influence is, at the very least, two-way. Rather than being deterministic, they see the consequences of technology for social life as *emergent*. Even if we knew all the factors that influence us at the start (an impossible feat), we would not be able to precisely predict the social interactions, formations, and changes that result from their ongoing interplay as people use technologies in specific situations.

This book adheres to social shaping and domestication perspectives, arguing that, to connect digital media to social consequences, we need to understand both features of technology and the practices that influence and emerge around technology, including the role of technological rhetorics in those practices. If you turn the page expecting to find simple answers to the question of what computers and mobile phones do to our personal connections, you will be disappointed. They do many things, and which ones they do to which people depends on many forces, only some of which are predictable. As the chapters that follow will show, sometimes these media are used in ways that are predictable given media affordances (people call to say they are running late more because they have mobile phones on hand through which to do it), surprising (the American social network site Orkut came quickly to be dominated by Brazilians and later Indians, Friendster became the dominant social network site in Southeast Asia), disruptive (people form close relationships before meeting in person), and affirming (people use the mobile phone to increase family cohesion). The complexity of the social shaping and domestication perspectives does not mean we should throw up our hands and despair of gaining any insight. We should, however, always be wary of simple explanations.

3

Communication in digital spaces

If asked to share general thoughts about communicating face-to-face, on the telephone, and on the internet, many people are likely to say something like this:

> Face-to-face is much more personal; phone is personal as well, but not as intimate as face-to-face. The internet is the least personal but it's always available.
>
> Face-to-face: I enjoy the best. I like to see facial reactions, etc. Phone: nice to hear their voice, but wish I could see their reactions. Internet: like it, but can't get a true sense of the person.
>
> I am more apt to be more affectionate and personable face-to-face. Over the phone, I can try to convey them, but they don't work as well. The internet is much too impersonal to communicate feelings.
>
> Internet would definitely be the least personal, followed by the phone (which at least has the vocal satisfaction) and the most personal would be face-to-face.

These responses to a survey I conducted in 2002 framed the comparison in terms of the extent to which nonverbal social cues ("hear their voice," "see their reactions," "vocal satisfaction") affected the perceived intimacy of each medium.

In the first chapter, we saw that a medium's ability to convey social cues about interactants and context is an essential component of its communicative possibilities and constraints. In chapter 2, we saw historical and contemporary visions, both hopeful and fearful, of how limited social cues may affect people, relationships, and social hierarchies. Media with fewer social cues often trigger hopes that people will become more equal and more valued for their minds than their social identities, but also raise fears that interactions, identities, and

positive relationships he had built online is one example. Similar letters from many others singing the praises of the internet poured in. The mail, wrote Landers in 1996, was "staggering, and most of the readers agree."

Letter writers defended the internet against dystopian visions in many ways. One was through the use of metaphor, comparing the internet to fire, parks, knives, and, in one letter (which I swear I did not write), the telephone, as seen in these 1996 examples:

> Saying the Net is destructive because it can be used incorrectly is like saying humankind would be better off without fire because it can be dangerous.

> Get a clue, Ann. Condemning the Internet because some people meet scoundrels on-line is like condemning parks because some pedophile exposed himself to children in a park.

> The problem with people and the Internet is not the Internet but what people do with it. The same is true of a knife. I was under the knife having lifesaving surgery the same day someone across town was murdered by one.

> Wary of the Internet, Ann? I'll bet if you had been around in the 1880s, you'd have been suspicious of the telephone because it could be used for "nefarious purposes." Anything new needs time to be accepted.

As seen in this comparison between the telephone and the internet, letter writers who defended the internet often took a social constructivist perspective on the relationship between technology and society. Some explicitly challenged Ann's, Abby's, and other letter writers' construction of the technology's status as cause rather than symptom:

> You have said that the Internet has disrupted relationships between couples and destroyed marriages. That is not the fault of the Internet. Those relationships were already in trouble. (1996)

> People who stay up all night on their computers don't have an Internet problem. They have an addiction problem. (1997)

Others took a social shaping stance in which the internet was positioned as a contributing factor when combined with other problems:

> Our 19-year marriage had been rather rocky, what with career problems, financial woes, children and other pressures. Then, my husband, "Ron," discovered the chat lines. (1996)

> Mark my words, Ann, mid-life and the Internet are an explosive combination that spells double trouble. (1996)

By the end of the 1990s, both columnists took a social shaping perspective on the relationship between the internet and social problems. The technology was seen as enabling some new possibilities for trouble, but the troubles belonged firmly to the people perpetrating the behaviors. Ann Landers eventually wrote that the internet posed a threat to "sterile" marriages (1996), but was not "a 'killer of marriages' any more than TV was when it first entered our living rooms" (1998). "Get out the wet noodle," Landers wrote in her inimitable style, "My readers have convinced me that the Internet, when used properly, has a lot more to offer than I thought" (1999).

Once this more nuanced understanding had been reached, the internet continued to appear as a character in letters to advice columns, but the tone changed considerably. For instance, the writer of a 2004 letter about a fiancé who had placed a personal ad on an online dating site was told that her fiancé "does not understand the responsibilities and obligations of marriage" and that "he might run off with the neighbor's wife." In contrast to earlier replies in which Ann and Abby bemoaned an "epidemic" of home-wrecking due to the internet, the internet was not even mentioned in this response. By 2004, it had become almost invisible.

That the internet and mobile phone have been largely domesticated does not mean that all anxieties surrounding them have been resolved. Digital media still appear in advice columns, in *New Yorker* cartoons, in all other popular media, and in everyday conversations. Just as one form of mediated communication becomes domesticated, another arises with some new twist to confuse us. The social concerns that we voice when we discuss technology are concerns we would have even if there were no technology around. They are questions of what it means to be truly yourself, to have meaningful relationships with others, and to be situated in a world of others who are very different from the people with whom we were raised.

Social shaping and domestication differ in where they put the emphasis on the social processes involved in making sense of the technology–society relationship, but agree that the direction of

People, technologies, and institutions all have power to influence the development and subsequent use of technology. They are "interrelated nodes in constantly changing sociotechnical networks, which constitute the forms and uses of technology differently in different times and places for different groups" (Lievrouw, 2006: 250). Historical analyses demonstrate that social shaping is "a process in which there is no single dominant shaping force" (MacKenzie & Wajcman, 1985/1999: 29). For instance, with Jean Burgess (Burgess & Baym, 2014), I studied the development of the @-reply, hashtag, and retweet conventions on Twitter. Each of these features was developed and used by lead users before Twitter incorporated them in its design. From the social shaping perspective, we need to consider how societal circumstances give rise to technologies, what specific possibilities and constraints technologies offer, and actual practices of use as those possibilities and constraints are taken up, rejected, and reworked in everyday life.

Domestication of technology

The fact that we no longer engage in either utopian or dystopian discourses about the landline telephone or, for that matter, the alphabet is evidence of how successfully earlier technologies have been domesticated. What once seemed marvelous and strange, capable of creating greatness and horror, is now so ordinary as to be invisible. Life without them can become unimaginable (my son once asked how we used the internet before computers were invented). When others don't use them – as when someone refuses to have a mobile phone, text, or use Facebook – it can become a problem not just for them, but for us (Ling, 2012).

British and Norwegian media and technology studies in the 1990s developed the "domestication" approach to technology in order to continue where the social shaping of technology leaves off (Haddon, 2006). This approach concurs with social shaping in seeing both technology and society as influences in the consequences of new media, but it is particularly concerned with the processes at play as new technologies move from being fringe (wild) objects to everyday (tame) objects embedded deeply in the practices of daily life. Early

domestication work showed that, by the time most users encounter technologies, they are already laden with the social meanings given them by advertisement, design, and the kinds of rhetorics we have been discussing. Nonetheless, "both households and individuals then invest them with their own personal meanings and significance" (Haddon, 2006: 196). This is particularly true early on, in the "mastery" stage of domestication, when how we use and display our technologies and the ways we rework them to fit our needs can have most influence on their subsequent development (Ling, 2012). The process of domestication plays out at societal levels, but also in daily interactions as people figure out where to place devices, and, more importantly, who gets to use them for what and who doesn't (Silverstone, Hirsch, & Morley, 1992).

As technologies are integrated into everyday life, they come to be seen as offering a nuanced mix of both positive and negative implications. In the case of the mobile phone, despite near-ubiquitous adoption, there are still competing narratives between phones as ostentatious, expensive, stressful, and prone to creating bad manners and phones as assuring safety, autonomy, access to others, and control over the flow of daily life (Ling, 2012). Syntopian perspectives (Katz & Rice, 2002) view new technologies as simultaneously enabling and disabling. The extremes may persist, but in between we use communication to negotiate a vast realm of detail, contradiction, and complexity. In closing this chapter, I want to consider how we move from a period where new technologies are threatening or exciting to one in which they are ordinary and barely worthy of remark. The advice columns I drew on above serve as a remarkable microcosm through which to see domestication of the internet in action.

In early letters, particularly those prior to 2000, there was a very clear norm that the internet was dangerous. Internet users were often described as junkies, addicts, recluses, or, at best or on average, "fairly decent people" (as Ann Landers wrote in 1994). Both columns had readers who were having different experiences, however, and the columns provided a venue in which those having good experiences were able to resist the negative image of the technology being constructed in others' letters and in Ann's and Abby's responses. A Netizen in Chicago's 1996 letter (seen above) explaining all the

harms children experience through digital media are in line with, or less than, those they experience without new media.

The flip side to children's abilities to do new things outside parental supervision through technology is that children are often seen not just as endangered, but as dangerous. Advertisements for early computers, targeted at parents in hopes they would buy them for their children, presented young people as natural users, even if parents were constructed as naïve, setting the stage for the perception that parents are clueless, and children naturals (Facer, 2012). Although children neither have nor think they have all the digital skills that are attributed to them (Livingstone, 2008), some children do develop skills and use technologies in ways that limit how much parents and others can control them (Banet-Weiser, 2004; Marvin, 2004). In one of my son's middle schools, for instance, students thwarted the district's efforts to keep them off social media on school machines by creating a system of hidden folders that gave them access to sites they continued to use.

The phenomenon of teen sexting, sharing naked selfies with each other via their mobile phones, combines the fear of children's sexuality and its potential negative consequences with the fear of children's empowerment. A comprehensive review of sexting research, media coverage, and educational resources in Australia, combined with focus group research, found that teens viewed "sexting" as an adult term that did not reflect their practices and experiences (Albury, Crawford, Byron, & Mathews, 2013). Given the regularity with which prominent adults are publicly humiliated for committing behaviors such as sending photographs of their genitalia through Twitter, one has to wonder how much adults' fear of children's behavior reflects fear of their own activities.

Fears about children can also be understood as arising from adults' fear of losing control over them, a problem inherent in child rearing, regardless of whatever technologies may or may not be present. Since fear is often displaced onto seemingly more manageable technology, parents, child welfare bodies, clinicians, teachers, and governments often try to protect children by implementing surveillance systems, legislating policy limitations on children's access to technology, and creating new technologies to limit children's interaction with technology (Marvin, 2004: 281). Displacing our anxieties about children's safety onto the internet and mobile phones makes our fear more manageable, but does little to protect children, and may keep them from realizing the benefits new technologies can offer them (Cassell & Cramer, 2007; Ito et al., 2010; Livingstone, Haddon, & Görzig, 2012; Livingstone & Helsper, 2013).

In sum, social constructivism provides a polar alternative to technological determinism. Rather than viewing social change as a consequence of new media, it views new technologies and their uses as consequences of social factors. From this perspective, the utopian and dystopian rhetorics I discussed above tell us little about the technology, but do provide insight into how technologies come to be and how they come to be understood and used. The example of moral panics shows how deterministic rhetorics can give rise to understandings of technology and to policy decisions which in turn shape the uses and consequences of those media, though not always as intended.

Social shaping of technology

If technological determinism locates cause with the technology, and social constructivism locates cause with people, a third perspective, sometimes called social shaping (MacKenzie & Wajcman, 1985/1999), emphasizes a middle ground. From this perspective, the consequences of technologies arise from a mix of "affordances" (Gibson, 1977; Norman, 1988) – the capabilities configurations of technological qualities enable – and the unexpected and emergent ways that people make use of those affordances. Expectations of how technologies will be used are built into their design (Gershon, 2010; Nardi, 2010), yet those influences do not necessarily dominate experience. Katz and Aakhus (2002) speak of technologies having "logics" or "apparatgeists" that influence but do not determine use. "Machines," wrote Douglas (2004 [1999]: 21), "do not make history by themselves. But some kinds of machines help make different kinds of histories and different kinds of people than others." Machines "can and do accelerate certain trends, magnify cultural weaknesses, and fortify certain social structures while eroding others" (Douglas, 2004 [1999]: 20). Social media platforms engineer particular kinds of sociality even as their users develop norms around their use (van Dijck, 2013).

children seem to arise almost instantaneously in the wake of any new communication medium. Children are often seen as innocents who can be corrupted, damaged, and permanently transformed by technology in ways that adults such as parents, teachers, and political leaders are powerless to prevent (Facer, 2012; Marvin, 2004; Sturken & Thomas, 2004). "The relationship of children and media culture, and the larger social context in which this relationship is forged," wrote Marvin (2004: 283), "is constantly debated and rehashed in the popular press and in public discourse." In the United States, the automobile led to fears that teenagers would isolate themselves from their families (Fischer, 1992). Among the media that have been charged with causing children to mature too soon and/or become juvenile delinquents are books, movies, comic books, and television (Fang, 2008). In American history, dime novels, so popular in the mid 1800s, spawned concern about the intellectual development of their readers, potential increases in anti-social behavior, and criminality, but also fostered hopes that the new medium could be used for enlightenment (Fang, 2008).

