Communication and relationships increasingly center on the use of technology and media. For the sake of organization only, this chapter is primarily concerned with such technologies as cell phones and iPods. Chapter 10 is dedicated to what has been traditionally termed “mass” media, such as television, radio, movies, books, video games, and newspapers. As both a mass media system and an interactive technology, the Internet will be discussed in both chapters, with this one discussing more of its social and interactive nature and the next one discussing it from a mass media perspective.

Even though we are separating these concepts into two chapters, we recognize that they are rapidly becoming integrated and will no doubt continue to merge into relational life. Television, no longer confined to a large-screened unit in such social spaces as your home, waiting rooms, and restaurants, can now be watched in a variety of locations through cell phones, iPods, and similar technologies. Movies, books, newspapers, video games, and millions of songs are available for download onto these devices, just waiting to help you accomplish a variety of personal and relational needs.

This separation is still legitimate at the present time but may not be suitable in the future. The continuously changing nature of human communication in general and the use of technology in particular to fulfill relational connections are among the features that make the discipline of communication so intriguing but also challenging. Accordingly, you may notice throughout the chapter a recurring theme of technological change and evolution but a constant awareness of their embeddedness in relationships. In fact, we use the term relational technologies quite a bit more than just technology.

This chapter first explores the use of relational technologies and their influence on the construction of personal and relational identities. We examine how the use of these technologies conveys particular meanings to others. We then look at the construction of identity through the Internet, specifically focusing on screen names, e-mail addresses,
content creation, social networking sites, and features of Internet activity that impact everyday life. The second half of the chapter is dedicated to the use of technology when interacting with others and how technology influences personal relationships. We first examine the distinct relational features of cell phone interactions and then explore the characteristics of online communication and its influence on relationships and social networks.

Focus Questions

1. How have emerging technologies generally been viewed?
2. What factors influence identity construction through the use of relational technologies?
3. What do your screen name and e-mail address tell others about you?
4. How are content creation and social networking sites impacting the construction of identity and self-disclosure?
5. How do cell phones impact interactions with others?
6. What makes online communication different from other forms of communication?
7. How is online communication impacting personal relationships and social networks?
8. Do people interact with technology like they interact with other people?

How Do People (and Scholars) View Technology?

A person’s perspective will influence how something is understood and how it is studied. Accordingly, your view of technology will influence how you comprehend and evaluate the information provided in this chapter. Within this initial section, we discuss how the perspectives of communication scholars have impacted how technology is studied. We also discuss how emerging technologies are traditionally viewed by people in general along with how relationships (surprise!) play a fundamental position in the ways in which technologies are used and understood.

Academic Views of Technology

Most people currently conducting research and writing textbooks about technology—including both of your authors—remember a time without cell phones, iPods, and the Internet. You may have heard these technologies referred to as new media because, for those writing the textbooks and conducting the research, they are new. However, even with growing numbers of nontraditional students, the majority of students studying this research and reading these textbooks do not view this technology as new but view it as something that has always been around and that has always been a very significant part of their lives. Accordingly, the term new media will not be used when discussing the Internet, cell phones, iPods, and similar devices. Instead, these technologies will be referred to as relational technologies in recognition of their truly relational nature.
Beyond the designation of these technologies, the media experience of researchers also influences how technology gets discussed in most current research. Much of what is written about the Internet, cell phones, and other relational technologies frames them as intrusive and threatening, and they are evaluated according to standards and criteria associated with what are thus viewed as traditional or “normal” media and technology. Actually an increasingly vital, essential, and beneficial part of everyday life, these technologies should be studied and evaluated according to their own unique standards and norms.

Cave Drawings and Other Concerns

Fears and apprehensions surrounding the latest technology are nothing new and concern people other than scholars from previous media generations. The emergence of any new communication technology has historically elicited choruses of concern and anxiety, surprisingly similar in nature.

