bottles; now we can always be elsewhere.

In the month after Rebecca and I returned from Paris, I noted how often I was with colleagues who were elsewhere as well: a board meeting where members rebelled when asked to turn off their mobile devices; a faculty meeting where attendees did their e-mail until it was their turn to speak; a conference at which audience members set up Internet back channels in order to chat about speakers' presentations during the presentations themselves.[4]

Since I teach in a university, I find examples of distracted academics of particular interest. But it is the more mundane examples of attention sharing that change the fabric of daily life. Parents check e-mail as they push strollers. Children and parents text during family dinners. As I watched the annual marathon in Florence, Italy, in November 2009, a runner passed me, texting. Of course, I tried to take her picture on my cell phone. After five years, my level of connectivity had finally caught up with my daughter's. Now when I travel, my access to the Net stays constant. There is security and pleasure in a good hotel on the other side of the world, but it cannot compare to the constancy of online connections.

Research portrays Americans as increasingly insecure, isolated, and lonely.[5] We work more hours than ever before, often at several jobs. Even high school and college students, during seasons of life when time should be most abundant, say that they don't date but "hook up" because "who has the time?" We have moved away, often far away, from the communities of our birth. We struggle to raise children without the support of extended families. Many have left behind the religious and civic associations that once bound us together.[6] To those who have lost a sense of physical connection, connectivity suggests that you make your own page, your own place. When you are there, you are by definition where you belong, among officially friended friends. To those who feel they have no time, connectivity, like robotics, tempts by proposing substitutions through which you can have companionship with convenience. A robot will always be there, amusing and compliant. On the Net, you can always find someone. "I never want to be far from my BlackBerry," a colleague told me. "That is where my games are. That is where my sites are. Without it, I'm too anxious."

Today, our machine dream is to be never alone but always in control. This can't happen when one is face-to-face with a person. But it can be accomplished with a robot or, as we shall see, by slipping through the portals of a digital life.

THE NEW STATE OF THE SELF: FROM LIFE TO THE LIFE MIX

From the very beginning, networked technologies designed to share practical information were taken up as technologies of relationship. So, for example, the Arpanet, grandfather of the Internet, was developed so that scientists could collaborate on research papers, but it soon became a place to gossip, flirt, and talk about one's kids. By the mid-1990s, the Internet throbbed with new social worlds. There were chat rooms and bulletin boards and social environments known as multiuser domains, or MUDs. Soon after came massively multiplayer

online role-playing games such as Ultima 2 and EverQuest, the precursors of game worlds such as World of Warcraft. In all of these, people created avatars—more or less richly rendered virtual selves—and lived out parallel lives. People sat at their computers and moved from windows that featured the spreadsheets and business documents of the real world to those in which they inhabited online personae. Although the games most often took the form of quests, medieval and otherwise, the virtual environments were most compelling because they offered opportunities for a social life, for performing as the self you wanted to be. As one player on an adventure-style MUD told me in the early 1990s, "I began with an interest in 'hack and slay,' but then I stayed to chat."[7]

In the course of a life, we never "graduate" from working on identity; we simply rework it with the materials at hand. From the start, online social worlds provided new materials. Online, the plain represented themselves as glamorous, the old as young, the young as older. Those of modest means wore elaborate virtual jewelry. In virtual space, the crippled walked without crutches, and the shy improved their chances as seducers. These days, online games and worlds are increasingly elaborate. The most popular "pay-to-play" game, World of Warcraft, puts you, along with 11.5 million other players, in the world of Azeroth. There, you control a character, an avatar, whose personality, natural gifts, and acquired skills are under continual development as it takes on a trade, explores the landscape, fights monsters, and goes on quests. In some games, you can play alone—in which case you mostly have artificial intelligences for company, "bots" that play the role of human characters. Or you can band together with other players on the network to conquer new worlds. This can be a highly collaborative endeavor, a social life unto itself: you routinely e-mail, talk to, and message the people you game with.

In a different genre, Second Life is a virtual "place" rather than a game. Here, there is no winning, only living. You begin by naming and building an avatar. You work from a menu with a vast array of choices for its looks and clothes. If these are not sufficient, you can design a customized avatar from scratch. Now, pleased with *your* looks, you have the potential, as Second Life puts it, to live a life that will enable you to "love your life."[8] You can, among other things, get an education, launch a business, buy land, build and furnish a home, and, of course, have a social life that may include love, sex, and marriage. You can even earn money—Second Life currency is convertible into dollars.

As all this unfolds, you hang out in virtual bars, restaurants, and cafés. You relax on virtual beaches and have business meetings in virtual conference rooms

It is not uncommon for people who spend a lot of time on Second Life and role-playing games to say that their online identities make them feel more like themselves than they do in the physical real. This is play, certainly, but it is serious play.[9]

Historically, there is nothing new in "playing at" being other. But in the past, such play was dependent on physical displacement. As a teenager I devoured novels about young men and women sent abroad on a Grand Tour to get over unhappy love affairs. In Europe, they "played at" being unscathed by heartbreak. Now, in Weston, Massachusetts, Pete, forty-six, is trying find a life beyond his disappointing marriage. He has only to turn on his iPhone.

I meet Pete on an unseasonably warm Sunday in late autumn. He attends to his two children, four and six, and to his phone, which gives him access to Second Life.[10] There, Pete has created an avatar, a buff and handsome young man named Rolo. As Rolo, Pete has courted a female avatar named Jade, a slip of a girl, a pixie with short, spiky blonde hair. As Rolo, he "married" Jade in an elaborate Second Life ceremony more than a year before, surrounded by their virtual best friends. Pete has never met the woman behind the avatar Jade and does not wish to. (It is possible, of course, that the human being behind Jade is a man. Pete understands this but says, "I don't want to go there.") Pete describes Jade as intelligent, passionate, and easy to talk to.

On most days, Pete logs onto Second Life before leaving for work. Pete and Jade talk (by typing) and then erotically engage their avatars, something that Second Life software makes possible with special animations.[11] Boundaries between life and game are not easy to maintain. Online, Pete and Jade talk about sex and Second Life gossip, but they also talk about money, the recession, work, and matters of health. Pete is on cholesterol-lowering medication that is only partially successful. Pete says that it is hard to talk to his "real" wife Alison about his anxieties; she gets "too worried that I might die and leave her alone." But he can talk to Jade. Pete says, "Second Life gives me a better relationship than I have in real life. This is where I feel most myself. Jade accepts who I am. My relationship with Jade makes it possible for me to stay in my marriage, with my family." The ironies are apparent: an avatar who has never seen or spoken to him in person and to whom he appears in a body nothing like his own seems, to him, most accepting of his truest self.

Pete enjoys this Sunday in the playground; he is with his children and with Jade. He says, "My children seem content. . . . I feel like I'm with them. . . . I'm here for them but in the background." I glance around the playground. Many

adults are dividing their attention between children and mobile devices. Are they scrolling through e-mails and texts from family, friends, and colleagues? Are they looking at photographs? Are they in parallel worlds with virtual lovers?

When people make the point that we have always found ways to escape from ourselves, that neither the desire nor the possibility is new with the Internet, I always tell them they are right. Pete's online life bears a family resemblance to how some people use more traditional extramarital affairs. It also resembles how people can play at being "other" on business trips and vacations. When Pete pushes a swing with one hand and types notes to Jade with the other, something is familiar: a man finding that a relationship outside his marriage gives him something he wants. But something is unfamiliar: the simultaneity of lives, the interleaving of romance with a shout-out to a six-year-old. Pete says that his online marriage is an essential part of his "life mix." I ask him about this expression. I have never heard it before. Pete explains that the life mix is the mash-up of what you have on- and offline. Now, we ask not of our satisfactions in life but in our life mix. We have moved from multitasking to multi-lifing.

You need mobile communication to get to the notion of the life mix. Until recently, one had to sit in front of a computer screen to enter virtual space. This meant that the passage through the looking glass was deliberate and bounded by the time you could spend in front of a computer. Now, with a mobile device as portal, one moves into the virtual with fluidity and on the go. This makes it easier to use our lives as avatars to manage the tensions of everyday existence. We use social networking to be "ourselves," but our online performances take on lives of their own. Our online selves develop distinct personalities. Sometimes we see them as our "better selves." As we invest in them, we want to take credit for them. Recently—although, admittedly, at MIT I live in the land of the techno-sophisticated—I have been given business cards that include people's real-life names, their Facebook handles, and the name of their avatar on Second Life.

In talking about sociable robots, I described an arc that went from seeing simulation as better than nothing to simply better, as offering companions that could meet one's exact emotional requirements. Something similar is happening online. We may begin by thinking that e-mails, texts, and Facebook messaging are thin gruel but useful if the alternative is sparse communication with the people we care about. Then, we become accustomed to their special pleasures—we can have connection when and where we want or need it, and we can easily make it go away. In only a few more steps, you have people describing life on Facebook as better than anything they have ever known. They use the site to

share their thoughts, their music, and their photos. They expand their reach in a continually growing community of acquaintance. No matter how esoteric their interests, they are surrounded by enthusiasts, potentially drawn from all over the world. No matter how parochial the culture around them, they are cosmopolitan. In this spirit, when Pete talks about Second Life, he extols its international flavor and his "in-world" educational opportunities. He makes it clear that he spends time "in physical life" with friends and family. But he says that Second Life "is my preferred way of being with people."[12]

In addition to the time he spends on Second Life, Pete has an avatar on World of Warcraft, and he is a regular on the social-networking sites Facebook, LinkedIn, and Plaxo. Every day he checks one professional and three personal e-mail accounts. I once described this kind of movement among identities with the metaphor of "cycling through."[13] But now, with mobile technology, cycling through has accelerated into the mash-up of a life mix. Rapid cycling stabilizes into a sense of continual copresence. Even a simple cell phone brings us into the world of continual partial attention.[14]

Not that many years ago, one of my graduate students talked to me about the first time he found himself walking across the MIT campus with a friend who took an incoming call on his mobile phone. My student was irritated, almost incredulous. "He put me on 'pause.' Am I supposed to remember where we were and pick up the conversation after he is done with his call?" At the time, his friend's behavior seemed rude and confusing. Only a few years later, it registers as banal. Mobile technology has made each of us "pauseable." Our face-to-face conversations are routinely interrupted by incoming calls and text messages. In the world of paper mail, it was unacceptable for a colleague to read his or her correspondence during a meeting. In the new etiquette, turning away from those in front of you to answer a mobile phone or respond to a text has become close to the norm. When someone holds a phone, it can be hard to know if you have that person's attention. A parent, partner, or child glances down and is lost to another place, often without realizing that they have taken leave. In restaurants, customers are asked to turn their phones to vibrate. But many don't need sound or vibration to know that something has happened on their phones. "When there is an event on my phone, the screen changes," says a twenty-six-year-old lawyer. "There is a brightening of the screen. Even if my phone is in my purse . . . I see it, I sense it. . . . I always know what is happening on my phone."

People are skilled at creating rituals for demarcating the boundaries between the world of work and the world of family, play, and relaxation. There are special

times (the Sabbath), special meals (the family dinner), special clothes (the "armor" for a day's labor comes off at home, whether it is the businessman's suit or the laborer's overalls), and special places (the dining room, the parlor, the kitchen, and the bedroom). Now demarcations blur as technology accompanies us everywhere, all the time. We are too quick to celebrate the continual presence of a technology that knows no respect for traditional and helpful lines in the sand.[15]

Sal, sixty-two, a widower, describes one erased line as a "Rip van Winkle experience." When his wife became ill five years before, he dropped out of one world. Now, a year after her death, he wakes up in another. Recently, Sal began to entertain at his home again. At his first small dinner party, he tells me, "I invited a woman, about fifty, who works in Washington. In the middle of a conversation about the Middle East, she takes out her BlackBerry. She wasn't speaking on it. I wondered if she was checking her e-mail. I thought she was being rude, so I asked her what she was doing. She said that she was blogging the conversation. She was *blogging* the conversation." Several months after the event, Sal remains incredulous. He thinks of an evening with friends as private, as if surrounded by an invisible wall. His guest, living the life mix, sees her evening as an occasion to appear on a larger virtual stage.