These days, children are seen as likely to be exposed to (or, worse yet, exploited for) pornography and sexual encounters and to encounter pervasive cyberbullying. The most prominent examples of this in the discourse around the internet concern sexual predation. To hear much of the public representation of the internet is to imagine a world in which sexual crimes are reaching new heights as unwitting innocents are drawn into deceptive relationships that end in molestation, abduction, and even death. Adult men do sometimes use the internet to lure girls into inappropriate relationships. This is surely awful, but it is very unusual. When adult men and under-aged girls do meet through the internet for sexual encounters, it is usually consensual (inasmuch as an under-aged person is capable of consent) and honest, if morally dubious (Cassell & Cramer, 2007; Wolak & Finkelhor, 2013). Cassell and Cramer's close analysis of US federal crime-report data regarding crimes against children shows that crimes against people 12–17 years old fell between 46 percent and 69 percent after 1993–5, despite the fact that millions of young people integrated the internet into their lives in that time frame. Sexual predation between strangers remains extremely infrequent relative to sexual predation within existing relationships, and assaults between those who met online are but a tiny proportion of stranger crimes (Internet Safety Technical Task Force, 2008).

However, the perception that this is a serious risk to most young people who use the internet is a classic case of a "moral panic" in which anxieties over uncontrollable social forces become the focus of efforts to understand a new cultural trend (Cohen, 1972). Panics displace our anxieties over something more important onto the technology, perhaps because they are too difficult or threatening to face directly (Thomas, 2004). One could just as easily argue that the internet has protected teens by keeping them home. Sexual predation is terrible, but if your goal is to reduce sexual crimes against children or women, the internet is the wrong place to focus. It is, however, a much easier target than our own marriages, homes, neighborhoods, places of worship, and schools, where most crimes against children and women occur (Internet Safety Technical Task Force, 2008).

Similarly, media reports of cyberbullying (often ending in a teenage suicide) are not entirely inaccurate, but are deceptive. Online bullying is almost always rooted in offline bullying (Livingstone & Smith, 2014). A 2013 overview of youth internet safety surveys conducted between 2000 and 2010 (Jones, Mitchell, & Finkelhor, 2013) attributed what seems to be an increase in online harassment to more female friends interacting more often through the internet, with the consequence that more offline aggression bleeds into online environments.

In a review of all the peer-reviewed empirical research they could find on child risk and harm online, Livingstone and Smith (2013) concluded that approximately 20 percent of adolescents are affected by online aggression, strangers seeking contact, sexting, or pornography. Despite increases in young people's access to online experiences in recent years, exposure to risk and actual harm have not become more frequent (Livingstone & Smith, 2014). Parents, however, tend to overestimate how often their children encounter distressing material online (Sorbring & Lundin, 2012). This is not to argue that children do not experience harm online. For the small percentage of young people who both encounter sexual materials or predators online and find those experiences distressing, the harm can be very real (Livingstone & Smith, 2014). Yet it is important to recognize that, on average, the

their success. Competitors drive development in different directions, as seen, for instance, in Microsoft turning from a DOS interface to Windows in emulation of Apple's graphic operating system, or Facebook's efforts to capitalize on the success of Twitter with revisions of its own site. Government agencies may shape technological development with their dispersion of grant monies, policies that prescribe what machines and sites can and cannot do, and actions that influence companies (as when some companies began using secure connections by default to lessen the likelihood of NSA eavesdropping on their customers). Furthermore, users shape development, especially, as Fischer (1992) notes, when they are organized. These differing sources of influence do not always agree. Indeed, they are often in conflict with one another, and the shape of any given technology is often a matter of compromise.

SCOT proponents also focus on what happens during technological adoption, arguing that a wide range of social, economic, governmental, and cultural factors influence how people take up and use media. In his study of the adoption of the telephone, Fischer (1992: 269) argued for a "user perspective." "Users," he wrote, "try to put a new technology to their own ends, which can lead to paradoxical outcomes not easily deducible from the straightforward logic of the technology." Lister, Dovey, Giddings, Grant, and Kelly (2003: 81) draw on media theorist Raymond Williams to argue that "whatever the original intention to develop a technology might be, subsequently other social groups, with different interests or needs, adapt, modify or subvert the uses to which any particular technology is put." Communication about technology, as seen in the messages discussed above, is one important force in these processes. The telegraph, radio, refrigerator, and internet are all technologies whose unexpected uses became their most common (Nye, 2004). The internet, conceived as a military back-up system, exemplifies technology re-envisioned and transformed by its users.

Though it's important to understand the power users have, it's easy to grant too much influence to individuals, when, as Fischer (1992) notes, there are other social structures at play, including access, availability, price, and marketing. Texting is an interesting example of this. It used to be that when I mentioned using mobile phones to send text messages, most of my college students – almost all of whom had

mobile phones in their pockets – stared blankly. They'd never heard of such a thing, despite the fact that this had become a major use of mobile phones in other countries in Asia and Europe years earlier. Regulatory and pricing decisions in the United States had hindered its diffusion (Ling, 2012). Around 2005, pricing plans on US cell phone contracts changed to make texting inexpensive. Then my students all used this feature of the phone. They no longer stared blankly. Indeed, some of them were too busy texting under their desks to register what I was saying.

The social influence model proposed by Janet Fulk (1993) draws attention to the influence of peers on individuals' perceptions and subsequent uses of media. In her work on adoption of new media (specifically email) in an organizational context, she found that the perspectives of peers, especially "attractive" peers – those who are friends as well as good colleagues – were strong influences on individuals' attitudes toward email. In a study of attitudes toward mobile phones in the midwestern United States, Campbell and Russo (2003) also showed that attitudes toward behaviors, such as whether or not you should turn off your mobile in a restaurant, were shaped by the attitudes of peers. As people discuss new media, and as those media are represented in other media such as television, print, and film, devices themselves come to carry social meaning (so that some phones look cool, and others look dorky). Media are also discursively associated with genders, so that computers are often cast as male, and telephones as female (Rakow, 1992; Hijazi-Omari & Ribak, 2008), and the disembodied voices of Siri and Cortana are female.

Moral panic

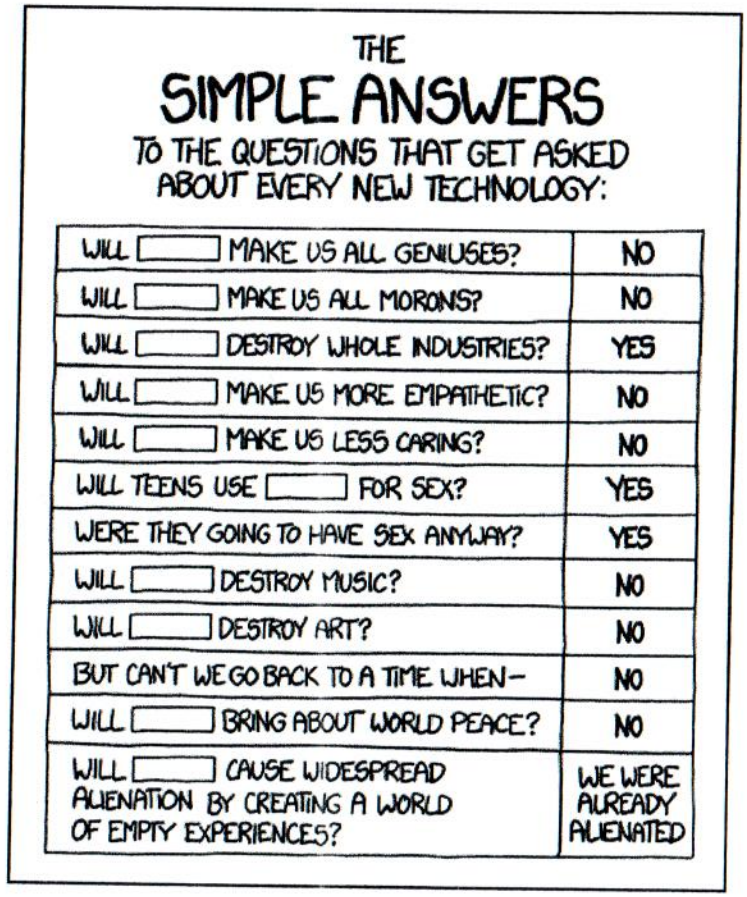
As we saw in our discussion of technological determinism, new media often stir up fears of moral decline. These fears, which take form in dystopian rhetorics, can lead to important policy decisions at personal, household, governmental, and design levels. In other words, the communication about the technologies becomes more important than the technologies in shaping the uses and effects of new media. Such rhetorics often focus on the well-being of children, and especially on the well-being of teenage girls. Concerns about protecting

and the erasure of social class distinctions. These perpetuate fears that communication technologies will take us farther apart from one another, leading us to cocoon in highly selective groups of like others, embracing machines instead of people. These rhetorics are predictable, and tell us as much – if not more – about society than they tell us about technologies. They point to our deep need to trust, connect with, and protect one another and ourselves, and the perpetual struggles these needs engender. Once again, xkcd cartoonist Munroe summarizes the issues concisely (cartoon 2.7).

Social construction of technology

People have the power

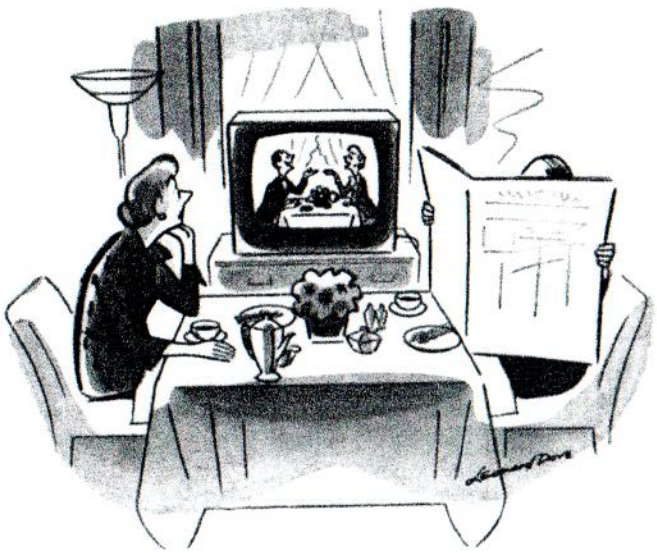
In the examples I have just discussed, and the historical trends they represent, technology is positioned as causing us and our social lives to change. Determinism views technology as arising independent of social contexts and then affecting them. Other perspectives share concern about the same issues, but do not grant technology as much causal agency. The Social Construction of Technology (SCOT) perspective focuses on how technologies arise from social processes. SCOT proponents view technologically deterministic perspectives as "inadequate as explanations and dangerously misleading [because] human beings, not machines, are the agents of change, as men and women introduce new systems of machines that alter their life world" (Nye, 1997: 180). One focus of social constructivism is how social forces influence the invention of new technologies (e.g. Bijker, Hughes, & Pinch, 1987; Bijker & Law, 1992). From a SCOT perspective, inventors are embedded in social contexts that make it feasible to use a garage to create a personal computer or a bicycle repair shop to invent an airplane. The choices that designers and developers make as they develop technology are seen as dependent on their social contexts which are, in turn, shaped in part by communication. In the contemporary context, one might look at the female avatars available in online games, characters that are almost uniformly shaped like pornographic fantasy figures, and posit that this is related to their having been designed by people – primarily male – who are embedded in a



Cartoon 2.7 "Simple answers," xkcd

patriarchal culture that views women as sex objects and thinks of their primary audience as men and boys.

Furthermore, SCOT theorists see technological development as influenced by many factors beyond the inventors. Investors – both private and governmental – have priorities that shape which technologies are deemed worthy of pursuit and given the resources to enable



Cartoon 2.6

around social networks in 2013 specifically drew this same connection, depicting an historic black-and-white image of a train full of men, backs to the camera, all reading newspapers. The tagline? "All this technology making us anti-social."

A common motif in stories of digital media damaging relationships is the "cyberaffair." One of the most recurrent metaphors advice columns used to describe the internet during its early American diffusion was "homewrecker." Published letters and replies repeatedly described men and women who, upon getting access to the internet, found a new love (or pornography), and ruined their marriage. A 1995 letter to "Ann Landers" begged Ann to warn readers about "an insidious monster about to pounce on the American people. It will destroy more marriages and lives than anything the world has ever known. It's called the Internet." Ann Landers cast the phenomenon as rampant, writing in 1998, "My mail tells me that the Internet may become the principal home-wrecker of the next century."