People tend to worry about the effects of emerging technologies on family, community, and, of course, children. While no evidence exists, we imagine focus groups were developed by well-meaning cave people to examine the potentially negative impact of cave drawings on innocent and susceptible cave children. Documented criticism of more recent technologies shows people expressed similar fears when radio began appearing in homes in the 1920s, and these fears were nearly identical to those expressed about television when it began appearing in homes during the 1950s. Actually, many of these criticisms are still being expressed! The even more recent introduction of the Internet led to concerns about diminished physical activity and social interaction among its users. Such criticisms are strikingly similar to questions raised in 1926 by the Knights of Columbus Adult Education Committee about telephones in homes, including “Does the telephone make [people] more active or more lazy?” and “Does the telephone break up home life and the old practice of visiting friends?” (as quoted in Fischer, 1992, p. 1).

Of course, the introduction of a new technology is not without its supporters, although voices of praise are usually overwhelmed by those of criticism. As with similarities among the concerns, the praise offered for each emerging technology is often quite similar. A public relations announcement by the American Telephone & Telegraph Company (AT&T) had this to say about telephones: “The telephone is essentially democratic; it carries the voice of the child and the grown-up
with equal speed and directness. . . . It is not only the implement of the individual, but it fulfills the needs of all the people” (as quoted in Fischer, 1992, p. 2). These sentiments sound strikingly similar to those surrounding the democratic and equalizing nature of the Internet.

Every Technology Is Relational

Technologies do impact society and the world in which you live. Regardless of whether its influences are positive or negative, each technology changes how people communicate and interact. The one constant among all technologies, from cave drawings to the Internet to whatever technologies arise next, is that they are inherently relational in their understanding and use. At the center of all criticism and praise of technologies rest their influence and effect on social interaction and connections among people. This influence is probably why criticism and praise surrounding each emerging technology have sounded so similar; relationships among people have been the one constant throughout all human technological development. Adapted to accomplish and meet relational needs, all technologies have influenced how you interact and relate with others.

Relational Technology and the Construction of Identities

Technological devices do not merely connect you with other people or provide you with information, music, and video. Personal and relational identities are created and maintained through your use of these technologies. We refer to cell phones and iPods as relational technologies to emphasize the relational functions and implications of their use in society and within specific groups. Throughout this section of the chapter, we examine how the use of technology creates and conveys information about the self, groups, and relationships.

The Meaning of Relational Technology

The use of relational technologies develops unique meanings for particular social groups. Perceiving and using technology in a manner consistent with these groups assists in establishing membership into these groups and developing particular identities. For instance, some groups view the cell phone less as a device to contact others and more as a means of displaying social status and membership (J. Katz, 2006). The social meanings accompanying technologies, along with their significance, vary according to the social system in which they are used. Members of some organizations, for example, may view text messages as a more appropriate means of communication, while members of other organizations may prefer contact through calling or face-to-face interactions. The views governing the use of these technologies are developed in large part by how other members of these organizations use and discuss each technology.
Technology and Media Generations

A major influence on people’s perceptions and use of technology is the generation in which they were born. In fact, media scholars Gary Gumpert and Robert Cathcart (1985) have maintained that the traditional notion of separating generations according to time can be replaced by separating generations according to media experience. What separates generations is not just the chronological era in which they were born but also the media and technology that encompass their world. **Media generations** are differentiated by unique media grammar and media consciousness based on the technological environment in which they are born. Before the introduction of radio, past generations understood the world according to the printed word and standards associated with literacy. Radio generations eventually gave way to television generations, which gave way to digital and Internet generations, which will eventually give way to whatever technology and media generations are on the horizon.

Each technology influences people’s thinking, sense of experience, and perceptions of reality in very unique and specific ways. Media generations and societies as a whole consequently develop different standards and methods for evaluating knowledge, experience, and reality (Chesebro, 1984). If you were born into the Internet generation, you think differently and perceive the world differently than someone born before the introduction of the Internet, and vice versa. Furthermore, those born during a particular media era privilege the perspectives or orientations brought about by their dominant technology. Someone from the Internet generation may accept and enjoy an abbreviated podcast or webcast of a full-length television episode, but someone from a television generation may find it difficult to follow. Likewise, media generations born into a digital world undervalue books and traditional television in favor of the Internet and digital products.