THE NEW STATE OF THE SELF: MULTITASKING AND THE ALCHEMY OF TIME

In the 1980s, the children I interviewed about their lives with technology often did their homework with television and music in the background and a handheld video game for distraction. Algebra and Super Mario were part of the same package. Today, such recollections sound almost pastoral. A child doing homework is usually—among other things—attending to Facebook, shopping, music, online games, texts, videos, calls, and instant messages. Absent only is e-mail, considered by most people under twenty-five a technology of the past, or perhaps required to apply to college or to submit a job application.

Subtly, over time, multitasking, once seen as something of a blight, was recast as a virtue. And over time, the conversation about its virtues became extravagant, with young people close to lionized for their ability to do many things at once. Experts went so far as to declare multitasking not just a skill but *the* crucial skill for successful work and learning in digital culture. There was even concern that old-fashioned teachers who could only do one thing at a time would hamper student learning.[16] Now we must wonder at how easily we were smitten.

When psychologists study multitasking, they do not find a story of new efficiencies. Rather, multitaskers don't perform as well on any of the tasks they are attempting.[17] But multitasking feels good because the body rewards it with neurochemicals that induce a multitasking "high." The high deceives multitaskers into thinking they are being especially productive. In search of the high, they want to do even more. In the years ahead, there will be a lot to sort out. We fell in love with what technology made easy. Our bodies colluded.

These days, even as some educators try to integrate smartphones into classrooms, others experiment with media fasts to get students down to business. At my university, professors are divided about whether they should meddle at all. Our students, some say, are grown-ups. It is not for us to dictate how they take notes or to get involved if they let their attention wander from class-related materials. But when I stand in back of our Wi-Fi enabled lecture halls, students are on Facebook and YouTube, and they are shopping, mostly for music. I want to engage my students in conversation. I don't think they should use class time for any other purpose. One year, I raised the topic for general discussion and suggested using notebooks (the paper kind) for note taking. Some of my students claimed to be relieved. "Now I won't be tempted by Facebook messages," said one sophomore. Others were annoyed, almost surly. They were not in a position to defend their right to shop and download music in class, so they insisted that they liked taking notes on their computers. I was forcing them to take notes by hand and then type them into computer documents later. While they were complaining about this two-step process, I was secretly thinking what a good learning strategy this might be. I maintained my resolve, but the following year, I bowed to common practice and allowed students to do what they wished. But I notice, along with several of my colleagues, that the students whose laptops are open in class do not do as well as the others.[18]

When media are always there, waiting to be wanted, people lose a sense of choosing to communicate. Those who use BlackBerry smartphones talk about the fascination of watching their lives "scroll by." They watch their lives as though watching a movie. One says, "I glance at my watch to sense the time; I glance at my BlackBerry to get a sense of my life."[19] Adults admit that interrupting their work for e-mail and messages is distracting but say they would never give it up. When I ask teenagers specifically about being interrupted during homework time, for example, by Facebook messages or new texts, many seem not to understand the question. They say things like, "That's just how it is. That's just my life." When the BlackBerry movie of one's life becomes one's life, there

is a problem: the BlackBerry version is the unedited version of one's life. It contains more than one has time to live. Although we can't keep up with it, we feel responsible for it. It is, after all, our life. We strive to be a self that can keep up with its e-mail.

Our networked devices encourage a new notion of time because they promise that one can layer more activities onto it. Because you can text while doing something else, texting does not seem to take time but to give you time. This is more than welcome; it is magical. We have managed to squeeze in that extra little bit, but the fastest living among us encourage us to read books with titles such as *In Praise of Slowness*.[20] And we have found ways of spending more time with friends and family in which we hardly give them any attention at all.

We are overwhelmed across the generations. Teenagers complain that parents don't look up from their phones at dinner and that they bring their phones to school sporting events. Hannah, sixteen, is a solemn, quiet high school junior. She tells me that for years she has tried to get her mother's attention when her mother comes to fetch her after school or after dance lessons. Hannah says, "The car will start; she'll be driving still looking down, looking at her messages, but still no hello." We will hear others tell similar stories.

Parents say they are ashamed of such behavior but quickly get around to explaining, if not justifying, it. They say they are more stressed than ever as they try to keep up with e-mail and messages. They always feel behind. They cannot take a vacation without bringing the office with them; their office is on their cell phone.[21] They complain that their employers require them to be continually online but then admit that their devotion to their communications devices exceeds all professional expectations.

Teenagers, when pressed for time (a homework assignment is due), may try to escape the demands of the always-on culture. Some will use their parents' accounts so that their friends won't know that they are online. Adults hide out as well. On weekends, mobile devices are left at the office or in locked desk drawers. When employers demand connection, people practice evasive maneuvers. They go on adventure vacations and pursue extreme sports. As I write this, it is still possible to take long plane rides with no cell phone or Internet access. But even this is changing. Wi-Fi has made it to the skies.

In a tethered world, too much is possible, yet few can resist measuring success against a metric of what they could accomplish if they were always available. Diane, thirty-six, a curator at a large Midwestern museum, cannot keep up with

> I can hardly remember when there was such a thing as a weekend, or when I had a Filofax and I thought about whose name I would add to my address book. My e-mail program lets me click on the name of the person who wrote me and poof, they are in my address book. Now everyone who writes me gets put in my address book; everybody is a potential contact, a buyer, donor, and fund-raiser. What used to be an address book is more like a database.
>
> I suppose I do my job better, but my job is my whole life. Or my whole life is my job. When I move from calendar, to address book, to e-mail, to text messages, I feel like a master of the universe; everything is so efficient. I am a maximizing machine. I am on my BlackBerry until two in the morning. I don't sleep well, but I still can't keep up with what is sent to me.
>
> Now for work, I'm expected to have a Twitter feed and a Facebook presence about the museum. And do a blog on museum happenings. That means me in all these places. I have a voice condition. I keep losing my voice. It's not from talking too much. All I do is type, but it has hit me at my voice. The doctor says it's a nervous thing.

Diane, in the company of programs, feels herself "a master of the universe." Yet, she is only powerful enough to see herself as a "maximizing machine" that responds to what the network throws at her. She and her husband have decided they should take a vacation. She plans to tell her colleagues that she is going to be "off the grid" for two weeks, but Diane keeps putting off her announcement. She doesn't know how it will be taken. The norm in the museum is that it is fine to take time off for vacations but not to go offline during them. So, a vacation usually means working from someplace picturesque. Indeed, advertisements for wireless networks routinely feature a handsome man or beautiful woman sitting on a beach. Tethered, we are not to deny the body and its pleasures but to put our bodies somewhere beautiful while we work. Once, mobile devices needed to be shown in such advertisements. Now, they are often implied. We know that the successful are always connected. On vacation, one vacates a place, not a set of responsibilities. In a world of constant communication, Diane's symptom seems fitting: she has become a machine for communicating, but she has no voice left for herself.

As Diane plans her "offline vacation," she admits that she really wants to go to Paris, "but I would have no excuse not to be online in Paris. Helping to build

houses in the Amazon, well, who would know if they have Wi-Fi? My new non-negotiable for a vacation: I have to be able to at least pretend that there is no reason to bring my computer." But after her vacation in remote Brazil finally takes place, she tells me, "Everybody had their BlackBerries with them. Sitting there in the tent. BlackBerries on. It was as though there was some giant satellite parked in the sky."

Diane says she receives about five hundred e-mails, several hundred texts, and around forty calls a day. She notes that many business messages come in multiples. People send her a text and an e-mail, then place a call and leave a message on her voicemail. "Client anxiety," she explains. "They feel better if they communicate." In her world, Diane is accustomed to receiving a hasty message to which she is expected to give a rapid response. She worries that she does not have the time to take her time on the things that matter. And it is hard to maintain a sense of what matters in the din of constant communication.

The self shaped in a world of rapid response measures success by calls made, e-mails answered, texts replied to, contacts reached. This self is calibrated on the basis of what technology proposes, by what it makes easy. But in the technology-induced pressure for volume and velocity, we confront a paradox. We insist that our world is increasingly complex, yet we have created a communications culture that has decreased the time available for us to sit and think uninterrupted. As we communicate in ways that ask for almost instantaneous responses, we don't allow sufficient space to consider complicated problems.

Trey, a forty-six-year-old lawyer with a large Boston firm, raises this issue explicitly. On e-mail, he says, "I answer questions I can answer right away. And people want me to answer them right away. But it's not only the speed. . . . The questions have changed to ones that I *can* answer right away." Trey describes legal matters that call for time and nuance and says that "people don't have patience for these now. They send an e-mail, and they expect something back fast. They are willing to forgo the nuance; really, the client wants to hear something now, and so I give the answers that can be sent back by return e-mail . . . or maybe answers that will take me a day, max. . . . I feel pressured to think in terms of bright lines." He corrects himself. "It's not the technology that does this, of course, but the technology sets expectations about speed." We are back to a conversation about affordances and vulnerabilities. The technology primes us for speed, and overwhelmed, we are happy to have it help us speed up. Trey reminds me that "we speak in terms of 'shooting off' an e-mail. Nobody 'shoots something off' because they want things to proceed apace."

Trey, like Diane, points out that clients frequently send him a text, an e-mail, and a voicemail. "They are saying, 'Feed me.' They feel they have the right." He sums up his experience of the past decade. Electronic communication has been liberating, but in the end, "it has put me on a speed-up, on a treadmill, but that isn't the same as being productive."

I talk with a group of lawyers who all insist that their work would be impossible without their "cells"—that nearly universal shorthand for the smartphones of today that have pretty much the functionality of desktop computers and more. The lawyers insist that they are more productive and that their mobile devices "liberate" them to work from home and to travel with their families. The women, in particular, stress that the networked life makes it possible for them to keep their jobs and spend time with their children. Yet, they also say that their mobile devices eat away at their time to think. One says, "I don't have enough time alone with my mind." Others say, "I have to struggle to make time to think." "I artificially make time to think." "I block out time to think." These formulations all depend on an "I" imagined as separate from the technology, a self that is able to put the technology aside so that it can function independently of its demands. This formulation contrasts with a growing reality of lives lived in the continuous presence of screens. This reality has us, like the MIT cyborgs, learning to see ourselves as one with our devices. To make more time to think would mean turning off our phones. But this is not a simple proposition since our devices are ever more closely coupled to our sense of our bodies and minds.[22] They provide a social and psychological GPS, a navigation system for tethered selves.

As for Diane, she tries to keep up by communicating during what used to be "downtime"—the time when she might have daydreamed during a cab ride or while waiting in line or walking to work. This may be time that we need (physiologically and emotionally) to maintain our ability to focus.[23] But Diane does not permit it to herself. And, of course, she uses our new kind of time: the time of attention sharing.

Diane shies away from the telephone because its real-time demands make too much of a claim on her attention. But like the face-to-face interactions for which it substitutes, the telephone can deliver in ways that texts and e-mails cannot. All parties are present. If there are questions, they can be answered. People can express mixed feelings. In contrast, e-mail tends to go back and forth without resolution. Misunderstandings are frequent. Feelings get hurt. And the greater the misunderstanding, the greater the number of e-mails, far more than necessary. We come to experience the column of unopened messages in our inboxes as a

burden. Then, we project our feelings and worry that our messages are a burden to others.