In addition to ruining close relationships, the internet and other new media are frequently depicted as causing *social isolation*. In the *Wall Street Journal*, Hays speculated that "Connecting with one and all in the electronic ether could leave people more disconnected than ever before, as the necessity of face-to-face contact diminishes. If a troubled or shy office worker easily finds solace and approval on the networks, will she be less inclined to seek out friends on the job?" (1993, cited in Anderson, 2005: 96). Writers to "Ann Landers" and "Dear Abby" in the late 1990s frequently described internet users as "junkies" who get "addicted" to the internet, destroying their close relationships. One wrote:

> My husband of 22 years has become a recluse. He refuses social invitations, has quit attending our children's activities and lies to me about the amount of time he spends surfing the 'Net. Like an alcoholic, he apologizes and promises to do better, but once the computer clicks on, he sits there, transfixed, until the wee hours of the morning. (1998)

"People are not going to want to leave their homes when they can have more fun in cyberspace," warned futurist Faith Popcorn in the London *Independent* (Anderson, 2005: 67–8). In *US News & World Report*, Neal Postman offered a futuristic scenario that summarized the dystopian fears concisely:

> Public life will have disappeared because we did not see, in time to reverse the process, that our dazzling technologies were privatizing almost all social activities. . . . We replaced meeting friends with the video telephone and electronic mail . . . We became afraid of real people and eventually forgot how to behave in public places, which had become occupied almost entirely by criminals. The rest of us had no need to be with each other. (1993, cited in Anderson, 2005: 96)

To summarize, technologically determinist rhetorics of digital media, like those of previous communication technologies, often focus on the authenticity of identity and the well-being of "real" relationships. Utopian rhetorics emphasize the happy prospect that technology will liberate true selves from the constraints of geography and the shackles of marginalized social identities and empower them to enrich their offline relationships and engage in new ones online. These visions are pitted against tangled dystopian scenarios of deception, tribalism,

specter of technological *erasure of social status information* is frightening. Communication technologies have long been represented as a source of stress for families, making it too easy for people to engage in "irregular courtship" with people outside the community (Marvin, 1988: 73). The telephone was feared for its potential to enable the "wrong kinds" of sociability across age, class, and racial lines (Fischer, 1992: 225). When the telephone was new, articles criticized ordinary people who called New York City's mayor regularly, simply because they now could. Those placing the calls might have understood this as a utopian outcome of the technology – allowing them greater access to those of significantly higher status and greater ability to participate in governance – but, for the mayor and other members of the elite, it demonstrated an intrusive threat. Furthermore, even when people themselves do not enter the sanctuary of the privileged, their communication artifacts might. The phonograph and radio were often viewed as corrupting because they raised the specter of interracial interaction (and sex!) by bringing ragtime and jazz music written and performed by black artists into affluent white homes (Douglas, 2004 [1999]).

Building new online relationships has been both touted and decried as a way for a person to "assemble his or her own electronic neighborhood" (Dertouzos, 1991, in Anderson, 2005: 49). Though some, such as Dertouzos, see this as a perk, others worry that, rather than lessening differences in social class, social divides will be reproduced or increased by technology. "The superhighway may connect us more to other people of similar interests and beliefs," worried Brown in the *Seattle Post-Intelligencer* (1995, cited in Anderson, 2005: 64), "But we'll have less communication with those who are different. Socially we may find ourselves returning to a form of tribalism, as we separate ourselves along group lines – racial, ethnic, ideological – choosing access to only the information that speaks to our identities and beliefs." Eli Pariser's (2011) book *The Filter Bubble* makes a similar argument, raising concerns that algorithms shape what people see, based on assumptions about what will interest them.

Technologically deterministic rhetorics also frame new communication media as improving and damaging the close personal relationships people sustain face-to-face. The telephone was seen as a means to bring people closer together, build communities, and decrease loneliness (de Sola Pool, 1977; Fischer, 1992). Electricity was going to decrease the divorce rate since it would make domestic chores easier to do and lessen the conflict they created (Marvin, 1988). The automobile spawned dreams of family togetherness (Fischer, 1992), as seen in the recurrent motif of the car-based family vacation. Early ads for the radio and phonograph often showed happy families where clean children looked approvingly at their parents as they gathered around the technology in their living rooms. As Spigel (1992: 3) shows in her analysis of popular communication during television's early years, the television "was depicted as a panacea for the broken homes and hearts of wartime life . . . shown to restore faith in family togetherness . . . however . . . equally dystopian discourses warned of television's devastating effects on family relationships and the efficient functioning household."

In the context of contemporary digital media, the hope remains that new communication technologies will *bring families and loved ones together*. Today, we hear of people staying in touch with their children through Skype, or using mobile "family plans" to keep the family in continuous contact. A 1995 article in *Wired* predicted that the family would rise to the top of a new communication hierarchy: "Every family will have its own mailing list carrying contributions from its members. . . . I sense that the rules will be something like this: friends over strangers; family over friends; and within those categories, the geographically or chronologically close over the distant" (Hapgood, 1995, cited in Anderson, 2005: 64).

The dystopian alternative is usually articulated as a fear that new media will take people away from their intimate relationships, as they *substitute* mediated relationships or even media use itself for face-to-face engagement. Fischer (1992) described early twentieth-century concerns that the telephone would replace visiting. The fear of substituting mediated for meaningful relationships also occurred around television. A 1962 *New Yorker* cartoon, for instance, showed a husband and wife seated at the dinner table, his face buried in a newspaper (cartoon 2.6). The wife watched a television depicting a couple sharing a romantic dinner. The image on the screen simulated intimacy while media old (newspaper) and new (television) kept the spouses from connecting with each other. A popular photo passed

articles and books, has its own Wikipedia page, and has become one of the most popular *New Yorker* cartoons ever, as indicated by its high rank on requested reprint and presentation rights. A Google search for its caption in 2009 turned up more than 250,000 hits, and by 2013 it turned up nearly 53 million. Its transnational appeal can be seen in its appearance on the cover of an Estonian book about the internet (Institut Za Etnologiju I Folkloristiku, 2004).

Although Steiner has said he didn't know what the cartoon was about when he drew it, *New Yorker* cartoon editor Robert Mankoff said it "perfectly predicted both the Internet's promise and its problems" (2004: 618). Whether this cartoon represents a dream or a nightmare depends on whether one is the dog or the fool unknowingly talking to the dog.

Of course, no one really expects house pets to go online and pretend to be people, but they often expect that sparse social cues will cause people to lie about themselves. As one man explained in a 1994 letter to "Ann Landers":

> Every woman on a computer line describes herself as Cindy Crawford, and every guy is Tom Cruise. Women lie about their marital status, weight, age and occupation. And get this, Ann, some women are actually guys.

Authentic self-representation is not always a simple question of true and false, as we will address in chapter 5. With its potential to liberate people from the constraints of their social context, people may also be seen as becoming *more honest* in mediated encounters. This advice column letter-writer admitted to Abby that she had presented a deceptive identity online, yet claimed the emotions and relationships predicated upon it were real:

> I am deeply in love with a man who is handsome, smart and loving. We are engaged and happy together. The problem? We met on the Internet. Abby, he thinks I am 26, but I'm not. Everything I've said to him has been a lie. I am really 12.

On a societal level, anonymity opens the possibility of *liberation* from the divisions that come about from seeing one another's race, age, gender, disabilities, and so on. Standage (1998) tells of an interracial relationship formed via telegraph without either party's knowledge of

Cartoon 2.5 "How the hell does Facebook know I'm a dog?"

the other's racial identity. Early rhetoric about the internet often speculated that the reduction of social cues would lead to people valuing one another's contributions for their intrinsic worth rather than the speaker's status. The internet would lead to the world Martin Luther King Jr. dreamed of, in which people would be judged by the content of their character rather than the color of their skin. A now-legendary telecommunication company advertisement that ran during the 1997 Superbowl described it like this: "There is no race, there are no genders, there is no age, there are no infirmities, there are only minds. Utopia? No, the Internet." Sites like Facebook and (for a time) Google+ have insisted that all accounts belong to individuals who use real names and have encouraged everyone to enter many identifying pieces of information that tie them to particular verifiable places and times. This stance is both mocked and critiqued in Rob Cottingham's 2010 twist on Steiner's dog cartoon (cartoon 2.5).

On the other hand, many people, especially in the middle and upper classes, view social divisions as useful and necessary means of protecting themselves and their families from unwanted outside influences and dangers (Marvin, 1988; Spigel, 1992). For them, the

One of the hopes surrounding the internet is that it can *broaden our pool of potential relational partners* and lead to new relationships (a topic we will return to in chapter 5). For instance, this testimonial from "A Netizen in Chicago" appeared in "Ann Landers" in 1996:

> I met my girlfriend on the Net. She is Canadian. I live in Illinois. We have gotten together, face to face, only once, but over the last few months, we have gotten to know each other well. We have fallen in love. We have four meetings planned and call each other twice a week. We e-mail every night.
>
> I also have made many friends on the Net. Most of us will never meet, but we offer our support when one of us is feeling blue and our accolades when things are going great.
>
> On our news group alone, many friendships have developed. There have been four marriages so far, and several relationships are now in progress that will probably end up in marriage. None of us is hooked on the Net, but we do check frequently to see how our on-line pals are doing.

At the same time, many question whether relationships formed this way can ever be as real as those formed face-to-face. Cartoon 2.3, from 2006, plays off the befuddled faces of older parents against the smiling faces of a young – mediated – couple, showing both the

Cartoon 2.3 "We met online."

utopian hope for new relational opportunities and the wary uncertainty that surrounds them.

One reason for uncertainty in mediated environments is that, with fewer visual and auditory social cues, people are not sure whether or not they can *trust* other people to be who they claim to be. This is the central problem of anonymity. Perhaps the best encapsulation of the binary between hope and dread that the anonymity of the internet provides is Peter Steiner's famous 1993 *New Yorker* cartoon of two dogs, one seated on a chair at the computer, the other sitting on the floor watching (cartoon 2.4). The computing dog explained to the other, "On the Internet, nobody knows you're a dog," a caption which, writes Anderson (2005: 228), "will live forever as an online-culture touchstone." This cartoon has been reproduced in numerous scholarly

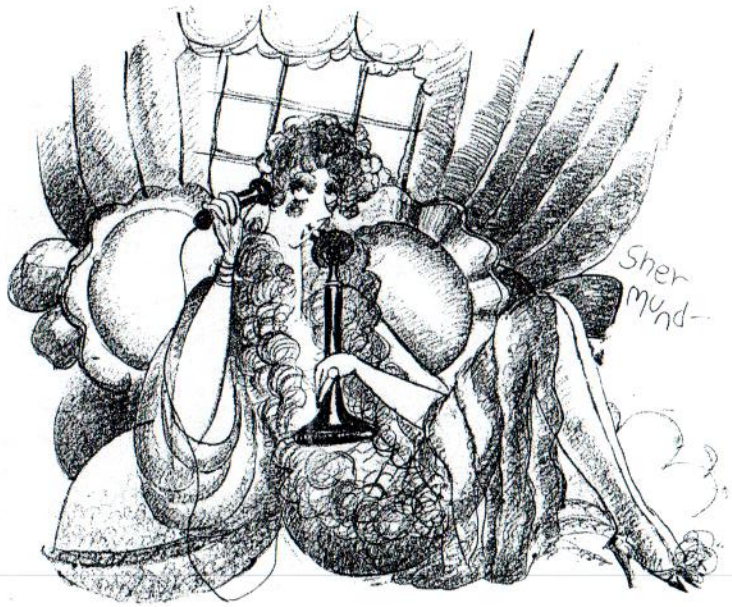
Cartoon 2.4 "On the Internet, nobody knows you're a dog."

their audience's concerns. Their livelihood depends upon it. Though other kinds of messages, including scholarly reports such as those we'll turn to in the remaining chapters, may be better sources of accurate information about new media effects, mass-mediated messages are considerably more likely to influence how people think about new technology and, as we'll return to below, how they subsequently behave. The themes I'll consider in this section include issues of the authenticity of mediated communication and relationships, the quality of mediated interactions, the formation of new relationships, the effects of anonymity (honesty, deception, liberation, and the potential erasure of status), and the effects on existing close relationships (will they become closer, be replaced with mediated relationships, be forgone altogether?). I postpone my discussion of the themes about children, specifically their status as potential victims and as dangerously empowered, until the section on social construction that follows.

Socrates' idea that writing provides "not truth, but only the semblance of truth" remains very much with us. At the core of most, if not all, of the rhetorics about mediated forms of personal connection is a persistent sense that mediated interaction and the relationships sustained through it are not *real*. Many "fear that actual human connection has been irretrievably lost," although others hope "that communication technologies can promote human connectivity" (Sturken & Thomas, 2004: 3). In the telephone's early years, some worried it could sustain "only a semblance of 'real' relations" (Fischer, 1992: 224). The common use of the term "virtual" to describe online relationships and groups, and of the acronym "IRL" (in real life) to describe offline connections, are evidence of this deep-seated presumption.

People often question the *quality of mediated interactions*, believing technological mediation takes away the social cues that provide rich meaning (a topic explored in depth in the next chapter). Walter Benjamin (2009 [1935]) famously argued that the "aura" of tangible art provides much of its value, a value lessened in the age of mechanical reproduction. Replicating this concern, internet critic Stoll (1995, cited in Anderson, 2005: 65) wrote that, in comparison to letters, electronic interaction was cold: "The paper doesn't age, the signatures don't fade. Perhaps a future generation will save their romances on floppy disks [but] give me a shoebox of old letters."

Electronic messages are frequently portrayed as vacuous. A 2009 study by market research firm Pear Analytics, for instance, created a category called "pointless babble" into which they placed 40 percent of Twitter messages, echoing oft-heard complaints that mobile phones lead to empty conversation, sustained for the sake of interacting even when we have nothing to say ("Twitter tweets are 40% 'babble,'" 2009). The idea that new media cause pointless babble could also be seen in a 1927 *New Yorker* cartoon in which a luxuriantly robed, very made-up, clearly affluent, woman reclining on a couch said: "Hold the line a minute, dear ... I'm trying to think what I have on my mind" (cartoon 2.2).



