n my last column, I wrote about two books—Nicholas Carr's *The Shallows* and William Powers' *Hamlet's Blackberry*—relating to learning in the always-on, always connected environment of "screens." Since then, two additional works have come to my attention. While I won't be able to do them justice in the space I have here, they deserve careful consideration and open discussion by those of us in the library community.

If Carr's and Power's books are about how we *learn* in an always-connected world of screens, Sherry Turkle's *Alone Together* and Elias Aboujaoude's *Virtually You* are about who we are in the process of *becoming* in that world.<sup>2</sup> Turkle is a psychologist at MIT who studies human-computer interactions. Among her previous works are *The Second Self* (1984) and *Life on the Screen* (1995). Aboujaoude is a psychiatrist at the Stanford University School of Medicine, where he serves as director of the Obsessive Compulsive Disorder Clinic and the Impulse Control Disorders Clinic. Based on extensive coverage of specialist and popular literature, as well as numerous anonymized accounts of patients and subjects encountered by the authors, both works are characterized by thorough research and thoughtful analysis.

While their approaches to the topic of "what we are becoming" as a result of screens may differ-Aboujaoude's, for example, focuses on "templates" and the terminology of traditional psychiatry, while Turkle's examines the relationship between loneliness and solitude (they are different), and how these in turn relate to the world of screens—their observations of the everyday manifestations of what might be called the pathology of screens bear many common threads. I'm acutely aware of the potential for injustice (at best) and misrepresentation or misunderstanding (rather worse) that I risk in seeking to distill two very complex studies into such a small space. And, frankly, I'm still trying to wrap my head around both the books and the larger issues they raise. With that caveat, I still think we should be reading about and widely discussing the phenomena reported, which many of us observe on a daily basis. In the sections that follow, I'd like to touch on a very few themes that emerge from these books.

## "Why Do People No Longer Suffice?"3

A pair of anecdotes that Turkle recounts to explain her reasons for writing the current book seems worth sharing at the outset. In the first, she describes taking her then-fourteen-year-old daughter, Rebecca, to the Charles Darwin exhibition at New York's American Museum of Natural History in 2005. Among the many artifacts on

display was a pair of live giant Galapagos tortoises: "One tortoise was hidden from view; the other rested in its cage, utterly still. Rebecca inspected the visible tortoise thoughtfully for a while and then said matter-of-factly, 'They could have used a robot.'" When Turkle queried other bystanders, many of the children agreed, with one saying, 'For what the turtles do, you didn't have to have live ones.'" In this case, "alive enough" was sufficient for the purpose at hand.<sup>4</sup>

Sometime later, Turkle read and publicly expressed her reservations about British computer scientist David Levy's book, *Love and Sex with Robots*, in which Levy predicted that by the middle of this century,

Love with robots will be as normal as love with other humans, while the number of sexual acts and lovemaking positions commonly practiced between humans will be extended, as robots will teach more than is in all of the world's published sex manuals combined.<sup>5</sup>

Contacted by a reporter from *Scientific American* about her comments regarding Levy's book, Turkle was stunned when the reporter, equating the possibility of relationships between humans and robots with gay and lesbian relationships, accused her of likewise opposing these human-to-human relationships. If we now have reached a point where gay and lesbian relationships can strike us as comparable to human-to-machine relationships, something very important has changed; for Turkle, it suggested that we are on the threshold of what she terms the "robotic moment":

This does not mean that companionate robots are common among us; it refers to our state of emotional—and I would say philosophical—readiness. I find people willing to seriously consider robots not only as pets but as potential friends, confidants and romantic partners. We don't seem to care what these artificial intelligences "know" or "understand" of the human moments we might "share" with them. At the robotic moment, the **performance** of connection seems connection enough. We are poised to attach to the inanimate without prejudice.<sup>6</sup>

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## Changing Mores, or the Triumph of Rudeness

I can't think of any successful online community where the nice, quiet, reasonable voices defeat the loud, angry ones. . . . The computer somehow nullifies the social contract.