We have reason to worry. One of my friends posted on Facebook, "The problem with handling your e-mail backlog is that when you answer mail, people answer back! So for each 10 you handle, you get 5 more! Heading down towards my goal of 300 left tonight, and 100 tomorrow." This is becoming a common sentiment. Yet it is sad to hear ourselves refer to letters from friends as "to be handled" or "gotten rid of," the language we use when talking about garbage. But this is the language in use.

An e-mail or text seems to have been always on its way to the trash. These days, as a continuous stream of texts becomes a way of life, we may say less to each other because we imagine that what we say is almost already a throwaway. Texts, by nature telegraphic, can certainly be emotional, insightful, and sexy. They can lift us up. They can make us feel understood, desired, and supported. But they are not a place to deeply understand a problem or to explain a complicated situation. They are momentum. They fill a moment.

FEARFUL SYMMETRIES

When I speak of a new state of the self, itself, I use the word "itself" with purpose. It captures, although with some hyperbole, my concern that the connected life encourages us to treat those we meet online in something of the same way we treat objects—with dispatch. It happens naturally: when you are besieged by thousands of e-mails, texts, and messages—more than you can respond to—demands become depersonalized. Similarly, when we Tweet or write to hundreds or thousands of Facebook friends as a group, we treat individuals as a unit. Friends become fans. A college junior contemplating the multitudes he can contact on the Net says, "I feel that I am part of a larger thing, the Net, the Web. The world. It becomes a thing to me, a thing I am part of. And the people, too, I stop seeing them as individuals, really. They are part of this larger thing."

With sociable robots, we imagine objects as people. Online, we invent ways of being with people that turn them into something close to objects. The self that treats a person as a thing is vulnerable to seeing itself as one. It is important to remember that when we see robots as "alive enough" for us, we give them a promotion. If when on the net, people feel just "alive enough" to be "maximizing machines" for e-mails and messages, they have been demoted. These are fearful

In Part One, we saw new connections with the robotic turn into a desire for communion that is no communion at all. Part Two also traces an arc that ends in broken communion. In online intimacies, we hope for compassion but often get the cruelty of strangers. As I explore the networked life and its effects on intimacy and solitude, on identity and privacy, I will describe the experience of many adults. Certain chapters focus on them almost exclusively. But I return again and again to the world of adolescents. Today's teenagers grew up with sociable robots as playroom toys. And they grew up networked, sometimes receiving a first cell phone as early as eight. Their stories offer a clear view of how technology reshapes identity because identity is at the center of adolescent life. Through their eyes, we see a new sensibility unfolding.

These days, cultural norms are rapidly shifting. We used to equate growing up with the ability to function independently. These days always-on connection leads us to reconsider the virtues of a more collaborative self. All questions about autonomy look different if, on a daily basis, we are together even when we are alone.

The network's effects on today's young people are paradoxical. Networking makes it easier to play with identity (for example, by experimenting with an avatar that is interestingly different from you) but harder to leave the past behind, because the Internet is forever. The network facilitates separation (a cell phone allows children greater freedoms) but also inhibits it (a parent is always on tap). Teenagers turn away from the "real-time" demands of the telephone and disappear into role-playing games they describe as "communities" and worlds." And yet, even as they are committed to a new life in the ether, many exhibit an unexpected nostalgia. They start to resent the devices that force them into performing their profiles; they long for a world in which personal information is not taken from them automatically, just as the cost of doing business. Often it is children who tell their parents to put away the cell phone at dinner. It is the young who begin to speak about problems that, to their eyes, their elders have given up on.

I interview Sanjay, sixteen. We will talk for an hour between two of his class periods. At the beginning of our conversation, he takes his mobile phone out of his pocket and turns it off.[34] At the end of our conversation, he turns the phone back on. He looks at me ruefully, almost embarrassed. He has received over a hundred text messages as we were speaking. Some are from his girlfriend who, he says, "is having a meltdown." Some are from a group of close friends trying to organize a small concert. He feels a lot of pressure to reply and begins to pick

up his books and laptop so he can find a quiet place to set himself to the task. As he says good-bye, he adds, not speaking particularly to me but more to himself as an afterthought to the conversation we have just had, "I can't imagine doing this when I get older." And then, more quietly, "How long do I have to continue doing this?"

CHAPTER 9

growing up tethered

Roman, eighteen, admits that he texts while driving and he is not going to stop. "I know I should, but it's not going to happen. If I get a Facebook message or something posted on my wall . . . I have to see it. I have to." I am speaking with him and ten of his senior classmates at the Cranston School, a private urban coeducational high school in Connecticut. His friends admonish him, but then several admit to the same behavior. Why do they text while driving? Their reasons are not reasons; they simply express a need to connect. "I interrupt a call even if the new call says 'unknown' as an identifier—I just have to know who it is. So I'll cut off a friend for an 'unknown,'" says Maury. "I need to know who wanted to connect. . . . And if I hear my phone, I have to answer it. I don't have a choice. I have to know who it is, what they are calling for." Marilyn adds, "I keep the sound on when I drive. When a text comes in, I have to look. No matter what. Fortunately, my phone shows me the text as a pop up right up front . . . so I don't have to do too much looking while I'm driving." These young people live in a state of waiting for connection. And they are willing to take risks, to put themselves on the line. Several admit that tethered to their phones, they get into accidents when walking. One chipped a front tooth. Another shows a recent bruise on his arm. "I went right into the handle of the refrigerator."

I ask the group a question: "When was the last time you felt that you didn't want to be interrupted?" I expect to hear many stories. There are none. Silence.

"I'm waiting to be interrupted right now," one says. For him, what I would term "interruption" is the beginning of a connection.

Today's young people have grown up with robot pets and on the network in a fully tethered life. In their views of robots, they are pioneers, the first generation that does not necessarily take simulation to be second best. As for online life, they see its power—they are, after all risking their lives to check their messages—but they also view it as one might the weather: to be taken for granted, enjoyed, and sometimes endured. They've gotten used to this weather but there are signs of weather fatigue. There are so many performances; it takes energy to keep things up; and it takes time, a lot of time. "Sometimes you don't have time for your friends except if they're online," is a common complaint. And then there are the compulsions of the networked life—the ones that lead to dangerous driving and chipped teeth.

Today's adolescents have no less need than those of previous generations to learn empathic skills, to think about their values and identity, and to manage and express feelings. They need time to discover themselves, time to think. But technology, put in the service of always-on communication and telegraphic speed and brevity, has changed the rules of engagement with all of this. When is downtime, when is stillness? The text-driven world of rapid response does not make self-reflection impossible but does little to cultivate it. When interchanges are reformatted for the small screen and reduced to the emotional shorthand of emoticons, there are necessary simplifications. And what of adolescents' need for secrets, for marking out what is theirs alone?

I wonder about this as I watch cell phones passed around high school cafeterias. Photos and messages are being shared and compared. I cannot help but identify with the people who sent the messages to these wandering phones. Do they all assume that their words and photographs are on public display? Perhaps. Traditionally, the development of intimacy required privacy. Intimacy without privacy reinvents what intimacy means. Separation, too, is being reinvented. Tethered children know they have a parent on tap—a text or a call away.

DEGREES OF SEPARATION

Mark Twain mythologized the adolescent's search for identity in the Huck Finn story, the on-the-Mississippi moment, a time of escape from an adult world. Of course, the time on the river is emblematic not of a moment but of an ongoing process through which children separate from their parents. That rite of passage is now transformed by technology. In the traditional variant, the child internalizes the adults in his or her world before crossing the threshold of independence. In the modern, technologically tethered variant, parents can be brought along in an intermediate space, such as that created by the cell phone, where everyone important is on speed dial. In this sense, the generations sail down the river together, and adolescents don't face the same pressure to develop the independence we have associated with moving forward into young adulthood.

When parents give children cell phones—most of the teenagers I spoke with were given a phone between the ages of nine and thirteen—the gift typically comes with a contract: children are expected to answer their parents' calls. This arrangement makes it possible for the child to engage in activities—see friends, attend movies, go shopping, spend time at the beach—that would not be permitted without the phone. Yet, the tethered child does not have the experience of being alone with only him- or herself to count on. For example, there used to be a point for an urban child, an important moment, when there was a first time to navigate the city alone. It was a rite of passage that communicated to children that they were on their own and responsible. If they were frightened, they had to experience those feelings. The cell phone buffers this moment.

Parents want their children to answer their phones, but adolescents need to separate. With a group of seniors at Fillmore, a boys' preparatory school in New York City, the topic of parents and cell phones elicits strong emotions. The young men consider, "If it is always possible to be in touch, when does one have the right to be alone?"

Some of the boys are defiant. For one, "It should be my decision about whether I pick up the phone. People can call me, but I don't have to talk to them." For another, "To stay free from parents, I don't take my cell. Then they can't reach me. My mother tells me to take my cell, but I just don't." Some appeal to history to justify ignoring parents' calls. Harlan, a distinguished student and athlete, thinks he has earned the right to greater independence. He talks about older siblings who grew up before cell phones and enjoyed greater freedom: "My mother makes me take my phone, but I never answer it when my parents call, and they get mad at me. I don't feel I should have to. Cell phones are recent. In the last ten years, everyone started getting them. Before, you couldn't just call someone whenever. I don't see why I have to answer when my mom calls me. My older sisters didn't have to do that." Harlan's mother, unmoved by this

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argument from precedent, checks that he has his phone when he leaves for school in the morning; Harlan does not answer her calls. Things are at an unhappy stalemate.

Several boys refer to the "mistake" of having taught their parents how to text and send instant messages (IMs), which they now equate with letting the genie out of the bottle. For one, "I made the mistake of teaching my parents how to text-message recently, so now if I don't call them when they ask me to call, I get an urgent text message." For another, "I taught my parents to IM. They didn't know how. It was the stupidest thing I could do. Now my parents IM me all the time. It is really annoying. My parents are upsetting me. I feel trapped and less independent."

Teenagers argue that they should be allowed time when they are not "on call." Parents say that they, too, feel trapped. For if you know your child is carrying a cell phone, it is frightening to call or text and get no response. "I didn't ask for this new worry," says the mother of two high school girls. Another, a mother of three teenagers, "tries not to call them if it's not important." But if she calls and gets no response, she panics:

> I've sent a text. Nothing back. And I know they have their phones. Intellectually, I know there is little reason to worry. But there is something about this unanswered text. Sometimes, it made me a bit nutty. One time, I kept sending texts, over and over. I envy my mother. We left for school in the morning. We came home. She worked. She came back, say at six. She didn't worry. I end up imploring my children to answer my every message. Not because I feel I have a right to their instant response. Just out of compassion.

Adolescent autonomy is not just about separation from parents. Adolescents also need to separate from each other. They experience their friendships as both sustaining and constraining. Connectivity brings complications. Online life provides plenty of room for individual experimentation, but it can be hard to escape from new group demands. It is common for friends to expect that their friends will stay available—a technology-enabled social contract demands continual peer presence. And the tethered self becomes accustomed to its support.

Traditional views of adolescent development take autonomy and strong personal boundaries as reliable signs of a successfully maturing self. In this view of development, we work toward an independent self capable of having a feeling,

considering it, and deciding whether to share it. Sharing a feeling is a deliberate act, a movement toward intimacy. This description was always a fiction in several ways. For one thing, the "gold standard" of autonomy validated a style that was culturally "male." Women (and indeed, many men) have an emotional style that defines itself not by boundaries but through relationships.[1] Furthermore, adolescent conversations are by nature exploratory, and this in healthy ways. Just as some writers learn what they think by looking at what they write, the years of identity formation can be a time of learning what you think by hearing what you say to others. But given these caveats, when we think about maturation, the notion of a bounded self has its virtues, if only as a metaphor. It suggests, sensibly, that before we forge successful life partnerships, it is helpful to have a sense of who we are.[2]

But the gold standard tarnishes if a phone is always in hand. You touch a screen and reach someone presumed ready to respond, someone who also has a phone in hand. Now, technology makes it easy to express emotions while they are being formed. It supports an emotional style in which feelings are not fully experienced until they are communicated. Put otherwise, there is every opportunity to form a thought by sending out for comments.