Cartoon 2.2 "Hold the line a minute dear . . . I'm trying to think what I have on my mind."

able to avoid technological influence by avoiding the technology. According to Lynne Markus (1994), however, the key issue is not which features have which effects. Instead, "it is the degree to which the outcomes, whether positive or negative, are the inevitable results of technological characteristics, or whether they might be subject to other influences" (1994: 122). Markus argues that technological determinism is ultimately an optimistic theory. If negative outcomes can be traced to technological causes, then they can be eliminated with better technology. It is also, however, a disempowering perspective that positions people as powerless to stop these changes unless they invent new, better, or different technologies or eschew technology altogether.

As the similarities amongst Socrates', Carr's, and Alloway's articulation of new media's effect on wisdom suggest, deterministic rhetorics tend to be formulaic and hyperbolic (Turkle, 2004). Predictable negative stories are met with predictable positive alternatives in a familiar contradictory binary. In the 1920s, for instance, people anticipated that radio would "provide culture and education to the masses, eliminate politicians' ability to incite passions in a mob, bring people closer to government proceedings, and produce a national culture that would transcend regional and local jealousies" (Douglas, 2004 [1999]: 20). Now, Douglas continues, "we've been witness to all sorts of overheated and contradictory predictions about the Internet: it will re-create political and cultural communities in cyberspace; it will bring pornographers, stalkers, and credit-card scammers into our homes, corrupting our kids and ransacking our privacy." The cartoonist Randall Munroe demonstrated this beautifully in his cartoon "The Pace of Modern Life" (cartoon 2.1).

The historian David Nye (1997) has carried out extensive research on how nineteenth-century Americans responded to new technologies of the time. As he summarized in a later article (2004), Americans could have used many narratives to make sense of new technology, but in practice usually used six, three *utopian*, envisioning a world improved by technology, and three *dystopian*, visions of a world made worse. In the utopian stories, technologies are seen as natural societal developments, as improvements to daily life, or as forces that will transform reality for the better. Dystopian reactions emphasize fears of losing

control, becoming dependent, and being unable to stop change. In the three dystopian rhetorics Nye identifies, technology may be seen as a way for elites to control the masses, as agents of doom, or as malevolent tricksters that promise positive change but in the end only make our lives more difficult. "The long history of popular culture's alternately fearful and euphoric representations of electronic communication," wrote Boddy (2004: 4), "suggests the continuing historical relevance of such ephemeral fantasies of pleasure and terror." Even in his dystopian article, Carr (2008) offered utopian visions, arguing that "the new technology did often have the effects [Socrates] feared," yet also that Socrates "couldn't foresee the many ways that writing and reading would serve to spread information, spur fresh ideas, and expand human knowledge (if not wisdom)."

Recurrent themes in the reception of new technology

We are surrounded by messages that treat media qualities as a cause of social consequences. In this section, I identify common recurring themes regarding new media and social life that appear in popular media. In addition to previous theorists and cultural historians of technology, I make use of Janna Quitney Anderson's (2005) compilation of predictions and descriptions of the internet from newspapers, magazines, and other American sources from the early 1990s. I also use cartoons from the *New Yorker* – an influential and long-lived magazine that has been questioning our relationship to technology through humor since its inception in the 1920s – and letters from the two most popular American advice columns, "Ann Landers" and "Dear Abby." The *New Yorker* reached a sector of the American population – urban, educated, and affluent – most likely to be early adapters of the internet and earlier new technologies. "Ann Landers" and "Dear Abby" together reached as many as 110 million readers daily and, especially in the mid 1990s, could well have been the only mass messages about the role of the internet in intimate relationships that many people encountered. Though these sources might seem trivial, silly, or even gossipy, they should not be underestimated in their capacity to reflect pervasive cultural attitudes. Writers and editors design mass-mediated messages in order to resonate with

THE ART OF LETTER-WRITING IS FAST DYING OUT. WHEN A LETTER COST NINE PENCE, IT SEEMED BUT FAIR TO TRY TO MAKE IT WORTH NINE PENCE ... NOW, HOWEVER, WE THINK WE ARE TOO BUSY FOR SUCH OLD-FASHIONED CORRESPONDENCE. **WE FIRE OFF A MULTITUDE OF RAPID AND SHORT NOTES, INSTEAD OF SITTING DOWN TO HAVE A GOOD TALK OVER A REAL SHEET OF PAPER.**

THE SUNDAY MAGAZINE

1871

IT IS, UNFORTUNATELY, ONE OF THE CHIEF CHARACTERISTICS OF MODERN BUSINESS TO BE ALWAYS IN A HURRY. **IN OLDEN TIMES IT WAS DIFFERENT.**

THE MEDICAL RECORD

1884

WITH THE ADVENT OF CHEAP NEWSPAPERS AND SUPERIOR MEANS OF LOCOMOTION ... THE DREAMY QUIET OLD DAYS ARE OVER ... FOR **MEN NOW LIVE, THINK AND WORK AT EXPRESS SPEED.** THEY HAVE THEIR *MERCURY* OR *POST* LAID ON THEIR BREAKFAST TABLE IN THE EARLY MORNING, AND IF THEY ARE TOO HURRIED TO SNATCH FROM IT THE NEWS DURING THAT MEAL, THEY CARRY IT OFF, TO BE **SULKILY READ AS THEY TRAVEL ... LEAVING THEM NO TIME TO TALK WITH THE FRIEND WHO MAY SHARE THE COMPARTMENT WITH THEM** ... THE HURRY AND BUSTLE OF MODERN LIFE ... LACKS THE QUIET AND REPOSE OF THE PERIOD WHEN OUR FOREFATHERS, THE DAY'S WORK DONE, TOOK THEIR EASE ...

WILLIAM SMITH, HORLEY: ANCIENT AND MODERN

1886

CONVERSATION IS SAID TO BE A LOST ART ... GOOD TALK PRESUPPOSES LEISURE, BOTH FOR PREPARATION AND ENJOYMENT. **THE AGE OF LEISURE IS DEAD, AND THE ART OF CONVERSATION IS DYING.**

FRANK LESLIE'S POPULAR MONTHLY, VOLUME 29

1890

INTELLECTUAL LAZINESS AND THE HURRY OF THE AGE HAVE PRODUCED **A CRAVING FOR LITERARY NIPS.** THE TORPID BRAIN ... HAS GROWN TOO WEAK FOR SUSTAINED THOUGHT.

THERE NEVER WAS AN AGE IN WHICH SO MANY PEOPLE WERE ABLE TO WRITE BADLY.

ISRAEL ZANGWILL, THE BACHELORS' CLUB

1891

THE ART OF PURE LINE ENGRAVING IS DYING OUT. WE LIVE AT TOO FAST A RATE TO ALLOW FOR THE PREPARATION OF SUCH PLATES AS OUR FATHERS APPRECIATED. IF A PICTURE CATCHES THE PUBLIC FANCY, THE PUBLIC MUST HAVE AN ETCHED OR A PHOTOGRAVURED COPY OF IT WITHIN A MONTH OR TWO OF ITS APPEARANCE, THE DAYS WHEN ENGRAVERS WERE WONT TO SPEND TWO OR THREE YEARS OVER A SINGLE PLATE ARE FOR EVER GONE.

JOURNAL OF THE INSTITUTE OF JAMAICA, VOLUME 1

1892

SO MUCH IS EXHIBITED TO THE EYE THAT **NOTHING IS LEFT TO THE IMAGINATION.** IT SOMETIMES SEEMS ALMOST POSSIBLE THAT THE MODERN WORLD MIGHT BE CHOKED BY ITS OWN RICHES, **AND HUMAN FACULTY DWINDLE AWAY AMID THE MILLION INVENTIONS THAT HAVE BEEN INTRODUCED TO RENDER ITS EXERCISE UNNECESSARY.**

THE ARTICLES IN THE *QUARTERLIES* EXTEND TO THIRTY OR MORE PAGES, BUT **THIRTY PAGES IS NOW TOO MUCH.** SO WE WITNESS A FURTHER CONDENSING PROCESS AND, WE HAVE THE *FORTNIGHTLY* AND THE *CONTEMPORARY* WHICH REDUCE THIRTY PAGES TO **FIFTEEN PAGES** SO THAT YOU MAY READ A LARGER NUMBER OF ARTICLES IN A SHORTER TIME AND IN A SHORTER FORM. AS IF THIS LAST CONDENSING PROCESS WERE NOT ENOUGH THE CONDENSED ARTICLES OF THESE PERIODICALS ARE **FURTHER CONDENSED** BY THE DAILY PAPERS, WHICH WILL GIVE YOU **A SUMMARY OF THE SUMMARY** OF ALL THAT HAS BEEN WRITTEN ABOUT EVERYTHING.

THOSE WHO ARE DIPPING INTO SO MANY SUBJECTS AND GATHERING INFORMATION IN A SUMMARY AND SUPERFICIAL FORM LOSE THE HABIT OF SETTLING DOWN TO GREAT WORKS.

EPHEMERAL LITERATURE IS DRIVING OUT THE GREAT CLASSICS OF THE PRESENT AND THE PAST ... **HURRIED READING CAN NEVER BE GOOD READING.**

G. J. GOSCHEN, FIRST ANNUAL ADDRESS TO THE STUDENTS, TOYNBEE HALL, LONDON

1894

THE EXISTENCE OF **MENTAL AND NERVOUS DEGENERATION AMONG A GROWING CLASS OF PEOPLE,** ESPECIALLY IN LARGE CITIES, IS AN OBVIOUS PHENOMENON ... THE MANIA FOR STIMULANTS ... DISEASES OF THE MIND ARE ALMOST AS NUMEROUS AS THE DISEASES OF THE BODY ... THIS INTELLECTUAL CONDITION IS CHARACTERIZED BY A **BRAIN INCAPABLE OF NORMAL WORKING ... IN A LARGE MEASURE DUE TO THE HURRY AND EXCITEMENT OF MODERN LIFE,** WITH ITS FACILITIES FOR RAPID LOCOMOTION AND **ALMOST INSTANTANEOUS COMMUNICATION BETWEEN REMOTE POINTS OF THE GLOBE ...**

THE CHURCHMAN, VOLUME 71

1895

IF WE **TEACH THE CHILDREN HOW TO PLAY** AND ENCOURAGE THEM IN THEIR SPORTS ... **INSTEAD OF SHUTTING THEM IN BADLY VENTILATED SCHOOLROOMS,** THE NEXT GENERATION WILL BE MORE JOYOUS AND WILL BE HEALTHIER THAN THE PRESENT ONE.

PUBLIC OPINION: A COMPREHENSIVE SUMMARY OF THE PRESS THROUGHOUT THE WORLD, VOLUME 18

1895

THE CAUSE OF THE ... INCREASE IN NERVOUS DISEASE IS **INCREASED DEMAND MADE BY THE CONDITIONS OF MODERN LIFE UPON THE BRAIN.** EVERYTHING IS DONE IN A HURRY. **WE TALK ACROSS A CONTINENT, TELEGRAPH ACROSS AN OCEAN,** TAKE A TRIP TO CHICAGO FOR AN HOUR'S TALK ... **WE TAKE EVEN OUR PLEASURES SADLY AND MAKE A TASK OF OUR PLAY** ... WHAT WONDER IF THE PRESSURE IS ALMOST MORE THAN OUR NERVES CAN BEAR.

G. SHARAN (FROM E. KNAPP), 'ARE NERVOUS DISEASES INCREASING?' MEDICAL RECORD

1896

Cartoon 2.1 "The pace of modern life," xkcd

THE MANAGERS OF SENSATIONAL NEWSPAPERS ... DO NOT TRY TO EDUCATE THEIR READERS AND MAKE THEM BETTER, BUT TEND TO **CREATE PERVERTED TASTES AND DEVELOP VICIOUS TENDENCIES.** THE OWNERS OF THESE PAPERS SEEM TO HAVE BUT ONE PURPOSE, AND THAT IS TO INCREASE THEIR CIRCULATION.

MEDICAL TIMES, VOLUME 26

1898

TO TAKE SUFFICIENT TIME FOR OUR MEALS SEEMS FREQUENTLY IMPOSSIBLE ON ACCOUNT OF THE DEMANDS ON OUR TIME MADE BY OUR BUSINESS ... WE ACT ON THE APPARENT BELIEF THAT ALL OF OUR BUSINESS IS SO PRESSING THAT WE MUST JUMP ON THE QUICKEST CAR HOME, EAT OUR DINNER IN THE MOST HURRIED WAY, MAKE THE CLOSEST CONNECTION FOR A CAR RETURNING ...

LUIS JOHN RETTGER, STUDIES IN ADVANCED PHYSIOLOGY

1898

IN THESE DAYS OF INCREASING RAPID ARTIFICIAL LOCOMOTION, **MAY I BE PERMITTED TO SAY A WORD IN FAVOUR OF A VERY WORTHY AND VALUABLE OLD FRIEND OF MINE, MR. LONG WALK?**

I AM AFRAID THAT THIS GOOD GENTLEMAN IS IN DANGER OF GETTING NEGLECTED, IF NOT FORGOTTEN. WE LIVE IN DAYS OF WATER TRIPS AND LAND TRIPS, EXCURSIONS BY SEA, ROAD AND RAIL– BICYCLES AND TRICYCLES, TRAM CARS AND MOTOR CARS ... BUT IN MY HUMBLE OPINION, GOOD HONEST WALKING EXERCISE FOR HEALTH BEATS ALL OTHER KINDS OF LOCOMOTION INTO A COCKED HAT.