Technology and Social Networks

Your social network is an equally powerful force in guiding perceptions and use of technology. While generational influence is largely determined by the *availability* of technology, the influence of social networks on your use and perceptions of technology is determined by the actual *use and incorporation* of technology and the social meanings that subsequently develop. Friends, family,
classmates, coworkers, and others with whom you share a particular relationship direct and shape your assumptions about the value of technology and what its use represents both relationally and personally. For instance, cell phone adoption, along with attitudes toward products and services, is often shared among members of a social network (Campbell & Russo, 2003). Whether or not you own particular relational technology is based in large part on whether or not your friends own that particular relational technology. Likewise, your use of relational technologies and your attitude toward them are likely to mirror those of your friends and other members of your social network.

Your use of technology will, of course, vary according to the person with whom you are in contact and what you want to achieve through the interaction. You belong to multiple social groups, each of which likely views technology and its use differently. For example, you may be more likely to contact members of one group via e-mail and members of another group through text messages. The technological tendencies of a group may also impact its ability to achieve social status and acceptance. For instance, the use of iPods may be less common in some groups, and owning one may earn you a higher social status. On the other hand, among groups in which these devices are quite common, owning an iPod may not indicate higher social status but establish group membership and acceptance through the common use of this technology. Each social group to which you belong will help shape and mold your view and use of technology, with the group you view as most important for what you wish to achieve personally and relationally likely providing the greatest influence of all.

**Technological Products and Service Providers**

In addition to adoption and incorporation of relational technologies, identities are also created though the use of specific products and services. Scholars have long studied the diffusion of innovations, or how new ideas and technologies are spread throughout communities (e.g., E. Katz, Levin, & Hamilton, 1963). Some individuals desire to own the latest relational technology and related accessories as a means of demonstrating technological savvy or social status. Aside from issues associated with cost, those whose technological devices appear dated may care little about possessing the latest products and even purposefully delay adopting new technological devices as a means...
of conveying technological indifference or mistrust. The majority of people adopt technological devices at relatively the same time. In all three cases of technological adoption, the technological device being used communicates specific attitudes about that technology.

Beyond the speed at which technological devices and services are adopted, specific meanings are associated with the use of particular products and service providers within a social system. The use of these devices allows people to associate themselves with accompanying perspectives and attitudes related to these technological products. One study (Lobet-Maris, 2003) found that, when purchasing a cell phone, young people are influenced less by quality or available features and more by the image associated with that particular phone. Each style of cell phone is symbolically connected to certain lifestyles, activities, or media personalities, and the use of these phones enables the construction of associated identities. Not limited to the phone model, these connections also include the actual service provider. Individuals in the study linked cell phone networks with specific social features, such as humanitarianism, professionalism, and family. Thus, the use of specific networks may enable people to feel associated with groups sharing certain values or orientations.

**College Experience**

Consider how relational technologies are viewed by people on campus compared to other groups with which you may interact. For instance, if you have recently graduated from high school, how do meanings of technology use there differ from those on campus? If it has been a while since you were in high school, how does technology use on campus compare with that in places where you have worked?

**Ringtones**

Ringtones do not simply inform someone of an incoming call or message; they can be viewed as a method of identity construction. People frequently select favorite music or dialogue from television programs or movies. Using these media products as ringtones announces your media preferences to others and underscores their importance in your life. As we discuss in the next chapter, identities constructed through media preferences are equally as meaningful as other sorts of identities. The selection of ringtones—media-based or otherwise—is meaningful and is based largely on how a person wants to be perceived by others.
Of course, some people tend to keep their cell phone set on silent or vibrate rather than an audible ring tone. This decision could be an indication that the person does not desire to draw attention to his or her use of the technology. It could also indicate that the person does not wish to be socially compelled to answer, which provides greater choice in social contexts. Once again, this selection is not just personal but also relational and is influenced by how a person wishes to be understood.

**Performance of Relational Technology**

Finally, the use of relational technologies can be considered a performance through which identities are constructed. The proper use or performance of technology has been established socially and will likely change over time. However, behaviors are judged according to present norms and prevailing expectations. Violating social standards associated with the use of technology often leads to negative responses and evaluations by others.