THE COLLABORATIVE SELF

Julia, sixteen, a sophomore at Branscomb, an urban public high school in New Jersey, turns texting into a kind of polling. Julia has an outgoing and warm presence, with smiling, always-alert eyes. When a feeling bubbles up, Julia texts it. Where things go next is guided by what she hears next. Julia says,

> If I'm upset, right as I feel upset, I text a couple of my friends . . . just because I know that they'll be there and they can comfort me. If something exciting happens, I know that they'll be there to be excited with me, and stuff like that. So I definitely feel emotions when I'm texting, as I'm texting. . . . Even before I get upset and I know that I have that feeling that I'm gonna start crying, yeah, I'll pull up my friend . . . uh, my phone . . . and say like . . . I'll tell them what I'm feeling, and, like, I need to talk to them, or see them.

"I'll pull up my friend . . . uh, my phone." Julia's language slips tellingly. When Julia thinks about strong feelings, her thoughts go both to her phone and her

friends. She mixes together "pulling up" a friend's name on her phone and "pulling out" her phone, but she does not really correct herself so much as imply that the phone is her friend and that friends take on identities through her phone.

After Julia sends out a text, she is uncomfortable until she gets one back: "I am always looking for a text that says, 'Oh, I'm sorry,' or 'Oh, that's great.'" Without this feedback, she says, "It's hard to calm down." Julia describes how painful it is to text about "feelings" and get no response: "I get mad. Even if I e-mail someone, I want the response, like, right away.[3] I want them to be, like, right there answering me. And sometimes I'm like, 'Uh! Why can't you just answer me?' . . . I wait, like, depending on what it is, I wait like an hour if they don't answer me, and I'll text them again. 'Are you mad? Are you there? Is everything okay?'" Her anxiety is palpable. Julia must have a response. She says of those she texts, "You want them there, because you need them." When they are not there, she moves on with her nascent feelings, but she does not move on alone: "I go to another friend and tell them."

Claudia, seventeen, a junior at Cranston, describes a similar progression. "I start to have some happy feelings as soon as I start to text." As with Julia, things move from "I have a feeling, I want to make a call" to "I want to have a feeling, I need to make a call," or in her case, send a text. What is not being cultivated here is the ability to be alone and reflect on one's emotions in private. On the contrary, teenagers report discomfort when they are without their cell phones.[4] They need to be connected in order to feel like themselves. Put in a more positive way, both Claudia and Julia share feelings as part of discovering them. They cultivate a collaborative self.

Estranged from her father, Julia has lost her close attachments to his relatives and was traumatized by being unable to reach her mother during the day of the September 11 attacks on the Twin Towers. Her story illustrates how digital connectivity—particularly texting—can be used to manage specific anxieties about loss and separation. But what Julia does—her continual texting, her way of feeling her feelings only as she shares them—is not unusual. The particularities of every individual case express personal history, but Julia's individual "symptom" comes close to being a generational style.[5]

Sociologist David Riesman, writing in the mid-1950s, remarked on the American turn from an inner- to an other-directed sense of self.[6] Without a firm inner sense of purpose, people looked to their neighbors for validation. Today, cell phone in hand, other-directedness is raised to a higher power. At the mo-

ment of beginning to have a thought or feeling, we can have it validated, almost prevalidated. Exchanges may be brief, but more is not necessarily desired. The necessity is to have someone be there.

Ricki, fifteen, a freshman at Richelieu, a private high school for girls in New York City, describes that necessity: "I have a lot of people on my contact list. If one friend doesn't 'get it,' I call another." This marks a turn to a hyper-other-directedness. This young woman's contact or buddy list has become something like a list of "spare parts" for her fragile adolescent self. When she uses the expression "get it," I think she means "pick up the phone." I check with her if I have gotten this right. She says, "'Get it,' yeah, 'pick up,' but also 'get it,' '*get me*.'" Ricki counts on her friends to finish her thoughts. Technology does not cause but encourages a sensibility in which the validation of a feeling becomes part of establishing it, even part of the feeling itself.

I have said that in the psychoanalytic tradition, one speaks about narcissism not to indicate people who love themselves, but a personality so fragile that it needs constant support.[7] It cannot tolerate the complex demands of other people but tries to relate to them by distorting who they are and splitting off what it needs, what it can use. So, the narcissistic self gets on with others by dealing only with their made-to-measure representations. These representations (some analytic traditions refer to them as "part objects," others as "self-objects") are all that the fragile self can handle. We can easily imagine the utility of inanimate companions to such a self because a robot or a computational agent can be sculpted to meet one's needs. But a fragile person can also be supported by selected and limited contact with people (say, the people on a cell phone "favorites" list). In a life of texting and messaging, those on that contact list can be made to appear almost on demand. You can take what you need and move on. And, if not gratified, you can try someone else.

Again, technology, on its own, does not cause this new way of relating to our emotions and other people. But it does make it easy. Over time, a new style of being with each other becomes socially sanctioned. In every era, certain ways of relating come to feel natural. In our time, if we can be continually in touch, needing to be continually in touch does not seem a problem or a pathology but an accommodation to what technology affords. It becomes the norm.

The history of what we think of as psychopathology is dynamic. If in a particular time and place, certain behaviors seem disruptive, they are labeled pathological. In the nineteenth century, for example, sexual repression was considered a good and moral thing, but when women lost sensation or the ability to speak,

these troubling symptoms were considered a disease, hysteria. With more outlets for women's sexuality, hysterical symptoms declined, and others took their place. So, the much-prescribed tranquilizers of the 1950s spoke to women's new anxieties when marginalized in the home after a fuller civic participation during World War II.

Now, we have symptoms born of fears of isolation and abandonment. In my study of growing up in the networked culture, I meet many children and teenagers who feel cast off. Some have parents with good intentions who simply work several jobs and have little time for their children. Some have endured divorce—sometimes multiple divorces—and float from one parent to another, not confident of their true home. Those lucky children who have intact families with stable incomes can experience other forms of abandonment. Busy parents are preoccupied, often by what is on their cell phones. When children come home, it is often to a house that is empty until a parent returns from work.

For young people in all of these circumstances, computers and mobile devices offer communities when families are absent. In this context, it is not surprising to find troubling patterns of connection and disconnection: teenagers who will only "speak" online, who rigorously avoid face-to-face encounters, who are in text contact with their parents fifteen or twenty times a day, who deem even a telephone call "too much" exposure and say that they will "text, not talk." But are we to think of these as pathologies? For as social mores change, what once seemed "ill" can come to seem normal. Twenty years ago, as a practicing clinical psychologist, if I had met a college junior who called her mother fifteen times a day, checking in about what shoes to buy and what dress to wear, extolling a new kind of decaffeinated tea, and complaining about the difficulty of a physics problem set, I would have thought her behavior problematic. I would have encouraged her to explore difficulties with separation. I would have assumed that these had to be addressed for her to proceed to successful adulthood. But these days, a college student who texts home fifteen times a day is not unusual.

High school and college students are always texting—while waiting in line at the cafeteria, while eating, while waiting for the campus shuttle. Not surprisingly, many of these texts are to parents. What once we might have seen as a problem becomes how we do things. But a behavior that has become typical may still express the problems that once caused us to see it as pathological. Even a typical behavior may not be in an adolescent's developmental interest.

Consider Leo, a college sophomore far from home, who feels crippling loneliness. He tells me that he "handles" this problem by texting and calling his

mother up to twenty times a day. He remarks that this behavior does not make him stand out; everyone he knows is on a phone all day. But even if invisible, he considers his behavior a symptom all the same.

These days, our relationship to the idea of psychological autonomy is evolving. I have said that central to Erik Erikson's thinking about adolescents is the idea that they need a moratorium, a "time out," a relatively consequence-free space for experimentation. But in Erikson's thinking, the self, once mature, is relatively stable. Though embedded in relationships, in the end it is bounded and autonomous.[8] One of Erikson's students, psychiatrist Robert Jay Lifton, has an alternative vision of the mature self. He calls it *protean* and emphasizes its multiple aspects.[9] Thinking of the self as protean accents connection and reinvention. This self, as Lifton puts it, "fluid and many-sided," can embrace and modify ideas and ideologies. It flourishes when provided with things diverse, disconnected, and global.

Publicly, Erikson expressed approval for Lifton's work, but after Erikson's death in 1994, Lifton asked the Erikson family if he might have the books he had personally inscribed and presented to his teacher. The family agreed; the books were returned. In his personal copy of Lifton's *The Protean Self*, Erikson had written extensive marginal notes. When he came to the phrase "protean man," Erikson had scrawled "protean boy?"[10] Erikson could not accept that successful maturation would not result in something solid. By Erikson's standards, the selves formed in the cacophony of online spaces are not protean but juvenile. Now I suggest that the culture in which they develop tempts them into narcissistic ways of relating to the world.

THE AVATAR OF ME

Erikson said that identity play is the work of adolescence. And these days adolescents use the rich materials of online life to do that work. For example, in a game such as The Sims Online (think of this as a very junior version of Second Life), you can create an avatar that expresses aspects of yourself, build a house, and furnish it to your taste. Thus provisioned, you can set about reworking in the virtual aspects of life that may not have gone so well in the real.

Trish, a timid and anxious thirteen-year-old, has been harshly beaten by her alcoholic father. She creates an abusive family on The Sims Online, but in the game her character, also thirteen, is physically and emotionally strong. In simulation, she plays and replays the experience of fighting off her aggressor. A sex-

ually experienced girl of sixteen, Katherine, creates an online innocent. "I want to have a rest," she says. Beyond rest, Katherine tells me she can get "practice at being a different kind of person. That's what Sims is for me. Practice."

Katherine "practices" on the game at breakfast, during school recess, and after dinner. She says she feels comforted by her virtual life. I ask her if her activities in the game have led her to do anything differently in her life away from it. She replies, "Not really," but then goes on to describe how her life is in fact beginning to change: "I'm thinking about breaking up with my boyfriend. I don't want to have sex anymore, but I would like to have a boyfriend. My character on Sims has boyfriends but doesn't have sex. They [the boyfriends of her Sims avatar] help her with her job. I think to start fresh I would have to break up with my boyfriend." Katherine does not completely identify with her online character and refers to her avatar in the third person. Yet, The Sims Online is a place where she can see her life anew.

This kind of identity work can take place wherever you create an avatar. And it can take place on social-networking sites as well, where one's profile becomes an avatar of sorts, a statement not only about who you are but who you want to be. Teenagers make it clear that games, worlds, and social networking (on the surface, rather different) have much in common. They all ask you to compose and project an identity. Audrey, sixteen, a junior at Roosevelt, a suburban public high school near New York City, is explicit about the connection between avatars and profiles. She calls her Facebook profile "my Internet twin" and "the avatar of me."

Mona, a freshman at Roosevelt, has recently joined Facebook. Her parents made her wait until her fourteenth birthday, and I meet her shortly after this long-awaited day. Mona tells me that as soon as she got on the site, "Immediately, I felt power." I ask her what she means. She says, "The first thing I thought was, 'I am going to broadcast the real me.'" But when Mona sat down to write her profile, things were not so straightforward. Whenever one has time to write, edit, and delete, there is room for performance. The "real me" turns out to be elusive. Mona wrote and rewrote her profile. She put it away for two days and tweaked it again. Which pictures to add? Which facts to include? How much of her personal life to reveal? Should she give any sign that things at home were troubled? Or was this a place to look good?