T. THATCHER, 'A PLEA FOR A LONG WALK', THE PUBLISHERS' CIRCULAR

1902

THE ART OF CONVERSATION IS ALMOST A LOST ONE. PEOPLE **TALK AS THEY RIDE BICYCLES–AT A RUSH–WITHOUT PAUSING TO CONSIDER THEIR SURROUNDINGS** ... WHAT HAS BEEN GENERALLY UNDERSTOOD AS CULTURED SOCIETY IS RAPIDLY DETERIORATING INTO BASENESS AND VOLUNTARY IGNORANCE. **THE PROFESSION OF LETTERS IS SO LITTLE UNDERSTOOD,** AND SO FAR FROM BEING SERIOUSLY APPRECIATED, THAT ... NEWSPAPERS ARE FULL, NOT OF THOUGHTFUL HONESTLY EXPRESSED PUBLIC OPINION ON THE AFFAIRS OF THE NATION, BUT OF VAPID PERSONALITIES INTERESTING TO NONE SAVE GOSSIPS AND BUSY BODIES.

MARIE CORELLI, FREE OPINIONS FREELY EXPRESSED

1905

THERE IS A GREAT **TENDENCY AMONG THE CHILDREN OF TODAY TO REBEL AGAINST RESTRAINT,** NOT ONLY THAT PLACED UPON THEM BY THE WILL OF THE PARENT, BUT AGAINST ANY RESTRAINT OR LIMITATION OF WHAT THEY CONSIDER THEIR RIGHTS ... THIS FACT HAS FILLED WELL MINDED PEOPLE WITH GREAT APPREHENSIONS FOR THE FUTURE.

REV. HENRY HUSSMANN, THE AUTHORITY OF PARENTS

1906

THERE IS A GREAT **TENDENCY AMONG THE CHILDREN OF TODAY TO REBEL AGAINST RESTRAINT,** NOT ONLY THAT PLACED UPON THEM BY THE WILL OF THE PARENT, BUT AGAINST ANY RESTRAINT OR LIMITATION OF WHAT THEY CONSIDER THEIR RIGHTS ... THIS FACT HAS FILLED WELL MINDED PEOPLE WITH GREAT APPREHENSIONS FOR THE FUTURE.

REV. HENRY HUSSMANN, THE AUTHORITY OF PARENTS

1906

OUR MODERN FAMILY GATHERING, SILENT AROUND THE FIRE, **EACH INDIVIDUAL WITH HIS HEAD BURIED IN HIS FAVOURITE MAGAZINE,** IS THE SOMEWHAT NATURAL OUTCOME OF THE BANISHMENT OF COLLOQUY FROM THE SCHOOL ...

THE JOURNAL OF EDUCATION, VOLUME 29

1907

PLAYS IN THEATRES AT THE PRESENT TIME PRESENT SPECTACLES AND **DEAL OPENLY WITH SITUATIONS WHICH NO PERSON WOULD HAVE DARED TO MENTION IN GENERAL SOCIETY FORTY YEARS AGO** ... THE CURRENT REPRESENTATIONS OF **NUDE MEN AND WOMEN IN THE DAILY JOURNALS** AND THE ILLUSTRATED MAGAZINES WOULD HAVE EXCLUDED SUCH PERIODICALS FROM ALL RESPECTABLE FAMILIES TWO DECADES AGO ... THOSE WHO HAVE BEEN DIVORCED ... FORTY AND FIFTY YEARS AGO LOST AT ONCE AND IRREVOCABLY THEIR STANDING IN SOCIETY, WHILE TO-DAY THEY CONTINUE IN ALL THEIR SOCIAL RELATIONSHIPS, HARDLY CHANGED ...

EDITORIAL, THE WATCHMAN, BOSTON

1908

WE WRITE MILLIONS MORE LETTERS THAN DID OUR GRANDFATHERS, BUT THE INCREASE IN VOLUME HAS BROUGHT WITH IT AN AUTOMATIC ARTIFICIAL MACHINE-LIKE RING ... AN EXAMINATION OF A FILE OF OLD LETTERS REVEALS NOT ONLY A REMARKABLE GRASP OF DETAILS, BUT A **FITNESS AND COURTLINESS TOO OFTEN TOTALLY LACKING** IN THE MECHANICAL CURT CUT AND DRIED LETTERS OF TO-DAY.

FORREST CRISSEY, HANDBOOK OF MODERN BUSINESS CORRESPONDENCE

1908

A HUNDRED YEARS AGO IT TOOK SO LONG AND COST SO MUCH TO SEND A LETTER THAT IT SEEMED WORTH WHILE TO PUT SOME TIME AND THOUGHT INTO WRITING IT. NOW THE QUICKNESS AND THE CHEAPNESS OF THE POST SEEM TO JUSTIFY THE FEELING THAT **A BRIEF LETTER TO-DAY MAY BE FOLLOWED BY ANOTHER NEXT WEEK–A "LINE" NOW BY ANOTHER TO-MORROW.**

PERCY HOLMES BOYNTON, PRINCIPLES OF COMPOSITION

1915

have to process that information. Your attention span is being reduced and you're not engaging your brain and improving nerve connections."

Problematic as they may be, concerns like this should not be dismissed. However, they should be understood in the theoretical and historical context of the reception of new technologies. Popular visions of new technology have tended toward technological determinism as far back as Ancient Greece. In *Phaedrus*, Socrates (Plato, *c.*370 BCE) decried the invention of the alphabet and writing as a threat to the oral tradition of Greek society (Ong, 1982). Anticipating what his nation's newspapers would write more than 2,000 years later (Koutsogiannis & Mitsikopoulou, 2003, to whom we will return in the next chapter), Socrates, paraphrasing an Egyptian God, warned the inventors of the alphabet:

> this discovery of yours will create forgetfulness in the learners' souls, because they will not use their memories; they will trust to the external written characters and not remember of themselves. The specific which you have discovered is an aid not to memory, but to reminiscence, and you give your disciples not truth, but only the semblance of truth; they will be hearers of many things and will have learned nothing; they will appear to be omniscient and will generally know nothing; they will be tiresome company, having the show of wisdom without the reality. (Plato, 2008 [360 BCE]: 69)

The language and forms of evidence may have changed, but the concern that communication technologies make us dumber is as old as writing. There is, as Lynn Spigel (2004: 140) put it, a "compulsion to repeat the same ideas, even as the society itself has noticeably changed." Reading books such as Marvin's *When Old Technologies Were New* (1988), *The Victorian Internet* (Standage, 1998), or Fischer's *America Calling* (1992) about the telephone's early days, the parallels between today's discourse, especially about the internet, and earlier rhetorics of technology are striking.

There are several variants of technological determinism. One, often linked to thinkers such as Canadian media theorist Marshall McLuhan, who coined the phrase "the medium is the message," is that technologies have characteristics that are transferred to those who use them. Claude Fischer calls this an "impact-imprint" perspective in which technologies change history by transferring "their

essential qualities" to their users, imprinting themselves on users' individual and collective psyches (1992: 10). Fischer uses the example of Meyrowitz's influential book *No Sense of Place* (1985), which argued that, because physical and social spaces are separated through electronic media, people who use them lose their own sense of place. Arguments that the rapid-fire editing of current television film creates short attention spans, or that playing violent video games leads to violent behavior, represent other takes on this perspective. Seen this way, "a technology enters a society from outside and 'impacts' social life" (Fischer, 1992: 12).

Such direct effects of technology may be strongest when a technology is new because people do not yet understand it. Rather than "using" it, people may be "used by it" (Fischer, 1992: 12). Direct effects are also tied to thinking of technologies in a simplistic way: the more you use them, the more they use you, and the more you are influenced by them. For instance, many studies of internet use, some of which will be addressed in chapters 4 and 6, measure time spent online, divide people into heavy and light users, or users vs. nonusers, and then correlate that measure with outcome variables such as loneliness or time spent with family. What a person was doing online is not addressed, collapsing such diverse activities as keeping in touch with one's mother, banking, researching political information, and looking at pornography into a single causal agent: The Internet.

In a milder form of technological determinism, media choice, technological features are seen as having direct consequences, but people are seen as making strategic, and usually rational, choices about which media they use for differing purposes. According to this perspective, "individuals will effectively employ media whose inherent characteristics are congruent with task demands" (Fulk, Steinfeld, Schmitz, & Power, 1987: 531). A later variant of this perspective, niche theory, developed by John Dimmick (2003), argues that different media allow for different exchanges of resources. For instance, instant messaging "appears to be for contacts with friends late at night while at home," while the landline phone is "for contacts made while at work" (Dimmick, Feaster, & Ramirez, 2011: 1278).

From a media choice perspective, change happens at an individual rather than societal level. By extension, this means that people are

Communication about technology is also productive, generating new meanings for technologies, new uses of technologies, and even new technologies (Sturken & Thomas, 2004). As early as the sixteenth century, there was an urban legend about "sympathetic needles" that allowed people to communicate instantaneously across distance, a legend that helped to inspire the telegraph (Standage, 1998). William Gibson's 1984 science fiction novel *Neuromancer* gave us the term "cyberspace," and both his writings and those of Neal Stephenson, especially the novel *Snow Crash* (1992), provided models of virtual worlds such as Second Life that were developed in their aftermath. Hannu Rahaniemi's novel *The Quantum Thief* (2010) serves us a future in which people wear "entanglement rings," share a collective "exomemory," and can protect their privacy by activating "guvelot" which makes them appear blurry to observers and the exomemory. When the book's hero receives a message from his girlfriend through his ring, he muses: "sending brain-to-brain messages directly through a quantum teleportation channel seems like a dirty, invasive way to communicate" (2010: 38). This sounds fantastical until one realizes that prototypes of technologies that allow people to control computers through thoughts already exist, developers are hard at work on rings that display messages, and Facebook and Google already function as proto-exomemory.

When people explain the consequences of a new medium in terms of technological or social forces, or some combination of these, they rely on theoretical assumptions about causality. This chapter is organized around the major theoretical frameworks for understanding the causal flow between technology and society. There is a strong tendency, especially when technologies are new, to view them as causal agents, entering societies as active forces of change that humans have little power to resist. This perspective is known as *technological determinism*. When media are new, most popular messages about them are deterministic. A second perspective, the *social construction of technology*, argues that people are the primary sources of change in both technology and society. The *social shaping* perspective sees technology and society as continually influencing one another. Ultimately, over time, people stop questioning individual technologies. Through a process of *domestication*, they become taken-for-granted parts of everyday life, no longer seen as agents of change. In the remainder of this chapter, we'll look at each of these four perspectives, drawing on rhetorics of technologies old and new to illustrate how they work.

Technological determinism

Machines change us

In a widely read essay in the *Atlantic* (2008), Nick Carr posited that Google is "making us stupid." Before discussing other people's stories and neuroscience, he described his own dumbing down:

> Over the past few years I've had an uncomfortable sense that someone, or something, has been tinkering with my brain, remapping the neural circuitry, reprogramming the memory. My mind isn't going – so far as I can tell – but it's changing. I'm not thinking the way I used to think. I can feel it most strongly when I'm reading. Immersing myself in a book or a lengthy article used to be easy. My mind would get caught up in the narrative or the turns of the argument, and I'd spend hours strolling through long stretches of prose. That's rarely the case anymore. Now my concentration often starts to drift after two or three pages. I get fidgety, lose the thread, begin looking for something else to do.

As Carr tells it, "someone, or something," changed him. He was the passive recipient transformed by an outside force. As he himself articulates, Carr's essay is in keeping with a long-standing tradition of technological determinism in which the technology is conceptualized as an external agent that acts upon and changes society.

A year after Carr worried that Google was sapping our intelligence, widespread news coverage of a forthcoming academic lecture compared Facebook's ability to "enhance intelligence" with Twitter's power to "diminish it." The UK paper the *Telegraph* (Cockroft, 2009) described University of Stirling memory expert Tracy Alloway's take on how asynchronous and synchronous interaction online differentially affect the brain:

> Sudoku also stretched the working memory, as did keeping up with friends on Facebook, she said. But the "instant" nature of texting, Twitter and YouTube was not healthy for working memory. "On Twitter you receive an endless stream of information, but it's also very succinct," said Dr Alloway. "You don't

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Making new media make sense

When faced with a new communication medium, the immediate challenge for scholars, users, and non-users is to make sense of it. What is it good for? What are its risks? What benefits might it bring? I once asked students to brainstorm what hopes and fears the internet raised for them. Among other things, they hoped the internet might facilitate new connections, cross-cultural interaction, more social support, and tighter family ties, but they feared losing face-to-face interaction as well as the rise of false relationships, deception, stalking, and new levels of vulnerability to strangers. To understand new media and their potential consequences, we need to consider both the technological features of a medium and the personal, cultural, and historical presumptions and values those features evoke.

In chapter 1, I raised the notion that new media cause cultural anxieties, and articulated several technological concepts that help us to think about how new media may differ from earlier forms of communication as well as from one another. Most anxieties around both digital media and their historical precursors stem from the fact that these media are interactive. Especially in combination with sparse social cues, interactivity raises issues about the authenticity and well-being of people, interactions, and relationships that use new media. Other anxieties arise out of the temporal structure of digital media, which seem to push us toward continuous interaction. The internet's ability to store and replicate information without regard to its content leads to fears about what that content might include and how this power might be abused in harmful ways. The mobility of some new media means that we can now have conversations when we are in public that would have once been held in our homes and that we can

be with others wherever we are, feeding into a related set of concerns about privacy and companionship.