The appropriate use of technology is often determined by location and occasion. For instance, there are numerous locations and occasions where the use of technology may be deemed socially unacceptable. You might not expect the use of cell phones, MP3 players, and other technological devices during religious services, weddings, or other special events. The use of cell phones while watching a movie at a theater can really irritate other members of the audience. Likewise, the use of relational technology is usually discouraged in the classroom. Your instructors may ban the use of cell phones in the classroom, but they are not the only ones who disapprove. Other students consider mobile phones ringing or vibrating during class to be just as distracting and annoying as faculty do (Campbell, 2006).

The appropriate use of technology also encompasses content. There are certain subjects people would normally avoid discussing with someone else when they are physically together in public, but often these topics are discussed freely while engaged in a conversation on a cell phone. Perhaps there is a heightened sense of privacy considering the other person cannot be seen or heard, but it is still very much a public performance. Whether they have been personal discussions of intimacy or graphic descriptions of a rash that just will not go away, you have probably overheard cell phone conversations that you would have rather avoided.

**Online Activity and the Construction of Identities**

Having discussed the influence of relational technologies on the construction of personal and relational identities, we now turn our attention to the Internet. Research concerning the
development of online identities has focused on identity construction through chat room discussions. While this line of research has provided valuable insight into Internet activity and personal identity, we would like to focus instead on matters of Internet activity that have received less attention but are continuing to grow in importance in everyday life.

**Screen Names**

Identity development is accomplished in part through the selection of screen names. Of course, screen names are frequently selected when participating in chat rooms but are also evident when playing MMORPGs (massively multiplayer online role-playing games), uploading videos on YouTube, leaving online comments and evaluations, and even selling items on eBay. A person is sometimes known to others only by his or her screen name, which may or may not provide an accurate representation of the person behind the screen. What is known about that individual is often limited to his or her Internet activity, with his or her life away from the Internet frequently unknown. A person may also establish a number of screen names and create multiple online identities.

Users may select screen names based on genuine perceived characteristics of the self or uncharacteristic traits they wish to establish online. Such screen names as *shyguy24* or *toughgr117* may be used by those who view themselves as outgoing or aggressive, as well as by those who see themselves as introverted or passive off-line but who wish to create a unique online persona. In other words, people may select a screen name based on characteristics they usually attempt to develop through off-line interactions with others. They may also select a screen name based on characteristics usually not developed through off-line interaction as a way to test these characteristics in what may be an anonymous and nonthreatening environment.

Screen names may represent other aspects of individuals beyond personality traits. Selecting such names as *HoopsFan90* or *Bears85* may symbolize an interest in a particular sport or team. Choosing such names as *SimpsonsGeek3564* or *GreysAnatoAmy53* may represent an interest in specific movies, television programs, or other popular-culture products. The screen names that people select may also embody personal relationships (*ProudPapa35, EmalynMom64, OlderSister124, ILuvDarvin95*) or represent people's professions, hobbies, and majors (*CrookedCop10_4, OilPainter23, CommStudiesRules73*). Selecting screen names based on these aspects of the self symbolizes their significance in a person's life and how that person wishes to be perceived by others.

Somewhat related to screen names are e-mail addresses, which may also influence and assist in constructing identities. The key components of e-mail addresses and their potential impact on identity construction are presented in Table 9.1.

Although former Vice President Al Gore once infamously took credit, no single person can be considered the inventor of the Internet. However, chief among the early major contributors are Leonard Kleinrock and J. C. R. Licklider. Leonard Kleinrock was the first person to publish a paper on packet switching, an essential component of the Internet. J. C. R. Licklider is considered the first person to conceive of a worldwide network of computers, which he labeled a “galactic network.”
Content Creation

The Internet has become both an instrument and a site for self-expression and, accordingly, the construction and performance of identities. This identity work is partially accomplished through online content creation. Social networking pages, blogs, and the posting of original pictures, videos, reviews, comments, and other personal online creations enable people to share and display their thoughts, interests, talents, and experiences and convey themselves to others in ways they wish to be viewed and understood.