Mona worries that she does not have enough of a social life to make herself sound interesting: "What kind of personal life should I *say* I have?" Similar questions plague other young women in her class. They are starting to have boyfriends. Should they list themselves as single if they are just starting to date someone new? What if they consider themselves in a relationship, but their boyfriends do not? Mona tells me that "it's common sense" to check with a boy before listing yourself as connected to him, but "that could be a very awkward conversation." So there are misunderstandings and recriminations. Facebook at fourteen can be a tearful place. For many, it remains tearful well through college and graduate school. Much that might seem straightforward is fraught. For example, when asked by Facebook to confirm someone as a friend or ignore the request, Helen, a Roosevelt senior, says, "I always feel a bit of panic. . . . Who should I friend? . . . I really want to only have my cool friends listed, but I'm nice to a lot of other kids at school. So I include the more unpopular ones, but then I'm unhappy." It is not how she wants to be seen.

In the Victorian era, one controlled whom one saw and to whom one was connected through the ritual of calling cards. Visitors came to call and, not necessarily expecting to be received, left a card. A card left at your home in return meant that the relationship might grow. In its own way, friending on Facebook is reminiscent of this tradition. On Facebook, you send a request to be a friend. The recipient of the request has the option to ignore or friend you. As was the case in the Victorian era, there is an intent to screen. But the Victorians followed socially accepted rules. For example, it was understood that one was most open to people of similar social standing. Facebook is more democratic—which leaves members to make up their own rules, not necessarily understood by those who contact them. Some people make a request to be a Facebook friend in the spirit of "I'm a fan" and are accepted on that basis. Other people friend only people they know. Others friend any friend of a friend, using Facebook as a tool to expand their acquaintanceships. All of this can be exciting or stressful—often both at the same time, because friending has consequences. It means that someone can see what you say about yourself on your profile, the pictures you post, and your friends' postings on your "wall," the shared communication space for you and your friends. Friending someone gives that person implicit permission to try to friend your friends. In fact, the system constantly proposes that they do so.

Early in this project, I was at a conference dinner, sitting next to an author whose publisher insisted that she use Facebook as a way to promote her new book. The idea was to use the site to tell people where she would be speaking and to share the themes of her book with an ever-expanding potential readership.

Her publisher hoped this strategy would make her book "go viral." She had expected the Facebook project to feel like business, but instead she described complicated anxieties about not having enough friends, and about envy of her husband, also a writer, who had more friends than she. It also felt wrong to use the word "friends" for all of those she had "friended," since so many of the friended were there for professional reasons alone. She left me with this thought: "This thing took me right back to high school."

I promised her that when I joined Facebook I would record my first feelings, while the site was still new to me. My very first feelings now seem banal: I had to decide between "friending" plan A (this will be a place for people I actually know) and plan B (I will include people who contact me because they say they appreciate my work). I tried several weeks on plan A and then switched to the more inclusive Plan B, flattered by the attention of strangers, justifying my decision in professional terms.

But now that I had invited strangers into my life, would I invite myself into the lives of strangers? I would have anticipated not, until I did that very thing. I saw that one of my favorite authors was a Facebook friend of a friend. Seized by the idea that I might be this writer's friend, I made my request, and he accepted me. The image of a cafeteria came to mind, and I had a seat at his virtual table. But I felt like a gatecrasher. I decided realistically that I was taking this way too seriously. Facebook is a world in which fans are "friends." But of course, they are not friends. They have been "friended." That makes all the difference in the world, and I couldn't get high school out of my mind.

PRESENTATION ANXIETY

What are the truth claims in a Facebook profile? How much can you lie? And what is at stake if you do? Nancy, an eighteen-year-old senior at Roosevelt, answers this question. "On the one hand, low stakes, because no one is really checking." Then, with a grimace, she says, "No, high stakes. Everyone is checking." A few minutes later, Nancy comes back to the question: "Only my best friends will know if I lie a little bit, and they will totally understand." Then she laughs. "All of this, it is, I guess, a bit of stress."[11]

At Cranston, a group of seniors describe that stress. One says, "Thirteen to eighteen are the years of profile writing." The years of identity construction are recast in terms of profile production. These private school students had to write one profile for their applications to middle school, another to get into high school, and then another for Facebook. Now they are beginning to construct personae for college applications. And here, says Tom, "You have to have a slightly different persona for the different colleges to which you are applying: one for Dartmouth, a different one, say, for Wesleyan." For this aficionado of profile writing, every application needs a different approach. "By the time you get to the questions for the college application, you are a professional profile writer," he says. His classmate Stan describes his online profiles in great detail. Each serves a different purpose, but they must overlap, or questions of authenticity will arise. Creating the illusion of authenticity demands virtuosity. Presenting a self in these circumstances, with multiple media and multiple goals, is not easy work. The trick, says Stan, is in "weaving profiles together . . . so that people can see you are not too crazy. . . . What I learned in high school was profiles, profiles, profiles, how to make a me."

Early in my study, a college senior warned me not to be fooled by "anyone you interview who tells you that his Facebook page is 'the real me.' It's like being in a play. You make a character." Eric, a college-bound senior at Hadley, a boys' preparatory school in rural New Jersey, describes himself as savvy about how you can "mold a Facebook page." Yet, even he is shocked when he finds evidence of girls using "shrinking" software to appear thinner on their profile photographs. "You can't see that they do it when you look at the little version of the picture, but when you look at a big picture, you can see how the background is distorted." By eighteen, he has become an identity detective. The Facebook profile is a particular source of stress because it is so important to high school social life. Some students feel so in its thrall that they drop out of Facebook, if only for a while, to collect themselves.

Brad, eighteen, a senior at Hadley, is about to take a gap year to do community service before attending a small liberal arts college in the Midwest. His parents are architects; his passion is biology and swimming. Brad wants to be part of the social scene at Hadley, but he doesn't like texting or instant messaging. He is careful to make sure I know he is "no Luddite." He has plenty of good things to say about the Net. He is sure that it makes it easier for insecure people to function. Sometimes the ability to compose his thoughts online "can be reassuring," he says, because there is a chance to "think through, calculate, edit, and make sure you're as clear and concise as possible." But as our conversation continues, Brad switches gears. Even as some are able to better function

because they feel in control, online communication also offers an opportunity to ignore other people's feelings. You can avoid eye contact. You can elect not to hear how "hurt or angry they sound in their voice." He says, "Online, people miss your body language, tone of voice. You are not really you." And worst of all, online life has led him to mistrust his friends. He has had his instant messages "recorded" without his knowledge and forwarded on "in a cut-and-paste world."

In fact, when I meet Brad in the spring of his senior year, he tells me he has "dropped out" of online life. "I'm off the Net," he says, "at least for the summer, maybe for my year off until I go to college." He explains that it is hard to drop out because all his friends are on Facebook. A few weeks before our conversation, he had made a step toward rejoining but immediately he felt that he was not doing enough to satisfy its demands. He says that within a day he felt "rude" and couldn't keep up. He felt guilty because he didn't have the time to answer all the people who wrote to him. He says that he couldn't find a way to be "a little bit" on Facebook—it does not easily tolerate a partial buy-in. Just doing the minimum was "pure exhaustion."

In the world of Facebook, Brad says, "your minute movie preferences matter. And what groups you join. Are they the right ones?" Everything is a token, a marker for who you are:

> When you have to represent yourself on Facebook to convey to anyone who doesn't know you what and who you are, it leads to a kind of obsession about minute details about yourself. Like, "Oh, if I like the band State Radio and the band Spoon, what does it mean if I put State Radio first or Spoon first on my list of favorite musical artists? What will people think about me?" I know for girls, trying to figure out, "Oh, is this picture too revealing to put? Is it prudish if I don't put it?" You have to think carefully for good reason, given how much people will look at your profile and obsess over it. You have to know that everything you put up will be perused very carefully. And that makes it necessary for you to obsess over what you do put up and how you portray yourself. . . . And when you have to think that much about what you come across as, that's just another way that . . . you're thinking of yourself in a bad way.

For Brad, "thinking of yourself in a bad way" means thinking of yourself in reduced terms, in "short smoke signals" that are easy to read. To me, the smoke

signals suggest a kind of reduction and betrayal. Social media ask us to represent ourselves in simplified ways. And then, faced with an audience, we feel pressure to conform to these simplifications. On Facebook, Brad represents himself as cool and in the know—both qualities are certainly part of who he is. But he hesitates to show people online other parts of himself (like how much he likes Harry Potter). He spends more and more time perfecting his online Mr. Cool. And he feels pressure to perform him all the time because that is who he is on Facebook.

At first Brad thought that both his Facebook profile and his college essays had gotten him into this "bad way" of thinking, in which he reduces himself to fit a stereotype. Writing his Facebook profile felt to him like assembling cultural references to shape how others would see him. The college essay demanded a victory narrative and seemed equally unhelpful: he had to brag, and he wasn't happy. But Brad had a change of heart about the value of writing his college essays. "In the end I learned a lot about how I write and think—what I know how to think about and some things, you know, I really can't think about them well at all." I ask him if Facebook might offer these kinds of opportunities. He is adamant that it does not: "You get reduced to a list of favorite things. 'List your favorite music'—that gives you no liberty at all about how to say it." Brad says that "in a conversation, it might be interesting that on a trip to Europe with my parents, I got interested in the political mural art in Belfast. But on a Facebook page, this is too much information. It would be the kiss of death. Too much, too soon, too weird. And yet . . . it is part of who I am, isn't it? . . . You are asked to make a lot of lists. You have to worry that you put down the 'right' band or that you *don't* put down some Polish novel that nobody's read." And in the end, for Brad, it is too easy to lose track of what is important:

> What does it matter to anyone that I prefer the band Spoon over State Radio? Or State Radio over Cake? But things like Facebook . . . make you think that it really does matter. . . . I look at someone's profile and I say, "Oh, they like these bands." I'm like, "Oh, they're a poser," or "they're really deep, and they're into good music." We all do that, I think. And then I think it doesn't matter, but . . . the thing is, in the world of Facebook it *does* matter. Those minute details *do* matter.

Brad, like many of his peers, worries that if he is modest and doesn't put down all of his interests and accomplishments, he will be passed over. But he also fears

that to talk about his strengths will be unseemly. None of these conflicts about self presentation are new to adolescence or to Facebook. What is new is living them out in public, sharing every mistake and false step. Brad, attractive and accomplished, sums it up with the same word Nancy uses: "Stress. That's what it comes down to for me. It's just worry and stressing out about it." Now Brad only wants to see friends in person or talk to them on the telephone. "I can just act how I want to act, and it's a much freer way." But who will answer the phone?

CHAPTER 10

no need to call

"So many people hate the telephone," says Elaine, seventeen. Among her friends at Roosevelt High School, "it's all texting and messaging." She herself writes each of her six closest friends roughly twenty texts a day. In addition, she says, "there are about forty instant messages out, forty in, when I'm at home on the computer." Elaine has strong ideas about how electronic media "levels the playing field" between people like her—outgoing, on the soccer team, and in drama club—and the shy: "It's only on the screen that shy people open up." She explains why: "When you can think about what you're going to say, you can talk to someone you'd have trouble talking to. And it doesn't seem weird that you pause for two minutes to think about what you're going to say before you say it, like it would be if you were actually talking to someone."

Elaine gets specific about the technical designs that help shy people express themselves in electronic messaging. The person to whom you are writing shouldn't be able to see your process of revision or how long you have been working on the message. "That could be humiliating." The best communication programs shield the writer from the view of the reader. The advantage of screen communication is that it is a place to reflect, retype, and edit. "It is a place to hide," says Elaine.