In addition to technological qualities, social forces also shape the anxieties we have and the questions we pose about new communication technologies. This chapter explores the messages that circulate around new media in order to show how social forces influence technological interpretation and use. New media appear in the stories we tell each other about what happened during our day and in the domestic squabbles over whose turn it is to use the computer. They are represented in mass media, where technologies play starring and peripheral roles in news stories, magazine articles, films, and television shows. Popular films such as *You've Got Mail* or *The Net*, both released shortly after the internet became popular in the USA, provide modern-day fairy tales that serve as cultural referents for understanding online romance or identity theft. The film and subsequent television show *Catfish* has become a touchstone that frames concerns about online deception. In *Her*, a man falls in love with his device's artificial intelligence, symbolizing concerns that machines could be more attractive than humans. The messages in popular media, examples of which we'll see below, show the social elements we bring to understanding new communication technologies and help to shape how people understand and design new technology.

Through communication, people assign symbolic meanings to technologies. The messages we communicate about technology are *reflective*, revealing as much about the communicators as they do about the technology (Sturken & Thomas, 2004). When we communicate about digital media, we are communicating about ourselves, as individuals, groups, and societies. As we represent these unfamiliar interpersonal tools through our words, conversations, stories, metaphors, images, and so on, we collectively negotiate what interpersonal relationships are and what we want them to be. When we talk about technology, we are sharing "the visions, both optimistic and anxious, through which modern societies cohere" (2004: 1). In addition to telling us about a medium, communication about technology is also one of the best places to see "the desires and concerns of a given social context and the preoccupations of particular moments in history" (2004: 1).

countries, 74.8 percent of the population have mobile broadband and 27.2 percent have fixed, but in developing countries, those numbers are only 19.8 percent and 6.1 percent respectively, demonstrating that although mobile broadband subscription increased considerably in developing countries, it is still beyond the financial reach of those with low incomes. The Pew Internet and American Life Project (Horrigan & Rainie, 2002) found that broadband access is important in shaping whether a person merely reads the internet or contributes content to it.

A 2001 UN Human Development Report is no doubt outdated in its precise numbers, but their analysis of global trends is still apt (UN, 2001). Much of the global population is illiterate. Worldwide, most internet users remain male and college-educated, and earn higher-than-average incomes. Women are in the minority of users in both developed and developing countries. The 2013 ITU report finds that, while it is lessening, gender disparity remains an issue. Men are more likely than women to use the internet, by an 11 percent margin globally (2 percent in developed nations, 16 percent in developing nations).

In the time between this book's first edition and this one, many of these disparities have begun to shrink. However, as the point about broadband suggests, access does not tell the whole story. Even if one sometimes uses a medium, other factors affect how much one is likely to gain from its use. Jung, Qiu, and Kim (2001) developed the Internet Connectedness Index to assess the varying degrees of connectivity that "internet use" may actually entail. Among the variables they identified as important were whether or not one owned a home computer, for how long one had owned one, from how many places a person could access the internet, how much time people spend online, and how many things a person can do online.

Eszter Hargittai's work has pointed to the importance of skill. She (2002) describes a "second level digital divide" that speaks to the differences in skill levels (e.g. understanding internet terminology, searching for and evaluating information) that internet users may have. Hargittai and Hinnant (2008) surveyed a random sample of US young adults. They found that women, people who had not graduated from college, and those who did not use the internet at home reported

lower skill levels and were less likely to visit sites with the potential to improve one's life, such as those offering news, or government, health, financial, and product information sites. Helsper and Eynon (2013) identified overlapping sets of technical, social, creative, and critical skills that can affect digital inclusion, and found that different kinds of social exclusion (education, gender, age, etc.) are related to different types of skills, helping to explain the cycle between social and digital exclusion.

In sum, we are still standing on shifting ground in our efforts to make sense of the capabilities of digital media and their social consequences. New media are constantly developing, new populations are taking up these tools, and new uses are emerging. Who is excluded from or enabled by digitally mediated interaction is neither random nor inconsequential. The same tools may take on very different meanings for different populations in different contexts or different times. It is too soon to tell what the final consequences will be, but it seems unlikely that they will ever be universal or stable. Nonetheless, we do know a great deal from nearly forty years of research. In the rest of this book we'll work with what data we have to fill in what we know now. I hope that astute readers will read between the lines to consider also how much more we have to learn.

gained access through a university affiliation, or a government lab or agency. Computer networks connecting people with home computers, such as CompuServe, Prodigy, and America Online, began in the 1980s, as did many private bulletin board systems that had major impacts on the sociality of the later internet (Driscoll, 2014). These provided home hobbyists with a means to get online, but they were not integrated with each other or with the internet.

Throughout the 1980s and the early 1990s, access to the internet gradually spread to other countries. It was not until the mid 1990s that the diffusion of the internet into everyday life for many Americans and people in some other parts of the world (most notably the UK and northern Europe) began in earnest. The years 1994 and 1995 were huge for the internet. The NSF pulled out of its funding, making commercial activity feasible, and the World Wide Web moved from concept to realization. Internet Service Providers such as America Online began to connect to the internet, and Americans began to come online in droves, leading to all kinds of culture clashes between those who had been online for years and this new class of users. By the end of the decade, most Americans were online.

Globally, the story is different, however, as it remains within some segments of the American population. Online media are far from universal, either across or within populations. Many books and articles have been written addressing the issues of the "digital divide" (e.g. Norris, 2001; Warschauer, 2004). As a whole, digital divide research has little to say about interpersonal connection, the topic of this book. Its focus is usually on issues such as political participation, career advancement, and the use of financial and health information (e.g. Hargittai & Hinnant, 2008). This research indicates that those most able to use new media improve their lives in ways that those who do not use them do not, increasing social and economic disparity. Everything this book will discuss needs to be understood as happening in a context which only some sectors of the global population can access or engage.

The digital divide is often framed as a simple division between those who have access to the internet and those who do not. Even within countries, there are clear trends in which populations use the internet and which don't. Within the United States, survey research

by the Pew Internet & American Life Project (*Who's Online*, 2014) has consistently found demographic differences in which Americans use the internet. In their May, 2013, random phone survey of American adults, Whites were 10 percent more likely to use it than Hispanics. Among young people (18–29 years old), 98 percent used the internet, while only 56 percent of those over 65 did. Income also correlated strongly with internet use. Only 76 percent of people in households earning less than $30,000/year reported using the internet, while 96 percent of those earning $75,000 or more did. Education was also an influence, as those who had not graduated from high school reported 59 percent usage compared to the 96 percent of those who had graduated from college. Location also matters. People living in urban and suburban communities were both 16 percent more likely to use the internet than people living in rural areas. Finally, people with disabilities are significantly less likely to use the internet. Pew data (Fox & Boyles, 2012) show that only 54 percent of Americans who identified as having a disability that inhibits daily functioning (approximately 27 percent of Americans) used the internet in mid 2012.

Globally, the disparities are even more striking. The website Internet World Stats (Miniwatts Marketing Group, 2013), which tracks this, estimates that 76.8 percent of North Americans use the internet, 67.6 percent of those in Oceania/Australia do, 63.2 percent of Europeans, 42.9 percent in Latin American / Caribbean countries, 40.2 percent of Middle Easterners, 27.5 percent of Asians, and only 15.6 percent of Africans. On average, just over a third of the world's population use the internet. Within these parts of the world, the factors that affect Americans (education, age, etc.) affect further which members of the population are among the internet users.

In many regions where internet use is lower than in North America, mobile phone use is far more pervasive. The United Nations' International Telecommunications Union (2013) estimated that, while 41.3 percent of the world's households have internet access and 38.8 percent of individuals use the internet, 96.2 percent used mobile phones. The report also draws attention to the fact that not all internet access is the same – only 9.8 percent of the global population have access to broadband services through a fixed internet connection, and only 29.5 percent have it through mobile connections. In developed

with shared histories, conventions, and practices. Social network sites (SNSs) such as Facebook or Sina Weibo, in which individuals have profiles to which they can upload many diverse media (photos, videos, music, links, and more) and connect their profiles with others through "friending," have been wildly successful and are near-ubiquitous, especially amongst young people, in some countries. boyd and Ellison (2007) locate the origins of SNSs in the advent of SixDegrees.com in 1997, followed by AsianAvenue, BlackPlanet, and MiGente, then LiveJournal and Cyworld (1999) and LunarStorm (2000). MySpace began in 2003, and Facebook in 2005. The professional SNS, Linked In, began in 2003. Video and photosharing sites such as Instagram (owned by Facebook), YouTube (owned by Google), and Flickr (owned by Yahoo!) may be considered a subset of SNS. Other popular, more specialized platforms that could be considered SNSs include Tumblr and Spotify. In these sites, people can create personal accounts, upload their own materials, and share them with others publicly or only amongst approved recipients. Social network sites are unique in combining multiple modes of communication and, hence, in the breadth of and control over social cues they may provide. As more people have acquired mobile phones with data plans, locative media such as Swarm, which allow people to "check in" from their locations, have become more common.

The move from the early internet to the Web and mobile phone can be seen in part as the rise of "platforms" and, more recently, apps. Tarleton Gillespie (2010: 348) argues that platforms have inherent politics, shaped by the incentives of their creators as they position themselves relative to users, clients, advertisers, and policy makers. These platforms have become "the primary keepers of the cultural discussion as it moves across the internet." José van Dijck (2013), in her critical history of social media *The Culture of Connectivity*, shows how the human desire for *connection* that drove the growth of the internet has been parlayed into *connectivity* – the making and storing of connections between individuals and sites (think of how Facebook Like buttons appear on so many sites other than Facebook). While early internet media such as Usenet or mailing lists were public-sector-financed and focused on connecting users for the users' own benefit, the culture of connectivity is driven by commercial platforms

primarily interested in commodifying personal connections in order to derive profits for owners and venture capitalists, generally through advertising. Furthermore, rather than simply displaying the content that has appeared since you last visited, most contemporary platforms use proprietary algorithms in order to determine which content is made visible to which users at which times.

As this brief review suggests, even as we are concerned with their overall impact, we must avoid the temptation to look at new media only as a whole. Each of these media, as well as the mobile phone, offers unique affordances, or packages of potentials and constraints (Gibson, 1977; Norman, 1988), for communication. Even as we think in terms of which qualities any given medium offers, we must also understand that we live in a "polymedia" environment where media can be embedded in one another and all media form contexts for the others (Madianou & Miller, 2012a, 2012b). In this media ecosystem, a person's choice to convey a message through one medium rather than another becomes part of its relational meaning (Gershon, 2010; Madianou & Miller, 2012a, 2012b). To understand how we use media, and with what consequences, we need to consider them both separately and holistically. We also need to understand how people used and made sense of earlier forms of digital media if we are going to make claims about what is and isn't new. It is for that reason that you will find so many studies of modes of online communication that are no longer as popular in the pages that follow.

Who uses new digital media?

The story of online media history is also a story of changing users, and we need to keep questions of whom we are talking about in mind as we think about how new media and social life intertwine. In its early years, the only people using the internet were the ones developing it, almost all of whom were located in the United States and the UK (Abbate, 1999). By the 1980s, scientists at universities had begun to use it, and, by the end of that decade, college students were using it too. But the internet of the 1980s was funded almost entirely by the National Science Foundation (NSF), an agency of the United States government. Commercial activity was prohibited, and almost all users

discussion with wide reach developed. Usenet newsgroups are asynchronous topic-based discussion forums distributed across multiple servers. Although these groups have become magnets for spam, they continue to house discussion. Originally, one read newsgroups through newsreaders built into Unix operating systems. This later developed into stand-alone newsreaders. Now most people access Usenet through the web, most notably through Google groups, where they may well not recognize them as Usenet newsgroups. These provided an early model for the topical web boards and social media groups so common now. They were also my own entrée into online group communication and the subject of my earliest work on online communication.

On some early sites, developers and participants used words and code to create a rich geographical context for synchronous interactions, and a highly developed range of characters. In the late 1970s, Richard Bartle and Roy Trubshaw developed MUD1, an interactive online role-playing game. Around the same time, Alan Klietz independently developed Sceptre of Goth, a MUD game (Bartle, 2004). Readers who play World of Warcraft or related massively multiplayer online role-playing games will recognize MUDs as their precedent. MUD stands for either Multi-User Domain or the less antiseptic Multi-User Dungeon, which better captures the phenomenon's origin in the role-playing game Dungeons and Dragons. Many MUDs offered predetermined categories by which to define one's character. People might choose their sex (often from a list with more than two choices) and race. Depending on the MUD, people might choose to be elves, fairies, cats, dragons, trolls, vampires, and other fantasy creatures.

Lambda MOO (Multi-User Domain Object-Oriented, a distinction that is of minimal importance here) and other MUDs, MOOs, MUCKs, MUSHes, and other oddly acronymed parallel sites followed, many of which were simply creative environments in which fictional rooms and landscapes served as spaces for social interaction, not games. Though MUDs and MOOs have always been obscure uses of the internet (unlike the later graphical games they inspired), they were the object of an inordinate amount of early research about the internet.

The World Wide Web

A major transformation in digital communication occurred in the 1990s when a group of physicists led by Sir Tim Berners-Lee at the Swiss physics laboratory CERN developed the World Wide Web. This heralded a shift from communication that was purely text-based to multimedia communication, and gave rise to more new forms of mediated interaction than I can cover here. These include web boards, blogs, wikis, social network sites, video and photosharing sites, and graphically intensive virtual worlds.