—Heather Champ, Yahoo!'s Flickr Community Manager<sup>7</sup>

Sadly, we've all experienced it. We get stuck on a bus, train, or in an elevator with someone engaged in a loud conversation on her or his mobile phone. All too often, the person is loudly carrying on about matters we wish we weren't there to hear. Perhaps it's a fight with a partner. Or a discussion of some delicate health matter. Whatever it is, we really don't want to know, but because of the limitations imposed by physical spaces, we can't avoid being a party to at least half of the conversation. What's wrong with these individuals? Do they really have no consideration or sense of propriety?

It turns out that in matters of tact and good taste, the ground has shifted, and where once we understood and abided by commonly accepted rules of conduct and respect for others, we do so no longer. Indeed, the every-day obnoxious intrusions by those using public spaces for their private conversations are among the least of offenders. Consider the following situations shared by Turkle: Sal, 62 years old, holds a small dinner party at his home as part of his "reentry into society" after several years of having cared for his recently deceased wife:

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. She was *blogging* the conversation. She was *blogging* the conversation.

Turkle later tells of attending a memorial service for a friend.

Several [attendees] around me used the [printed] 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.<sup>9</sup>

While these examples are admittedly extreme, both authors agree that something very basic has changed in the way we conduct ourselves. Turkle characterizes it as mobile technology having made each of us "pausable," i.e., that a face-to-face interaction being interrupted by an incoming call, text message, or e-mail is no longer extraordinary; rather, in the "new etiquette," it is "close to the norm." And the rudeness, as well we know, isn't limited to mobile communications. Referring to "flame wars," which regularly erupt in online communities, Aboujaoude observes:

The Internet makes it easier to suspend ethical codes governing conduct and behavior. Gentleness, common courtesy, and the little niceties that announce us as well-mannered, civilized, and sociable members of the species are quickly stripped away to reveal a completely naked, often unpleasant human being.<sup>11</sup>

Even our routine e-mail messages—lacking as they often do salutations and closing sign-offs—are characterized by a form of curtness heretofore unacceptable in paper communications. Remarkably, to those old enough to recall the traditional norms, the brusqueness is not only unintended, it is as well unconscious; "[we] just don't think warmth and manners are necessary or even advisable in cyberspace."<sup>12</sup>

# Castles in the Air: Avatars, Profiles, and Remaking Ourselves as We Wish We Were

Finally, a place to love your body, love your friends, and love your life.

-Second Life, "What Is Second Life?"13

One of the interesting and worrisome themes in both Turkle's and Aboujaoude's studies is that of the reinvention and transformation of the self, in the form of online personas and avatars. This is the stock-in-trade of online communities and gaming sites such as Facebook and Second Life. These sites cater to our nearly universal desire to be someone other than who we are:

Online, you're slim, rich, and buffed up, and you feel you have more opportunities than in the real world.... we can reinvent ourselves as comely avatars. We can write the Facebook profile that pleases us. We can edit our messages until they project the self we want to be.<sup>14</sup>

The problem is that for many there is an increasing fuzziness at the interface between real and virtual

personas: "Not surprisingly, people report feeling let down when they move from the virtual to the real world. It is not uncommon to see people fidget with their smartphones, looking for virtual places where they might once again be more."15 Turkle speaks of the development of what she terms a "vexed relationship" between the real and the virtual:

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.16

And indeed, some completely lose sight of what is real and what is not. Aboujaoude relates the story of Alex, whose involvement in an online community became so consuming that he not only created for himself an online persona—"'I then meticulously painted in his hair, streak by streak, and picked "azure blue" for his eye color and "snow white" for his teeth.""—but also left his "real" girlfriend after similarly remaking the avatar of his online girlfriend, Nadia—"from her waist size to the number of freckles on her cheeks." Speaking of his former "real" girlfriend, Alex said, "real had become overrated."17

### "Don't We Have People for These Jobs?"18

Ageist disclaimer: When I grew up, robots—those that weren't in science fiction stories or films—were things that were touted as making auto assembly lines more efficient, or putting auto workers out of jobs, depending on your perspective. While not technically a robot, the other machine that characterized "that time" was the Automated Teller Machine (ATM), which freed us from having to do our banking during traditional weekday hours, and not coincidentally resulted, again, in the loss of many entry-level jobs in financial institutions. As I recall, we were all reassured that the future lay in "helping/ service" professions, where the danger of replacement by machines was thought to be minimal. Now, fast forward 30 years.