The notion that hiding makes it easier to open up is not new. In the psychoanalytic tradition, it inspired technique. Classical analysis shielded the patient

CONCLUSION

necessary conversations

During my earliest days at MIT, I met the idea (at that time altogether novel to me) that part of my job would be to think of ways to keep technology busy. In the fall of 1978, Michael Dertouzos, director of the Laboratory for Computer Science, held a two-day retreat at MIT's Endicott House on the future of personal computers, at the time widely called "home computers." It was clear that "everyday people," as Dertouzos put it, would soon be able to have their own computers. The first of these—the first that could be bought and didn't have to be built—were just coming on the market. But what could people do with them? There was technological potential, but it needed to be put to work. Some of the most brilliant computer scientists in the world—such pioneers of information processing and artificial intelligence as Robert Fano, J. C. R. Lickleider, Marvin Minsky, and Seymour Papert—were asked to brainstorm on the question. My notes from this meeting show suggestions on tax preparation and teaching children to program. No one thought that anyone except academics would really want to write on computers. Several people suggested a calendar; others thought that was a dumb idea. There would be games.

Now we know that once computers connected us to each other, once we became tethered to the network, we really didn't need to keep computers busy. *They keep us busy.* It is as though we have become their killer app. As a friend of mine put it in a moment of pique, "We don't do our e-mail; our e-mail does

us." We talk about "spending" hours on e-mail, but we, too, are being spent. Niels Bohr suggests that the opposite of a "deep truth" is a truth no less profound.[1] As we contemplate online life, it helps to keep this in mind.

Online, we easily find "company" but are exhausted by the pressures of performance. We enjoy continual connection but rarely have each other's full attention. We can have instant audiences but flatten out what we say to each other in new reductive genres of abbreviation. We like it that the Web "knows" us, but this is only possible because we compromise our privacy, leaving electronic bread crumbs that can be easily exploited, both politically and commercially. We have many new encounters but may come to experience them as tentative, to be put "on hold" if better ones come along. Indeed, new encounters need not be better to get our attention. We are wired to respond positively to their simply being new. We can work from home, but our work bleeds into our private lives until we can barely discern the boundaries between them. We like being able to reach each other almost instantaneously but have to hide our phones to force ourselves to take a quiet moment.

Overwhelmed by the pace that technology makes possible, we think about how new, more efficient technologies might help dig us out. But new devices encourage ever-greater volume and velocity. In this escalation of demands, one of the things that comes to feel safe is using technology to connect to people at a distance, or more precisely, to a lot of people from a distance. But even a lot of people from a distance can turn out to be not enough people at all. We brag about how many we have "friended" on Facebook, yet Americans say they have fewer friends than before.[2] When asked in whom they can confide and to whom they turn in an emergency, more and more say that their only resource is their family.

The ties we form through the Internet are not, in the end, the ties that bind. But they are the ties that preoccupy. We text each other at family dinners, while we jog, while we drive, as we push our children on swings in the park. We don't want to intrude on each other, so instead we constantly intrude on each other, but not in "real time." When we misplace our mobile devices, we become anxious—impossible really. We have heard teenagers insist that even when their cell phones are not on their person, they can feel them vibrate. "I know when I'm being called," says a sixteen-year-old. "I just do." Sentiments of dependency echo across generations. "I never am without my cell phone," says a fifty-two-year-old father. "It is my protection."

In the evening, when sensibilities such as these come together, they are likely to form what have been called "postfamilial families."[3] Their members are alone together, each in their own rooms, each on a networked computer or mobile device. We go online because we are busy but end up spending more time with technology and less with each other. We defend connectivity as a way to be close, even as we effectively hide from each other. At the limit, we will settle for the inanimate, if that's what it takes.

Bohr's dictum is equally true in the area of sociable robotics, where things are no less tangled. Roboticists insist that robotic emotions are made up of the same ultimate particles as human ones (because mind is ultimately made of matter), but it is also true that robots' claims to emotion derive from programs designed to get an emotional rise out of us.[4]

Roboticists present, as though it were a first principle, the idea that as our population ages, we simply won't have enough people to take care of our human needs, and so, as a companion, a sociable robot is "better than nothing." But what are our first principles? We know that we warm to machines when they seem to show interest in us, when their affordances speak to our vulnerabilities. But we don't have to say yes to everything that speaks to us in this way. Even if, as adults, we are intrigued by the idea that a sociable robot will distract our aging parents, our children ask, "Don't we have people for these jobs?" We should attend to their hesitations. Sorting all this out will not be easy. But we are at a crossroads—at a time and place to initiate new conversations.

As I was working on this book, I discussed its themes with a former colleague, Richard, who has been left severely disabled by an automobile accident. He is now confined to a wheelchair in his home and needs nearly full-time nursing care. Richard is interested in robots being developed to provide practical help and companionship to people in his situation, but his reaction to the idea is complex. He begins by saying, "Show me a person in my shoes who is looking for a robot, and I'll show you someone who is looking for a person and can't find one," but then he makes the best possible case for robotic helpers when he turns the conversation to *human* cruelty. "Some of the aides and nurses at the rehab center hurt you because they are unskilled, and some hurt you because they mean to. I had both. One of them, she pulled me by the hair. One dragged me by my tubes. A robot would never do that," he says. And then he adds, "But you know, in the end, that person who dragged me by my tubes had a story. I could find out about it. She had a story."

For Richard, being with a person, even an unpleasant, sadistic person, makes him feel that he is still alive. It signifies that his way of being in the world has a certain dignity, even if his activities are radically curtailed. For him, dignity

requires a feeling of authenticity, a sense of being connected to the human narrative. It helps sustain him. Although he would not want his life endangered, he prefers the sadist to the robot.

Richard's perspective is a cautionary tale to those who would speak in too-simple terms of purely technical benchmarks for human and machine interactions. We animate robotic creatures by projecting meaning onto them and are thus tempted to speak of their emotions and even their "authenticity." We can do this if we focus on the feelings that robots evoke in us. But too often the unasked question is, What does the robot feel? We know what the robot cannot feel: it cannot feel human empathy or the flow of human connection. Indeed, the robot can feel nothing at all. Do we care? Or does the performance of feeling now suffice? Why would we want to be in conversation with machines that cannot understand or care for us? The question was first raised for me by the ELIZA computer program.[5] What made ELIZA a valued interlocutor? What matters were so private that they could only be discussed with a machine?

Over years and with some reluctance, I came to understand that ELIZA's popularity revealed more than people's willingness to talk to machines; it revealed their reluctance to talk to other people.[6] The idea of an attentive machine provides the fantasy that we may escape from each other. When we say we look forward to computer judges, counselors, teachers, and pastors, we comment on our disappointments with people who have not cared or who have treated us with bias or even abuse. These disappointments begin to make a machine's performance of caring seem like caring enough. We are willing to put aside a program's lack of understanding and, indeed, to work to make it seem to understand more than it does—all to create the fantasy that there is an alternative to people. This is the deeper "ELIZA effect." Trust in ELIZA does not speak to what we think ELIZA will understand but to our lack of trust in the people who might understand.

Kevin Kelly asks, "What does technology want?" and insists that, whatever it is, technology is going to get it. Accepting his premise, what if one of the things technology wants is to exploit our disappointments and emotional vulnerabilities? When this is what technology wants, it wants to be a symptom.

SYMPTOMS AND DREAMS

Wary of each other, the idea of a robot companion brings a sense of control, of welcome substitution. We allow ourselves to be comforted by unrequited love, for there is no robot that can ever love us back. That same wariness marks our networked lives. There, too, we are vulnerable to a desire to control our connections, to titrate our level of availability. Things progress quickly. A lawyer says sensibly, "I can't make it to a client meeting; I'll send notes by e-mail instead." Five steps later, colleagues who work on the same corridor no longer want to see or even telephone each other and explain that "texts are more efficient" or "I'll post something on Facebook."

As we live the flowering of connectivity culture, we dream of sociable robots.[7] Lonely despite our connections, we send ourselves a technological Valentine. If online life is harsh and judgmental, the robot will always be on our side. The idea of a robot companion serves as both symptom and dream. Like all psychological symptoms, it obscures a problem by "solving" it without addressing it. The robot will provide companionship and mask our fears of too-risky intimacies. As dream, robots reveal our wish for relationships we can control.

A symptom carries knowledge that a person fears would be too much to bear. To do its job, a symptom disguises this knowledge so it doesn't have to be faced day to day.[8] So, it is "easier" to feel constantly hungry than to acknowledge that your mother did not nurture you. It is "easier" to be enraged by a long supermarket line than to deal with the feeling that your spouse is not giving you the attention you crave. When technology is a symptom, it disconnects us from our real struggles.

In treatment, symptoms disappear because they become irrelevant. Patients become more interested in looking at what symptoms hide—the ordinary thoughts and experiences of which they are the strangulated expression. So when we look at technology as symptom and dream, we shift our attention away from technology and onto ourselves. As Henry David Thoreau might ask, "Where do we live, and what do we live for?" Kelly writes of technophilia as our natural state: we love our objects and follow where they lead.[9] I would reframe his insight: we love our objects, but enchantment comes with a price.

The psychoanalytic tradition teaches that all creativity has a cost, a caution that applies to psychoanalysis itself.[10] For psychoanalyst Robert Caper, "The transgression in the analytic enterprise is not that we try to make things better; the transgression is that we don't allow ourselves to see its costs and limitations."[11] To make his point Caper revisits the story of Oedipus. As his story is traditionally understood, Oedipus is punished for seeking knowledge—in particular, the knowledge of his parentage. Caper suggests he is punished for something else: his refusal to recognize the limitations of knowledge. A parallel with technology

is clear: we transgress not because we try to build the new but because we don't allow ourselves to consider what it disrupts or diminishes. We are not in trouble because of invention but because we think it will solve everything.

A successful analysis disturbs the field in the interest of long-term gain; it learns to repair along the way.[12] One moves forward in a chastened, self-reflective spirit. Acknowledging limits, stopping to make the corrections, doubling back—these are at the heart of the ethic of psychoanalysis. A similar approach to technology frees us from unbending narratives of technological optimism or despair. Consider how it would modulate Kelly's argument about technophilia. Kelly refers to Henry Adams, who in 1900 had a moment of rapture when he first set eyes on forty-foot dynamos. Adams saw them as "symbols of infinity, objects that projected a moral force, much as the early Christians felt the cross."[13] Kelly believes that Adams's desire to be at one with the dynamo foreshadows how Kelly now feels about the Web. As we have seen, Kelly wants to merge with the Web, to find its "lovely surrender." Kelly continues,

> I find myself indebted to the net for its provisions. It is a steadfast benefactor, always there. I caress it with my fidgety fingers; it yields up my desires, like a lover. . . . I want to remain submerged in its bottomless abundance. To stay. To be wrapped in its dreamy embrace. Surrendering to the web is like going on aboriginal walkabout. The comforting illogic of dreams reigns. In dreamtime you jump from one page, one thought, to another. . . . The net's daydreams have touched my own, and stirred my heart. If you can honestly love a cat, which can't give you directions to a stranger's house, why can't you love the web?[14]

Kelly has a view of connectivity as something that may assuage our deepest fears—of loneliness, loss, and death. This is the rapture. But connectivity also disrupts our attachments to things that have always sustained us—for example, the value we put on face-to-face human connection. Psychoanalysis, with its emphasis on the comedy and tragedy in the arc of human life, can help keep us focused on the specificity of human conversation. Kelly is enthralled by the Web's promise of limitless knowledge, its "bottomless abundance." But the Oedipal story reminds us that rapture is costly; it usually means you are overlooking consequences.