Just as they do in face-to-face interactions, people make strategic choices when presenting themselves (via their creations) online. Choice of content, along with the presentation of the material included, represents a symbolic display of a person’s worldview, providing specific insight into how he or she wishes to be viewed by others. For instance, the
creation of a picture display on Snapfish or a similar picture site does not merely serve to archive or document experiences. Relational and identity-based decisions are made concerning what pictures are shared and what messages these pictures convey to others. Similarly, it has been discovered that people use self-presentation strategies frequently in blogs to achieve acceptance and approval and to appear socially competent (Bortree, 2005).

**Social Networking Sites**

The development of profiles on such social networking sites as Facebook, MySpace, and LinkedIn, along with activity on these sites, remains the most widespread form of content creation. Findings from the Pew Internet & American Life Project indicate that 73% of online teens (12–17 years old), 72% of online young adults (18–29 years old), and 40% of online adults (30 years old and above) have at least one profile on a social networking site (Lenhart et al., 2010). These sites have become important tools in the display and creation of personal and relational identities.

Perhaps the most obvious identity work on these sites takes place through the creation of unique member profiles. Some sites allow people to establish unique backgrounds; to include images from television, movies, video games, and other media; and to incorporate music, all of which convey to visitors how a person wishes to be digitally perceived. Personal information including demographic information, self-descriptions, favorite quotes, interests, and media preferences are frequently offered through these profiles and serve to develop a particular view of the profile’s creator. Once again, as with face-to-face interactions, people make strategic choices about how they hope to be perceived through their profiles. The information provided in or excluded from these profiles is cast to portray a person in the ways in which he or she hopes to be seen by others.

In addition to the creation of profiles, such social networking site activities as updating your status, uploading photos, sharing websites, commenting on the profiles, and even playing games like Farm Town, Mafia Wars, and Bejeweled are used in the development of identities. Status updates, for example, do not simply let others in a network know what a person is doing or what a person is thinking. It can be argued that social networking sites began in the form of online communities. If this is the case, Well.com, launched in 1985, would be among the first. In their current form—in which people create a profile, compile a list of connections, and visit the profiles of other members—Classmates.com, launched in 1995, and SixDegrees.org, launched in 1997, were among the first social networking sites.
These updates present a person’s worldview to others and how he or she wishes to be seen.

A person’s activities and disclosures on social networking sites are often very strategic, but sometimes people include information without fully considering how it will impact the way others see them. Likewise, in face-to-face interactions, people do not always consider the impact of what they say and do on how they are perceived by others. Regardless of similarities with other forms of communication, however, the disclosure and corresponding identity development involved make social networking sites very unique.

Self-disclosure taking place on social networking sites has led communication scholars to question many classic studies and observations related to disclosure. Communication scholars previously believed that self-disclosure occurs gradually as trust is established in a relationship, but these sites instead provide a tremendous amount of personal information all at once. Peripheral, or relatively minor, information, such as favorite music, appears on these sites at the same time as more personal information, such as relationship history and sexual preferences. Scholars also believed that peripheral information about the self would be shared initially; that deeper personal information would be shared later; and, further, that information shared with one person would be different from that shared with another person, depending on the relationships between these individuals. More information, in general, and more personal information, specifically, would be shared with close friends than acquaintances. Unless access is blocked and sometimes in spite of access being blocked, anyone—regardless of his or her relationship with a creator—can view the information included on most social networking site pages. You may have heard stories about people being kicked out of school or losing a job because of the content shared on their social networking webpage. Someone had access to information that he or she would not have gained otherwise.

**Listen in on Your Life**

If you have your own page on a social networking site, what do you believe it conveys to other people about you? How do these perceptions compare with how you view yourself? Do your friends agree about the messages being conveyed?