The first half of Turkle's book is the history of "sociable robots" and our interactions with them. Moving from the reactions of MIT students to Joseph Weizenbaum's ELIZA in the mid-1970s, she recounts her studies of children's interactions, first with electronic toys-e.g., Tamagotchi—and later, with increasingly sophisticated and "alive" robots, such as Furby, AIBO, and My Real Baby. With each generation, these devices made yet more "demands" on their owners—for care, "feeding", etc. And with each generation, the line between "alive" and "alive

enough" became yet more blurred. Turkle's anecdotes of children explaining the "aliveness" of these robots are both touching and disturbing. Speaking of a Tamagotchi, one child wrote a poem: "My baby died in his sleep. I will forever weep. Then his batteries went dead. Now he lives in my head."19

The concept of "alive enough" is not unique to the very young, either. By 2009, sociable robots had moved beyond children's toys with the introduction of Paro, a baby seal-like "creature" aimed at providing companionship to the elderly and touted as "the most therapeutic robot in the world. . . . 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."20

Where does it end? Turkle goes on to describe Nursebot, a device aimed at hospitals and long-term care facilities, which colleagues characterized as "a robot even Sherry can love." But when Turkle injured herself in a fall a few months later.

[I was] 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. . . . The orderly who took me to the discharge station . . . gave me a high five. The Nursebot might have been capable of the logistics, but I was glad that I was there with people. . . . Between human beings, simple things reach you. When it comes to care, there may be no pedestrian jobs.21

But need we librarians care about something as farfetched as Nursebot? Absolutely. Now that IBM has proven that it can design a machine—okay, an array of machines, but something much more compact is surely coming soon—that can win at Jeopardy!, is the robotic reference librarian really that much of a hurdle? Take a bit of Watson technology, stick it in Nursebot, give it sensible shoes, and hey, I can easily imagine Bibliobot, factory-standard in several guises, including perhaps Donna Reed (as Mary, who becomes the town librarian in the alter-life of Capra's It's a Wonderful Life) or Shirley Jones (as Marian, the Librarian, in *The Music Man*). I like Donna Reed as much as anyone, but do I really want reference assistance from her android doppelgänger? But then, for years after the introduction of the ATM, I confess that I continued taking lunch hours off just so that I could deal with a "real person" at the bank, so perhaps it's just me.

The future is in the helping/service professions, indeed! And when we're all replaced by robots (sociable and otherwise), what will we do to fill the time?

#### Where From Here?

I titled this column "Singularity." For those not familiar with the literature of science fiction, Turkle provides a useful explanation:

This notion has migrated from science fiction to engineering. The *singularity* is the moment—it is mythic; you have to believe in it—when machine intelligence crosses a tipping point. Past this point, say those who believe, artificial intelligence will go beyond anything we can currently conceive. . . . At the singularity, everything will become technically possible, including robots that love. Indeed, at the singularity, we may merge with the robotic and achieve immortality. The singularity is technological rapture.<sup>22</sup>

I think it's pretty clear that we're still a fair distance from anything that one might reasonably term a singularity. But the concept is surely present, albeit in a somewhat less hubristic degree, when we speak in uncritical awe of "game-changing" or "transformational" technologies. Turkle puts it this way:

The triumphalist narrative of the Web is the reassuring story that people want to hear and that technologists want to tell. But the heroic story is not the whole story. In virtual worlds and computer games, people are flattened into personae. On social networks, people are reduced to their profiles. On our mobile devices, we often talk to each other on the move and with little disposable time—so little, in fact, that we communicate in a new language of abbreviation in which letters stand for words and emoticons for feelings. . . . We are increasingly connected to each other but oddly more alone: *in intimacy, new solitudes*.<sup>23</sup>

Some of my endlessly patient friends—the ones who provide both you and me with some measure of buffering from the worst of my rants in prepublication drafts of these columns—have asked questions about how all this relates to libraries, for example:

How much it is legitimate to generalize to the broader population research findings from cases of obsessive compulsive disorder? The individuals studied are, of course, obsessive and compulsive, in relation to the Internet and new technologies. Do their behaviors not represent an extreme end of the population?

A fair question. And yes, the examples I've provided in this column are admittedly somewhat extreme. But Turkle and Aboujaoud both point to many examples that are far more common. I think all of us would have

to admit that we've seen many examples of how connectedness between people we'd otherwise consider "normal" has and is changing our manners and mores.24 Many libraries and other public spaces, reacting to patron complaints about the lack of consideration shown by some users, have had to declare certain areas "cell phone free." In the interest of getting your attention, I've admittedly selected some fairly extreme examples from the two books at hand. However, I think the point is that, now that the glitter of always-on, always-connected, has begun to fade a bit, there is a *continuum* of dysfunctional behaviors that we are beginning to notice, and it's time to talk about how we as librarians fit into all of this. Are there things we in libraries are doing that encourage some of these less desirable and even unhealthy behaviors? Which takes us to a second concern raised by some of my gentle draft-readers:

We've heard this tale before. Television, and radio before it, were technologies that, when they were new, were criticized as corrupting and leading us to all sorts of negative, self-destructive, and socially undesirable behaviors. How are screens and the technology of always-connected any different?

A part of me—the one that winces every time someone glibly refers to the "transformational" changes taking place around us-agrees. I was trained as a historian, to take a long view about change. And we're talking about technologies that—in the case of the webhave been in common use for just over fifteen years. That said, my interest here is in seeing our profession begin a conversation about how connective technologies have influenced behavioral changes in people, and especially about how we in *libraries* may be unwittingly abetting those behavioral changes. Television and radio were fundamentally different technologies in that they were one-way broadcast tools. And to the best of my recollection, neither has ever been widely adopted by or in libraries. Yes, we've circulated videos and sound recordings, and even provided limited facilities for the playback of such media. But neither has ever really had an impact on the traditional core business of libraries, which is the encouragement and facilitation of the largely solitary, contemplative act of reading. Connective technologies, in the form of intelligent machines and network-based communities, can be said to be antithetical to this core activity. We need to think about that, and to consider carefully the behaviors we may be encouraging.

Notwithstanding those critics of change in our profession who feel we move far too glacially, I would maintain that we have often been, if not at the forefront of the technology pack, then certainly among its most enthusiastic

adopters. In our quest to remain "relevant" to our university or school administrations, governing boards, and (in theory, at least) our patrons, we have embraced with remarkably little reservation just about every technology trend that's come along in the past few decades. At the same time, we've been remarkably uncritical and unreflective about our role in, and the larger implications of, what we might be doing by adopting these technologies. Aboujaoude, in a surprising, but I think largely correct summary comment, observes:

Extremely little is available, however, for the individual interested in learning more about how virtual technology has reshaped our inner universe and may be remapping our brains. As centers of learning, public libraries, schools, and universities may be disproportionately responsible for this deficiency. They outdo one another in digitalizing their holdings and speeding up their Internet connections, and rightfully see those upgrades as essential to compete for students, scholars, and patrons. In exchange, however, and with few exceptions, they teach little about the unintended, less obvious, and more personal consequences of the World Wide Web. The irony is, at least in some libraries' case, that their very survival seems threatened by a shift that they do not seem fully engaged in trying to understand, much less educate their audiences about.25

I could hardly agree more. So, how do we answer Aboujaoude's critique?

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