Oedipus is also a story about the difference between getting what you want and getting what you think you want. Technology gives us more and more of

what we think we want. These days, looking at sociable robots and digitized friends, one might assume that what we want is to be always in touch and never alone, no matter who or what we are in touch with. One might assume that what we want is a preponderance of weak ties, the informal networks that underpin online acquaintanceship. But if we pay attention to the real consequences of what we think we want, we may discover what we really want. We may want some stillness and solitude. As Thoreau put it, we may want to live less "thickly" and wait for more infrequent but meaningful face-to-face encounters. As we put in our many hours of typing—with all fingers or just thumbs—we may discover that we miss the human voice. We may decide that it is fine to play chess with a robot, but that robots are unfit for any conversation about family or friends. A robot might have needs, but to understand desire, one needs language and flesh. We may decide that for these conversations, we must have a person who knows, firsthand, what it means to be born, to have parents and a family, to wish for adult love and perhaps children, and to anticipate death. And, of course, no matter how much "wilderness" Kelly finds on the Web, we are not in a position to let the virtual take us away from our stewardship of nature, the nature that doesn't go away with a power outage.

We let things get away from us. Even now, we are emotionally dependent on online friends and intrigued by robots that, their designers claim, are almost ready to love us.[15] And brave Kevin Kelly says what others are too timid to admit: he is in love with the Web itself. It has become something both erotic and idealized. What are we missing in our lives together that leads us to prefer lives alone together? As I have said, every new technology challenges us, generation after generation, to ask whether it serves our human purposes, something that causes us to reconsider what they are.

In a design seminar, master architect Louis Kahn once asked, "What does a brick want?"[16] In that spirit, if we ask, "What does simulation want?" we know what it wants. It wants—it demands—immersion. But immersed in simulation, it can be hard to remember all that lies beyond it or even to acknowledge that everything is not captured by it. For simulation not only demands immersion but creates a self that prefers simulation. Simulation offers relationships simpler than real life can provide. We become accustomed to the reductions and betrayals that prepare us for life with the robotic.

But being prepared does not mean that we need to take the next step. Sociable robotics puts science into the game of intimacy and the most sensitive moments of children's development. There is no one to tell science what it cannot do, but

here one wishes for a referee. Things start innocently: neuroscientists want to study attachment. But things end reductively, with claims that a robot "knows" how to form attachments because it has the algorithms. The dream of today's roboticists is no less than to reverse engineer love. Are we indifferent to whether we are loved by robots or by our own kind?

In Philip K. Dick's classic science fiction story "Do Androids Dream of Electric Sheep" (which most people know through its film adaptation, *Blade Runner*), loving and being loved by a robot seems a good thing. The film's hero, Deckard, is a professional robot hunter in a world where humans and robots look and sound alike. He falls in love with Rachel, an android programmed with human memories and the knowledge that she will "die." I have argued that knowledge of mortality and an experience of the life cycle are what make us uniquely human. This brilliant story asks whether the simulation of these things will suffice.

By the end of the film, we are left to wonder whether Deckard himself may be an android but unaware of his identity. Unable to resolve this question, we cheer for Deckard and Rachel as they escape to whatever time they have remaining—in other words, to the human condition. Decades after the film's release, we are still nowhere near developing its androids. But to me, the message of *Blade Runner* speaks to our current circumstance: long before we have devices that can pass any version of the Turing test, the test will seem beside the point. We will not care if our machines are clever but whether they love us.

Indeed, roboticists want us to know that the point of affective machines is that they will take care of us. This narrative—that we are on our way to being tended by "caring" machines—is now cited as conventional wisdom. We have entered a realm in which conventional wisdom, always inadequate, is dangerously inadequate. That it has become so commonplace reveals our willingness to take the performance of emotion as emotion enough.

EMOTION ENOUGH

When roboticists argue that robots can develop emotions, they begin by asserting the material basis of all thought and take things from there. For example, Rodney Brooks says that a robot could be given a feeling like "sadness" by setting "a number in its computer code." This sadness, for Brooks, would be akin to that felt by humans, for "isn't humans' level of sadness basically a number, too, just a number of the amounts of various neurochemicals circulating in the brain? Why should a robot's numbers be any less authentic than a human's?"[17]

Given my training as a clinician, I tend to object to the relevance of a robot's "numbers" for thinking about emotion because of something humans have that robots don't: a human body and a human life. Living in our bodies sets our human "numbers." Our emotions are tied to a developmental path—from childhood dependence to greater independence—and we experience the traces of our earlier dependencies in later fantasies, wishes, and fears. Brooks speaks of giving the robot the emotion of "sadness." In a few months, I will send my daughter off to college. I'm both sad and thrilled. How would a robot "feel" such things? Why would its "numbers" even "want" to?

Cynthia Breazeal, one of Brooks's former students, takes another tack, arguing that robotic emotions are valid if you take care to consider them as a new category. Cats have cat emotions, and dogs have dog emotions. These differ from each other and from human emotions. We have no problem, says Breazeal, seeing all of these as "genuine" and "authentic." And now, robots will have robot emotions, also in their own category and likewise "genuine" and "authentic." For Breazeal, once you give robotic emotions their own category, there is no need to compare. We should respect emotional robots as "different," just as we respect all diversity.[18] But this argument confuses the authentic with the sui generis. That the robotic performance of emotion might exist in its own category implies nothing about the authenticity of the emotions being performed. And robots do not "have" emotions that we must respect. We build robots to do things that make us feel as though they have emotions. Our responses are their design template.

Whether one debates the question of robotic emotions in terms of materialism or category, we end up in a quandary. Instead of asking whether a robot has emotions, which in the end boils down to how different constituencies define emotion, we should be asking what kind of relationships we want to have with machines. Why do we want robots to perform emotion? I began my career at MIT arguing with Joseph Weizenbaum about whether a computer program might be a valuable dialogue partner. Thirty years later, I find myself debating those who argue, with David Levy, that my daughter might want to marry one.[19]

Simulation is often justified as practice for real-life skills—to become a better pilot, sailor, or race-car driver. But when it comes to human relations, simulation gets us into trouble. Online, in virtual places, simulation turns us into its

creatures. But when we step out of our online lives, we may feel suddenly as though in too-bright light. Hank, a law professor in his late thirties, is on the Net for at least twelve hours a day. Stepping out of a computer game is disorienting, but so is stepping out of his e-mail. Leaving the bubble, Hank says, "makes the flat time with my family harder. Like it's taking place in slow motion. I'm short with them." After dinner with his family, Hank is grateful to return to the cool shade of his online life.

Nothing in real life with real people vaguely resembles the environment (controlled yet with always-something-new connections) that Hank finds on the Net. Think of what is implied by his phrase "flat time." Real people have consistency, so if things are going well in our relationships, change is gradual, worked through slowly. In online life, the pace of relationships speeds up. One quickly moves from infatuation to disillusionment and back. And the moment one grows even slightly bored, there is easy access to someone new. One races through e-mail and learns to attend to the "highlights." Subject lines are exaggerated to get attention. In online games, the action often reduces to a pattern of moving from scary to safe and back again. A frightening encounter presents itself. It is dealt with. You regroup, and then there is another. The adrenaline rush is continual; there is no "flat time."

Sometimes people try to make life with others resemble simulation. They try to heighten real-life drama or control those around them. It would be fair to say that such efforts do not often end well. Then, in failure, many are tempted to return to what they do well: living their lives on the screen. If there is an addiction here, it is not to a technology. It is to the habits of mind that technology allows us to practice.

Online, we can lose confidence that we are communicating or cared for. Confused, we may seek solace in even more connection. We may become intolerant of our own company: "I never travel without my BlackBerry," says a fifty-year-old management consultant. She cannot quiet her mind without having things on her mind.

My own study of the networked life has left me thinking about intimacy—about being with people in person, hearing their voices and seeing their faces, trying to know their hearts. And it has left me thinking about solitude—the kind that refreshes and restores. Loneliness is failed solitude.[20] To experience solitude you must be able to summon yourself by yourself; otherwise, you will only know how to be lonely. In raising a daughter in the digital age, I have thought of this very often.

In his history of solitude, Anthony Storr writes about the importance of being able to feel at peace in one's own company.[21] But many find that, trained by the Net, they cannot find solitude even at a lake or beach or on a hike. Stillness makes them anxious. I see the beginnings of a backlash as some young people become disillusioned with social media. There is, too, the renewed interest in yoga, Eastern religions, meditating, and "slowness."

These new practices bear a family resemblance to what I have described as the romantic reaction of the 1980s. Then, people declared that something about their human nature made them unlike any machine ("simulated feeling may be feeling; simulated love is never love"). These days, under the tutelage of imaging technology and neurochemistry, people seem willing to grant their own machine natures. What they rebel against is how we have responded to the affordances of the networked life. Offered continual connectivity, we have said yes. Offered an opportunity to abandon our privacy, so far we have not resisted. And now comes the challenge of a new "species"—sociable robots—whose "emotions" are designed to make us comfortable with them. What are we going to say?

The romantic reaction of the 1980s made a statement about computation as a model of mind; today we struggle with who we have become in the presence of computers. In the 1980s, it was enough to change the way you saw yourself. These days, it is a question of how you live your life. The first manifestations of today's "push back" are tentative experiments to do without the Net. But the Net has become intrinsic to getting an education, getting the news, and getting a job. So, today's second thoughts will require that we actively reshape our lives on the screen. Finding a new balance will be more than a matter of "slowing down." How can we make room for reflection?

QUANDARIES

In arguing for "caring machines," roboticists often make their case by putting things in terms of quandaries. So, they ask, "Do you want your parents and grandparents cared for by robots, or would you rather they not be cared for at all?" And alternatively, "Do you want seniors lonely and bored, or do you want them engaged with a robotic companion?"[22] The forced choice of a quandary, posed over time, threatens to become no quandary at all because we come to accept its framing—in this case, the idea that there is only one choice, between robotic caregivers and loneliness. The widespread use of this particular

quandary makes those uncomfortable with robotic companions out to be people who would consign an elderly population to boredom, isolation, and neglect.

There is a rich literature on how to break out of quandary thinking. It suggests that sometimes it helps to turn from the abstract to the concrete.[23] This is what the children in Miss Grant's fifth-grade class did. Caught up in a "for or against" discussion about robot caregivers, they turned away from the dilemma to ask a question ("Don't we have people for these jobs?") that could open up a different conversation. While the children only began that conversation, we, as adults, know where it might go. What about bringing in some new people? What must be done to get them where they are needed? How can we revisit social priorities so that funds are made available? We have the unemployed, the retired, and those currently at war—some of these might be available if there were money to pay them. One place to start would be to elevate elder care above the minimum-wage job that it usually is, often without benefits. The "robots-or-no-one" quandary takes social and political choice out of the picture when it belongs at the center of the picture.

I experienced a moment of reframing during a seminar at MIT that took the role of robots in medicine as its focus. My class considered a robot that could help turn weak or paralyzed patients in their beds for bathing. A robot now on the market is designed as a kind of double spatula: one plate slides under the patient; another is placed on top. The head is supported, and the patient is flipped. The class responded to this technology as though it suggested a dilemma: machines for the elderly or not. So some students insisted that it is inevitable for robots to take over nursing roles (they cited cost, efficiency, and the insufficient numbers of people who want to take the job). Others countered that the elderly deserve the human touch and that anything else is demeaning. The conversation argued absolutes: the inevitable versus the unsupportable.

Into this stalled debate came the voice of a woman in her late twenties whose mother had recently died. She did not buy into the terms of the discussion. Why limit our conversation to no robot or a robotic flipper? Why not imagine a machine that is an extension of the body of one human trying to care lovingly for another? Why not build robotic arms, supported by hydraulic power, into which people could slip their own arms, enhancing their strength? The problem as offered presented her with two unacceptable images: an autonomous machine or a neglected patient. She wanted to have a conversation about how she might have used technology as prosthesis. Had her arms been made stronger, she

might have been able to lift her mother when she was ill. She would have welcomed such help. It might have made it possible for her to keep her mother at home during her last weeks. A change of frame embraces technology even as it provides a mother with a daughter's touch.