In the 1990s, web boards took up where the promise of Usenet left off, facilitating asynchronous topic-based group interaction amongst people who did not need prior connections. Blogs, authored by either single people or collectives, are websites in which recent updates appear above previous updates, creating a reverse chronology of messages. Their content may be personal, political, or anything else, and their audiences may be anything from zero to millions. By convention and design, blogs almost always include a list of hyperlinks to other blogs (a "blog roll"), which serves to create connections and drive traffic amongst blogs. Groups of bloggers may read one another and comment on each other's blogs, creating communities of like-minded individuals and semi-organized grassroots social movements.

Also during this time, websites such as Active Worlds began to develop graphically rich environments. These have exploded in the early 2000s, in the form of massively multiplayer online role-playing games (MMORPGs – an acronym usually pronounced "more pigs"), such as World of Warcraft, League of Legends, and non-game spaces such as Second Life.

The 2000s brought what has been called "Web 2.0," the hallmark of which is often taken to be user-generated content. But, having been through the paragraphs just above, one must wonder what content on the textual internet and much of Web 1.0 was not generated by users. Wikis, the most famous of which is Wikipedia, are among the stars of this generation of digital media. Wikis are collective encyclopedia-authoring sites in which people can collaborate to produce informative entries. Though this may sound sterile, behind the editing of entries are rich social worlds of interconnected users

below on a brief historical overview of the internet. I emphasize the extent to which the interpersonal appeal of digital media shaped their development. Unlike the mobile phone, the internet was not built as a personal communication medium, let alone a way for fans to connect around their objects of pleasure, for people to find potential romantic partners, for employers to find or investigate potential hires, or any such social processes. It was developed to safeguard military knowledge. When the first internet connection was made in 1969 through what was then called ARPANET, funded by the US Department of Defense, no one envisioned that an interpersonal communication medium had been launched. However, what became the internet was not the only networked computing system being built at that time. Hobbyists built dial-in bulletin board systems for interactive file exchange, interaction, and games. Universities developed computer networks such as PLATO. Indeed, as a child in Urbana, Illinois, home of the University of Illinois where PLATO was developed, in the mid 1970s I used to stay after school to read jokes, play games, and chat with anonymous PLATO users in other locations (little did my classmates and I realize how ahead of our time we were!). In those same early years, bulletin board systems users dialed into servers in people's homes to chat. As Kevin Driscoll has written (2014), the received history of the internet as having begun with ARPANET, covered in detail in Janet Abbate's (1999) history, is one of several origin stories that could be told about "the internet." It is beyond the scope of this book to cover either the technological or social development of the internet. First, though, a disclaimer: trying to list specific types of digital media is frustrating at best. Between this writing and your reading there will be new developments, and things popular as I write will drop from vogue. Let this be a reminder to us of the importance of remaining focused on specific capabilities and consequences rather than the media themselves.

The textual internet

For its first quarter-century, the internet was text-only. With its limited social cues, it seemed a poor match for personal interaction. Yet it took mere months for its developers (who were also its primary users)

to realize the medium's utility for personal communication. Within three years of the first login, email was in use, and within four years, three-quarters of online traffic was email (Anderson, 2005). By 2000, the ability to use email was a significant reason that people first got online and one of the main reasons that those already online stayed online (Kraut, Mukhopadhyay, Szczypula, Kiesler, & Scherlis, 2000).

Synchronous person-to-person and small-group communication also developed early in the internet's history. "Talk" was an early synchronous internet communication genre. When using Talk, a horizontal line divided the top and lower halves of the screen, each half showing messages from one interactant. It was as minimalist and purely textual as a communication medium could be. Talk remained in regular usage into the early 1990s. When I began using the internet in 1990, I used it almost daily to tell my then-boyfriend that dinner was ready – I couldn't call since his phone line was tied up with his modem's internet connection. Talk provided a convenient work-around. Talk was followed by Internet Relay Chat (IRC) and, later, chat rooms that allowed distributed groups to converse in real-time. Instant Messaging, developed in the 1990s, can be seen as an advanced version of Talk. A person-to-person medium, IM was distinctive in its use of a buddy list and provision of continual information about who on that list was online and available for contact.

Not long after email, mailing lists were developed, in which a single email could be sent to a large group of subscribers, all of whom would receive it and (usually) be able to respond. Although the technological specifications of email and mailing lists are the same, there are some important differences. Specifically, on mailing lists, senders may very well not know most (or any) of the recipients. Mailing lists are often large. For instance, the Association of Internet Researchers' mailing list, AIR-L, has approximately 5,000 subscribers in many nations. In contrast, others are small private lists of family and friends. A colleague of mine, faced with a family member's cancer, created a mailing list of family members so that they could all share news with a single message. Private mailing lists may also be made up of school friends who have graduated or other such small groups of people seeking to stay in touch as a group.

In the early 1980s, another means of asynchronous group

than other personal media, mobile phones threaten autonomy, as we may become accountable to others at all times. Schegloff (2002), one of the first to study telephone-mediated interaction, suggests mobile media don't create perpetual contact so much as offer the perpetual possibility of making contact, a distinction some exploit by strategically limiting their availability (Licoppe & Heurtin, 2002).

These seven concepts help us begin to understand the similarities and differences between face-to-face communication and mediated interaction, as well as the variation amongst different kinds of digital interactions, even on the same web platform. Face-to-face communication, like all the forms of digital media we will be discussing, is interactive. People can respond to one another in message exchanges. Face-to-face communication is synchronous. It is also loaded with social cues that make one another's identities and many elements of social and physical context apparent (although, as we will return to in chapter 5, this does not guarantee honesty). Face-to-face conversations cannot be stored, nor can they be replicated. Even when recorded and, for example, broadcast, the recording loses many elements of the context that make face-to-face communication what it is. As discussed above, face-to-face communication has low reach, limiting how many can be involved and how far messages can spread. Face-to-face communication may be mobile, but only as long as the interactants are moving through space together. This combination of qualities grants face-to-face a sort of specialness. The full range of cues, the irreplicability, and the need to be there in shared place and time with the other all contribute to the sense that face-to-face communication is authentic, putting the "communion" in communication.

In contrast, some forms of mediated interaction are asynchronous, enabling more message planning and wider reach, but a potentially lower sense of connection. Media such as Skype or other video chat technologies offer many social cues – voice, facial expression, a window into the physical surroundings – but lack critical intimacy cues including touch and smell. Most digital media have fewer social cues than that, limiting interaction to sounds or even just words. By virtue of their conversion into electronic signals, all digital media can be stored, and often are even when individuals delete them (Facebook, for instance, saves drafts of messages that were never posted). Even

when conversations and messages are not stored, however, they may leave traces such as records of which phone numbers called which other ones, which IP addresses visited which websites, or how many tweets a person has tweeted. Digital messages are easily replicated if they are asynchronous, but less so if they are synchronous. The reach of digital media can vary tremendously depending on the medium. A phone call generally remains a one-to-one encounter, as does much instant messaging and chat, but social network sites, emails, mailing lists, discussion groups, and websites are among the digital modes that can have extraordinary reach. Digital media are becoming increasingly mobile as the internet and mobile phone converge into single devices, meaning that these technologies make communication possible in places where it wasn't before, but also that they can intrude into face-to-face conversations where they never could before. As a result, people can have very different experiences with different media, yet none may seem to offer the potential for intimacy and connection that being face-to-face does. These distinctions and convergences all bring with them important potential social shifts, which the remainder of this book will address.

Digital media

Just as it's important to clarify core concepts that may shape mediated social interaction, it's helpful to walk through the media in question. It's also important to recognize that the media we use today have historical precedents whose traces may have been as disruptive in their own time and traces linger today. Tom Standage's 2013 book *Writing on the Wall: Social Media – The First 2,000 Years* offers a lively walk through such precedents, including literal writing on walls in ancient Rome, as does William Powers's (2010) *Hamlet's Blackberry*. Asa Briggs and Peter Burke's (2009) *A Social History of the Media* demonstrates the precedents of earlier technologies, and also the continuities between old and new media. Such books reveal that many of the phenomena and concerns associated with new media began long before electricity, let alone digital media – a topic the next chapter will address.

I assume readers are familiar with the mobile phone, so I focus

environments that those who've participated for any length of time will recognize.

Though, as we will address in more depth in chapter 6, much of our mediated interaction is with people we know face-to-face, some media convey very little information about the identities of those with whom we are communicating. In some circumstances, this renders people anonymous, leading to both opportunity and terror. In lean media, people have more ability to expand, manipulate, multiply, and distort the identities they present to others. The paucity of personal and social identity cues can also make people feel safer, and thus create an environment in which they are more honest. Chapter 5 examines these identity issues.

Media also differ in the extent to which their messages endure. *Storage*, the maintenance of messages on servers or harddrives over time, and, relatedly, *replicability*, the ability to make copies of messages, are highly consequential. Unless one makes an audio or video recording of telephone and face-to-face conversations (activities with laws governing acceptable practice), for the interactants they are gone as soon as they are said. Human memory for conversation is notoriously poor. To varying degrees, digital media may be stored on devices, websites, and company backups where they may be replicated, retrieved at later dates, and edited prior to sending (Carnevale & Probst, 1997; Cherny, 1999; Culnan & Markus, 1987; Walther, 1996). Synchronous forms like IM and Skype require logging programs that most users are not likely to have. Those that are asynchronous can be easily saved, replicated, and redistributed to others. They can also be archived for search. Government agencies, such as the United States' National Security Administration, may capture and save data and metadata from enormous amounts of internet and mobile phone traffic. Despite this, online messages may feel ephemeral, and, indeed, websites may be there one day and different or gone the next. The popular photosharing application Snapchat found its niche by emphasizing the ephemerality of its photos which, much like the mission instructions in *Mission Impossible*, self-destruct soon after viewing (although what actually happens is that the file extension changes and the photo remains cached).

Media also vary in the size of an audience they can attain or

support, or *reach*. Gurak (2001: 30) describes reach as "the partner of speed," noting that "digitized discourse travels quickly, but it also travels widely . . . One single keystroke can send a message to thousands of people." Face-to-face communication is inherently limited to those who can fit in the same space. Even when amplified (a form of mediation in itself), physical space and human sensory constraints limit how many can see or hear a message as it's delivered. The telephone allows for group calls, but the upper limit on how many a group can admit or maintain is small. In contrast, many forms of digital communication can be seen by any internet user (as in the case of websites) or can be sent and, thanks to replicability, resent to enormous audiences. Messages can reach audiences both local and global. This is a powerful subversion of the elitism of mass media, within which a very small number of broadcasters could engage in one-to-many communication, usually within regional or geographic boundaries. The gatekeeping function of mass media is challenged as individuals use digital media to spread messages much farther and more widely than was ever historically possible (Gurak, 2001). Future chapters will address how enhanced reach allows people to form new communities of interest and new relationships.

Finally, media vary in their *mobility*, or extent to which they are portable – enabling people to send and receive messages regardless of location – or stationary – requiring that people be in specific locations in order to interact. The mobile phone represents the paradigm case of mobility, making person-to-person communication possible regardless of location. The trend toward mobile devices is further enhanced by the rise of tablets and "phablets" as well as the increasing preference for laptops over clunky personal computers tied to desks and landline phones. In addition to offering spatial mobility, some digital media allow us to move between times and interpersonal contexts (Ishii, 2006). Mobile media offer the promise that we need never be out of touch with our loved ones, no matter how long the traffic jam in which we find ourselves. When stuck with our families, we may import our friends through our mobile devices. As we'll see in chapter 6, mobile media give rise to microcoordination (Ling, 2004) in which people check in with one another to provide brief updates or quickly arrange meetings and errands. However, more

The *temporal structure* of a communication medium is also important. Synchronous communication, such as is found in face-to-face conversations, phone calls, and instant messages, occurs in real time. Asynchronous communication media, such as email and voice mail, have time delays between messages. In practice, the distinction cannot always be tied to specific media. Poor connections may lead to time delays in a seemingly synchronous online medium such as Instant Messaging. Text messaging via the telephone is often asynchronous, but needn't be. Twitter can function both ways. Ostensibly asynchronous email may be sent and received so rapidly that it functions as a synchronous mode of communication. Sites like Facebook may seem to be a single medium, but offer both asynchronous modes of interaction such as wall posts and messaging, and synchronous chat, and it is not unheard of for people to use comments on wall posts as a real-time chat medium.

The beauty of synchronous media is that they allow for the very rapid transmission of messages, even across distance. As we will see, synchronicity can enhance the sense of placelessness that digital media can encourage and make people feel more together when they are apart (Baron, 1998; Carnevale & Probst, 1997; McKenna & Bargh, 1998). Synchronicity can make messages feel more immediate and personal (O'Sullivan, Hunt, & Lippert, 2004) and encourage playfulness in interaction (Danet, 2001). The price of synchronicity, however, is that interactants must be able to align their schedules in order to be simultaneously engaged. Real-time media are also poorly suited to hosting interaction in large groups, as the rapid-fire succession of messages that comes from having many people involved is nearly impossible to sort through and comprehend, let alone answer. There is a reason that dinner parties are generally kept to a small collection of people, and guests at large functions are usually seated at tables that accommodate fewer than a dozen. Accordingly, most online chat rooms and other real-time forums have limits on how many can participate at one time.