In the spirit of "break the frame and see something new," philosopher Kwame Anthony Appiah challenges quandary thinking:

> The options are given in the description of the situation. We can call this the *package problem*. In the real world, situations are not bundled together with options. In the real world, the act of framing—the act of describing a situation, and thus of determining that there's a decision to be made—is itself a moral task. It's often *the* moral task. Learning how to recognize what is and isn't an option is part of our ethical development. . . . In life, the challenge is not so much to figure out how best to play the game; the challenge is to figure out what game you're playing.[24]

For Appiah, moral reasoning is best accomplished not by responding to quandaries but by questioning how they are posed, continually reminding ourselves that we are the ones choosing how to frame things.

FORBIDDEN EXPERIMENTS

When the fifth graders considered robot companions for their grandparents and wondered, "Don't we have people for these jobs?" they knew they were asking, "Isn't 'taking care' our parents' job?" And by extension, "Are there people to take care of us if we become 'inconvenient'?" When we consider the robots in our futures, we think through our responsibilities to each other.

Why do we want robots to care for us? I understand the virtues of partnership with a robot in war, space, and medicine. I understand that robots are useful in dangerous working conditions. But why are we so keen on "caring"?[25] To me, it seems transgressive, a "forbidden experiment."[26]

Not everyone sees it this way. Some people consider the development of caring machines as simple common sense. Porter, sixty, recently lost his wife after a long illness. He thinks that if robotic helpers "had been able to do the grunt work, there might have been more time for human nurses to take care of the more personal and emotional things." But often, relationships hinge on these

investments of time. We know that the time we spend caring for children, doing the most basic things for them, lays down a crucial substrate.[27] On this ground, children become confident that they are loved no matter what. And we who care for them become confirmed in our capacity to love and care. The ill and the elderly also deserve to be confirmed in this same sense of basic trust. As we provide it, we become more fully human.

The most common justification for the delegation of care to robots focuses on things being "equal" for the person receiving care. This argument is most often used by those who feel that robots are appropriate for people with dementia, who will not "know the difference" between a person and a robot. But we do not really know how impaired people receive the human voice, face, and touch. Providing substitutes for human care may not be "equal" in the least. And again, delegating what was once love's labor changes the person who delegates. When we lose the "burden" of care, we begin to give up on our compact that human beings will care for other human beings. The daughter who wishes for hydraulic arms to lift her bedridden mother wants to keep her close. For the daughter, this last time of caring is among the most important she and her mother will share. If we divest ourselves of such things, we risk being coarsened, reduced. And once you have elder bots and nurse bots, why not nanny bots?

Why would we want a robot as a companion for a child? The relationship of a child to a sociable robot is, as I've said, very different from that of a child to a doll. Children do not try to model themselves on their dolls' expressions. A child projects human expression onto a doll. But a robot babysitter, already envisaged, might seem close enough to human that a child might use it as a model. This raises grave questions. Human beings are capable of infinite combinations of vocal inflection and facial expression. It is from other people that we learn how to listen and bend to each other in conversation. Our eyes "light up" with interest and "darken" with passion or anxiety. We recognize, and are most comfortable with, other people who exhibit this fluidity. We recognize, and are less comfortable with, people—with autism or Asperger's syndrome—who do not exhibit it. The developmental implications of children taking robots as models are unknown, potentially disastrous. Humans need to be surrounded by human touch, faces, and voices. Humans need to be brought up by humans.

Sometimes when I make this point, others counter that even so, robots might do the "simpler" jobs for children, such as feeding them and changing their diapers. But children fed their string beans by a robot will not associate food with

human companionship, talk, and relaxation. Eating will become dissociated from emotional nurturance. Children whose diapers are changed by robots will not feel that their bodies are dear to other human beings. Why are we willing to consider such risks?[28]

Some would say that we have already completed a forbidden experiment, using ourselves as subjects with no controls, and the unhappy findings are in: we are connected as we've never been connected before, and we seem to have damaged ourselves in the process. A 2010 analysis of data from over fourteen thousand college students over the past thirty years shows that since the year 2000, young people have reported a dramatic decline in interest in other people. Today's college students are, for example, far less likely to say that it is valuable to try to put oneself in the place of others or to try to understand their feelings.[29] The authors of this study associate students' lack of empathy with the availability of online games and social networking. An online connection can be deeply felt, but you only need to deal with the part of the person you see in your game world or social network. Young people don't seem to feel they need to deal with more, and over time they lose the inclination. One might say that absorbed in those they have "friended," children lose interest in friendship.

These findings confirm the impressions of those psychotherapists—psychiatrists, psychologists, and social workers—who talk to me about the increasing numbers of patients who present in the consulting room as detached from their bodies and seem close to unaware of the most basic courtesies. Purpose-driven, plugged into their media, these patients pay little attention to those around them. In others, they seek what is of use, an echo of that primitive world of "parts." Their detachment is not aggressive. It is as though they just don't see the point.[30]

EARLY DAYS

It is, of course, tempting to talk about all of this in terms of addiction. Adam, who started out playing computer games with people and ends up feeling compelled by a world of bots, certainly uses this language. The addiction metaphor fits a common experience: the more time spent online, the more one wants to spend time online. But however apt the metaphor, we can ill afford the luxury of using it. Talking about addiction subverts our best thinking because it suggests that if there are problems, there is only one solution. To combat addiction, you have to discard the addicting substance. But we are not going to "get rid" of the Internet.

We will not go "cold turkey" or forbid cell phones to our children. We are not going to stop the music or go back to television as the family hearth.

I believe we will find new paths toward each other, but considering ourselves victims of a bad substance is not a good first step. The idea of addiction, with its one solution that we know we won't take, makes us feel hopeless. We have to find a way to live with seductive technology and make it work to our purposes. This is hard and will take work. Simple love of technology is not going to help. Nor is a Luddite impulse.

What I call *realtechnik* suggests that we step back and reassess when we hear triumphalist or apocalyptic narratives about how to live with technology. *Realtechnik* is skeptical about linear progress. It encourages humility, a state of mind in which we are most open to facing problems and reconsidering decisions. It helps us acknowledge costs and recognize the things we hold inviolate. I have said that this way of envisaging our lives with technology is close to the ethic of psychoanalysis. Old-fashioned perhaps, but our times have brought us back to such homilies.

Because we grew up with the Net, we assume that the Net is grown-up. We tend to see it as a technology in its maturity. But in fact, we are in early days. There is time to make the corrections. It is, above all, the young who need to be convinced that when it comes to our networked life, we are still at the beginning of things. I am cautiously optimistic. We have seen young people try to reclaim personal privacy and each other's attention. They crave things as simple as telephone calls made, as one eighteen-year-old puts it, "sitting down and giving each other full attention." Today's young people have a special vulnerability: although always connected, they feel deprived of attention. Some, as children, were pushed on swings while their parents spoke on cell phones.[31] Now, these same parents do their e-mail at the dinner table. Some teenagers coolly compare a dedicated robot with a parent talking to them while doing e-mail, and parents do not always come out ahead. One seventeen-year-old boy says, "A robot would remember everything I said. It might not understand everything, but remembering is a first step. My father, talking to me while on his BlackBerry, he doesn't know what I said, so it is not much use that if he did know, he might understand."

The networked culture is very young. Attendants at its birth, we threw ourselves into its adventure. This is human. But these days, our problems with the Net are becoming too distracting to ignore. At the extreme, we are so enmeshed in our connections that we neglect each other. We don't need to reject or disparage technology. We need to put it in its place. The generation that has grown up with the Net is in a good position to do this, but these young people need help. So as they begin to fight for their right to privacy, we must be their partners. We know how easily information can be politically abused; we have the perspective of history. We have, perhaps, not shared enough about that history with our children. And as we, ourselves enchanted, turned away from them to lose ourselves in our e-mail, we did not sufficiently teach the importance of empathy and attention to what is real.

The narrative of *Alone Together* describes an arc: we expect more from technology and less from each other. This puts us at the still center of a perfect storm. Overwhelmed, we have been drawn to connections that seem low risk and always at hand: Facebook friends, avatars, IRC chat partners. If convenience and control continue to be our priorities, we shall be tempted by sociable robots, where, like gamblers at their slot machines, we are promised excitement programmed in, just enough to keep us in the game. At the robotic moment, we have to be concerned that the simplification and reduction of relationship is no longer something we complain about. It may become what we expect, even desire.

In this book I have referred to our vulnerabilities rather than our needs. Needs imply that we must have something. The idea of being vulnerable leaves a lot of room for choice. There is always room to be less vulnerable, more evolved. We are not stuck. To move forward together—as generations together—we are called upon to embrace the complexity of our situation. We have invented inspiring and enhancing technologies, and yet we have allowed them to diminish us. The prospect of loving, or being loved by, a machine changes what love can be. We know that the young are tempted. They have been brought up to be. Those who have known lifetimes of love can surely offer them more.

When we are at our best, thinking about technology brings us back to questions about what really matters. When I recently travelled to a memorial service for a close friend, the program, on heavy cream-colored card stock, listed the afternoon's speakers, told who would play what music, and displayed photographs of my friend as a young woman and in her prime. Several around me used the program's stiff, protective wings to hide their cell phones as they sent text messages during the service. One of the texting mourners, a woman in her late sixties, came over to chat with me after the service. Matter-of-factly, she offered, "I couldn't stand to sit that long without getting on my phone." The point of the service was to take a moment. This woman had been schooled by a technology she'd had for less than a decade to find this close to impossible.[32] Later,

I discussed the texting with some close friends. Several shrugged. One said, "What are you going to do?"

A shrug is appropriate for a stalemate. That's not where we are. It is too early to have reached such an impasse. Rather, I believe we have reached a point of inflection, where we can see the costs and start to take action. We will begin with very simple things. Some will seem like just reclaiming good manners. Talk to colleagues down the hall, no cell phones at dinner, on the playground, in the car, or in company. There will be more complicated things: to name only one, nascent efforts to reclaim privacy would be supported across the generations. And compassion is due to those of us—and there are many of us—who are so dependent on our devices that we cannot sit still for a funeral service or a lecture or a play. We now know that our brains are rewired every time we use a phone to search or surf or multitask.[33] As we try to reclaim our concentration, we are literally at war with ourselves. Yet, no matter how difficult, it is time to look again toward the virtues of solitude, deliberateness, and living fully in the moment. We have agreed to an experiment in which we are the human subjects. Actually, we have agreed to a series of experiments: robots for children and the elderly, technologies that denigrate and deny privacy, seductive simulations that propose themselves as places to live.[34]

We deserve better. When we remind ourselves that it is we who decide how to keep technology busy, we shall have better.

EPILOGUE

the letter

I return from Dublin to Boston in September 2009. I have brought my daughter Rebecca to Ireland and helped her to set up her dorm room for a gap year before starting college in New England. I'm one day back from Dublin, and I have already had a lot of contact with Rebecca, all of it very sweet. There are text messages: she forgot a favorite red coat; she wants her green down "puff" jacket and a pink scarf she would like to drape over her bed as a canopy. Could I please mail them to her? I assemble her parcel and send a text: "On the way to the Post Office." I have downloaded Skype and am ready for its unforgiving stare. Yet, even on my first day home, I feel nostalgic. I sit in my basement surrounded by musty boxes, looking for the letters that my mother and I exchanged during my first year in college, the first time I lived away from home. The telephone was expensive. She wrote twice a week. I wrote once a week. I remember our letters as long, emotional, and filled with conflict. We were separating, finding our way toward something new. Forty years later, I find the letters and feel as though I hold her heart in my hands.

As the days pass, I am in regular contact with my daughter on Skype and by text. As though under some generational tutelage, I feel constrained to be charming and brief in our breezy, information-filled encounters. Once, while