With asynchronous media, the costs and benefits are reversed. Asynchronous communication allows very large groups to sustain interaction, as seen in the social network sites and online groups like fan forums, support groups, and hobbyist communities addressed in chapter 4. Asynchronicity also gives people time to manage their self-presentations more strategically. However, word may filter more slowly through such groups and amongst individuals. We can place fewer demands on others' time by leaving asynchronous messages for people to reply to when they like, but we may end up waiting longer than we'd hoped, or receive no reply at all. One of the biggest changes wrought by digital media is that even asynchronous communication can happen faster than before. Time lags are created by the time it takes a person to check for new messages and respond, not by the time messages spend in transit. In comparison to postal mail, the internet can shave weeks off interactions.

Most of the questions surrounding the personal connections people form and maintain through digital media derive from the sparse *social cues* that are available to provide further information regarding context, the meanings of messages, and the identities of the people interacting. As chapter 3 will address in more detail, rich media provide a full range of cues, while leaner media provide fewer. Body-to-body, people have a full range of communicative resources available to them. They share a physical context, which they can refer to nonverbally as well as verbally (for instance, by pointing to a chair). They are subject to the same environmental influences and distractions. They can see one another's body movements, including the facial expressions through which so much meaning is conveyed. They can use each other's eye gaze to gauge attention. They can see one another's appearance. They can also hear the sound of one another's voice. All of these cues – contextual, visual, and auditory – are important to interpreting messages and creating a social context within which messages are meaningful.

To varying degrees, digital media provide fewer social cues. In mobile and online interactions, we may have few if any cues to our partner's location. This is no doubt why so many mobile phone calls begin with the question "Where are you?" and also helps to explain some people's desire to share GPS positioning via mobile applications. The lack of shared physical context does not mean that interactants have no shared contexts. People communicating in personal relationships share relational contexts, knowledge, and some history. People in online groups often develop rich in-group social

2002; Humphreys, 2005; Ling, 2004). The first perspective forms a necessary backdrop for contextualizing and making sense of the second, but the emphasis in this book is on the mundane and the everyday, on how people incorporate digital media into their routine practices of relating and with what consequences.

Plan of the book

In the remainder of this chapter I identify a set of key concepts that can be used to differentiate digital media, and which influence how people use them and with what effects. I then offer a very brief overview of the media discussed in this book and a discussion of who does and who doesn't make use of them. Chapter 2 is an orientation to the major perspectives used to understand the interrelationships between communication technology and society, and an exploration of the major themes in popular rhetorics about digital media and personal connection. Chapter 3 examines what happens to messages, both verbal and nonverbal, in mediated contexts. Chapter 4 addresses the group contexts in which online interaction often happens, including communities and social networks. The remaining two chapters explore dyadic relationships. Chapter 5 shows how people present themselves to others and first get to know each other online. Chapter 6 looks at how people use new media to build and maintain their relationships. Finally, the conclusion returns to the question of sorting myths from reality, arguing against the notion of a "cyberspace" that can be understood apart from the mundane realities of everyday life, and for the notion that online and offline flow together in the life-worlds of contemporary relationships.

Seven key concepts

If we want to build a rich understanding of how media influence relationships, we need to stop talking about media in overly simplistic terms. We can't talk about consequences if we can't articulate capabilities. What is it about these media that changes interaction and, potentially, relationships? We need conceptual tools to differentiate media from one another and from face-to-face (or, as Fortunati, 2005, more aptly termed it, "body-to-body") communication. We also need concepts to help us recognize the diversity amongst what may seem to be just one technology. The mobile phone, for instance, is used for voice, texting, picture and video exchange, gaming, and, with the new dominance of smartphones, nearly endless other applications. The internet includes interaction platforms as diverse as YouTube, product reviews on shopping sites, email, and Instant Messaging (IM), which differ from one another in many ways. Seven concepts that can be used to productively compare different media to one another as well as to face-to-face communication are interactivity, temporal structure, social cues, storage, replicability, reach, and mobility.

The many modes of communication on the internet and mobile phone vary in the degrees and kinds of *interactivity* they offer. Consider, for instance, the difference between using your phone to select a new ringtone and using that phone to argue with a romantic partner, or using a website to buy new shoes rather than to discuss current events. Fornås and his co-authors (2002: 23) distinguish several meanings of interactivity. Social interactivity, "the ability of a medium to enable social interaction between groups or individuals," is what we are most interested in here. Other kinds include technical interactivity, "a medium's capability of letting human users manipulate the machine via its interface," and textual interactivity, "the creative and interpretive interaction between users (readers, viewers, listeners) and texts." "Unlike television," writes Laura Gurak (2001: 44), "online communication technologies allow you to talk back. You can talk back to the big company or you can talk back to individual citizens." Indeed, these days customers often expect that, when they talk back, companies will respond swiftly. The social media marketing site Convince and Convert (2012) reports on a survey finding that everyone who contacts a brand, product, or company through social media expects a reply within a few days, and a third expect a response within half an hour. Rafaeli and Sudweeks (1997) posit that we should see interactivity as a continuum enacted by people using technology, rather than a technological condition. As we will see in chapters to come, the fact that the internet enables interactivity gives rise to new possibilities – for instance, we can meet new people and remain close to those who have moved away – as well as old concerns that people may be flirting with danger.

media offer us "volume control" to regulate our social environment and manage our encounters. We can create new opportunities to converse. We can avoid interactions, talking into a mobile phone (or pretending to) to avoid a co-present acquaintance, or letting calls go to voice mail. We can manipulate our interactions, doing things like forwarding nasty emails or putting people on speakerphone. We can use nonverbally limited media such as text messages or emails to shelter us from anxiety-inducing encounters such as flirting or ending relationships. We can see where our contacts have checked in on Foursquare (now Swarm) or Facebook and choose to go elsewhere (Humphreys, 2011). But, just as we can use these media to manage others more strategically, others can also more easily manage us. Our autonomy is increasingly constrained by the expectation that we can be reached for communication anytime, anywhere, and we will owe an appropriate and timely response. We are trapped by the same state of "perpetual contact" (Katz & Aakhus, 2002) that empowers us. In light of revelations about government surveillance of mobile phone communication, web activities, and online games, it's evident that, even as we engage in increased control of our behaviors and relationships through digital media, the digital traces left by our activities are used for surveillance on a previously unimaginable scale.

One of the most exciting elements of new media is that they allow us to communicate personally within what used to be prohibitively large groups. This blurs the boundary between mass and interpersonal communication in ways that disrupt both. When people gather online to talk about a television show they are a mass communication audience, but the communication they have with one another is both interpersonal, directed to individuals within the group, and mass, available for anyone to read. If, as increasingly happens, the conversations and materials these fans produce for one another are incorporated into the television show, the boundaries between the production and reception of mass media are blurred as well.

Furthermore, what is personal may become mass, as when a young woman creates a videolog for her friends, which becomes widely viewed on YouTube. The ability for individuals to communicate and produce mediated content on a mass scale has led to opportunities for fame that were not available outside of the established culture industries before, but confusion about the availability and scale of messages has also led to unplanned broadcast of what was meant to be private, as when a politician inadvertently posts a sexually explicit selfie to his public Twitter feed rather than sending it through direct messaging.

This is just one way in which the boundaries between public and private are implicated in and changed by digital media. Internet users have been decried for revealing private information through online activities. Mobile phone users have been assailed for carrying on private conversations in public spaces (and shooting nasty looks at those who don't pretend not to notice). Puro (2002: 23) describes mobile phone users as "doubly privatizing" public space since they "sequester themselves non-verbally and then fill the air with private matters." Homes, especially in affluent societies, exhibit a "privatized media rich bedroom culture" (Livingstone, 2005) in which people use media to create privacy and solitude. All of this happens in a cultural moment when individualism is defined through consumerist practices of purchasing mass-mediated and branded products (Gergen, 1991; Livingstone, 2005; Walker, 2008) and publicizing one's self through "self-branding" may be essential to career success (Marwick, 2013).

At the heart of this boundary flux is deep confusion about what is virtual – that which seems real but is ultimately a mere simulation – and what is real. Even people who hang out and build relationships online contrast it to what they do "IRL" (In Real Life), lending credence to the perception that the mediated is unreal. Digital media thus call into question the very authenticity of our identities, relationships, and practices (e.g. Sturken & Thomas, 2004). Some critics have noted that these disruptions are part and parcel of a movement from modern to postmodern times in which time and space are compressed, speed is accelerated, people are ever more mobile, communication is person-to-person rather than place-to-place, identities are multiple, and communication media are ubiquitous (e.g. Fornås, Klein, Ladendorf, Sundén, & Sveningsson, 2002; Haythornthwaite & Wellman, 2002; Ling, 2004). Others have emphasized how, within these cultural changes, digital media are made mundane, boring, and routine as they are increasingly embedded in everyday lives and social norms coalesce around their use (e.g. Haythornthwaite & Wellman,

about the roles of digital media and devices in personal relationships. Rather than providing exuberant accounts or cautionary tales, this book provides a theoretical and data-grounded primer on how to make sense of these important changes in relational life. I began paying attention to these issues in 1990, launched my first research project into interpersonal communication over the internet in 1991, and began teaching courses in communication and new technology in Communication departments in 1994. The material in this book draws on my research projects, observations, and the large and growing body of scholarship on how digital media affect our interpersonal lives, to offer frameworks for evaluating and understanding these changes.

New media, new boundaries

Digital media raise a variety of issues as we try to understand them, their place in our lives, and their consequences for our personhood and relationships with others. When they are new, technologies affect how we see the world, our communities, our relationships, and our selves. They lead to social and cultural reorganization and reflection. In her landmark study of nineteenth-century popular scientific magazines, Carolyn Marvin (1988) showed how a new technology such as electricity, the telegraph, or the telephone creates a point in history where the familiar becomes unfamiliar, and therefore open to change. This leads to anxiety. While people in ancient times fretted about writing and Victorians fretted about electricity, today we are in "a state of anxiety not only about the PC, but in relation to technology more generally" (Thomas, 2004: 219).

The fundamental purpose of communication technologies from their ancient inception has been to allow people to exchange messages without being physically co-present. Until the invention of the telegraph in the 1800s, this ability to transcend space brought with it inevitable time delays. Messages could take years to reach their audience. The telegraph changed that by allowing real-time communication across long distances for the first time. People may have reeled in the face of writing and publishing, but it was little compared to how we reeled and continued to reel in the face of this newfound

power to collapse time and space. After millennia as creatures who engage in social interaction face-to-face, the ability to communicate across distance at very high speeds disrupts social understandings that are burned deep into our collective conscience. Digital media continue these disruptions and pose new ones. They raise important questions for scholars and lay people alike. How can we be present yet also absent? What is a self if it's not in a body? How can we have so much control yet lose so much freedom? What does personal communication mean when it's transmitted through a mass medium? What's a mass medium if it's used for personal communication? What do "private" and "public" mean anymore? What does it even mean to *be* real?

Kenneth Gergen (2002) describes us as struggling with the "challenge of absent presence," worrying that too often we inhabit a "floating world" in which we engage primarily with non-present partners despite the presence of flesh-and-blood people in our physical location. We may be physically present in one space, yet mentally and emotionally engaged elsewhere, a phenomenon on which Sherry Turkle dwells in her book *Alone Together* (2011). Consider, for instance, the dinner partner who is immersed in his mobile phone conversation. Since he is physically present, yet simultaneously absent, the very nature of self becomes problematic. Where is "he?" The borders between human and machine, the collapse of which was celebrated in Haraway's (1990) "Cyborg manifesto," and between self and body, are thrown into flux. In a time when some people feel that their "real self" is expressed best online (McKenna, Green, & Gleason, 2002), long-distance romances are built and maintained through electronic contact, and spaces for media are built right into the clothing we wear, how do we know where, exactly, true selves reside? Furthermore, what if the selves enacted through digital media don't line up with those we present face-to-face, or if they contradict one another? If someone is nurturing face-to-face, aggressive in one online forum, and needy in another online forum, which is real? Is there such a thing as a true self anymore? Was there ever?

The separation of presence from communication offers us more control over our social worlds yet subjects us to new forms of control, surveillance, and constraint. Naomi Baron (2008) argues that new

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1

New forms of personal connection

There have never been more ways to communicate with one another than there are right now. Once limited to face-to-face conversation, over the last several millennia we have steadily developed new technologies for interaction. The digital age is distinguished by rapid transformations in the kinds of technological mediation through which we encounter one another. Face-to-face conversation, landline telephone calls, and postal mail have been joined by email, mobile phone calls, text messaging, instant messaging, chat, web boards, social networks, photo sharing, video sharing, multiplayer gaming, and more. People have always responded to new media with confusion. In this time of rapid innovation and diffusion, it's natural to be concerned about their effects on our relationships.

When first faced with a new barrage of interpersonal communication media, people tend to react in one of two ways, both of which have long cultural histories. On the one hand, people express concern that our communication has become increasingly shallow. For many, the increased amount of mediated interaction seems to threaten the sanctity of our personal relationships. On the other, new media offer the promise of more opportunity for connection with more people, leading to stronger and more diverse relationships. Both perspectives reflect a sense that digital media are changing the nature of our social connections. Over time, as we get used to new communication media, people come to see them in more nuanced ways. Eventually they become so taken for granted they are all but invisible. These moments in which they are new and the norms for their use are in flux offer fresh opportunities to think about our technologies, our connections, and the relationships amongst them.

The purpose of this book is to provide a means of thinking critically

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