Relational Technology and Personal Relationships

Having examined the influence of technology on identities, we can now fully explore how technology and relationships are connected and mutually influential. Examining the influence of technology on relationships, Kraut, Brynin, and Kiesler (2006) have observed that on one level changes in technology simply allow people to achieve relatively stable relational goals in new ways. People exchange birthday greetings, for example, through e-cards rather than a traditional card sent through the postal service. Correspondence takes place through phone calls rather than letters. These authors also maintain, however, that more than simply altering how traditional goals are met, technological transformation also changes what can be accomplished, creating new relational goals and norms.
Cell phones, online communication, and other technological advancements are changing how people communicate and form relationships with others, as well as altering established relational goals and norms. This section of the chapter examines the impact of cell phones and other relational technologies on interactions among people. We then examine the characteristics of online communication and its influence on relationships and social networks. Finally, we consider how people interact not only with one another but also with technology itself.

Cell Phones and Personal Relationships

Cell phones have come to represent constant connection to those who possess your number, and how freely people give out their cell phone numbers varies. Giving or denying someone access to your cell phone number establishes both the boundaries and the degree of closeness desired and expected within the relationship. Limiting the availability of contact with a person establishes specific relational boundaries. How that person views and evaluates such limits depends on your relationship. Refusing to provide a cell phone number to a friend may be viewed negatively; therapists not providing clients with their numbers may be viewed as legitimate.

Providing another person with your cell phone number suggests a desire for connection with that individual and perhaps an indication of the type of relationship you wish to establish. For instance, making your number available to an acquaintance could imply a desire to develop a closer type of relationship. As above, the evaluation and meaning of this action generally depend on your relationship with that person. Although it serves to maintain the existence and importance of your relationship, providing a close friend with your cell phone number may be expected. Patients receiving the cell phone number of their doctor along with instructions to call at any time may see this action as more meaningful or consequential because it runs counter to the expectations associated with that relationship.

Constant Connection and Availability

Connection and availability are fully established when calls are actually made and text messages are sent. There are times when the content of these messages is less important than the actual contact itself. Such instances are similar to how seemingly mundane everyday talk keeps relationships going without necessarily adding much
in terms of substance. Connecting with another person reestablishes the existence and importance of the relationship, confirming for both parties its existence and value in their lives. At other times the content of these messages is vitally important, especially during the enactment of relational information and other relational maintenance strategies. Of course, letters sent via the Pony Express in 1860 accomplished the same things, so what makes cell phones so different? We are glad you asked!

Cell phones allow people to be in “perpetual contact” with others (J. Katz & Aakhus, 2002). If you have your cell phone with you, you have your social network with you as well. The ability to make instant contact with another person regardless of geographic location creates a symbolic connection unlike that created by any previous communication technology. Research indicates that 70% of couples with cell phones contact each other at least once a day just to say hello or to chat briefly, whereas only 54% of couples who do not own cell phones do this (Kennedy, Smith, Wells, & Wellman, 2008).

This constant connection with others can provide comfort and security in a relationship or can lead to challenges. Relationships require connections between people, as well as autonomy and independence (Baxter & Montgomery, 1996). While the feeling of constant connection made possible through cell phones can be beneficial, it may decrease feelings of autonomy, equally important and necessary in relationships.

New relational expectations have also developed as a result of constant availability through cell phones. When calling someone’s cell phone, you expect he or she will be readily available. If he or she does not answer the phone, you generally expect him or her to return the call in a timely manner and provide a plausible excuse for not answering in the first place. The same expectations apply when sending someone a text message. Failure to respond to a text message in a timely manner—or failure to respond, period—can constitute a violation in the relationship (Ling, 2004).

In what ways could the use of a cell phone create shared experiences? (See page 236.)

**Shared Experience**

We can discuss shared experience derived from the use of cell phones in two ways. First, the actual use of cell phones constitutes shared technological experience. Especially when people correspond through text messages,
they engage in the use of the same technology. As discussed earlier in the chapter, particu-
lar groups assign great significance and meaning to the use of particular technology. More
than simply transmitting information, the act of sending and receiving text messages both
announces and establishes shared membership and acceptance into a group.

Cell phones also enable people to engage in shared experience even when physically
separated. The immediate transmission of voice, picture, sound, and video provides
people with the sense of experiencing an event or occasion together. A person in a disa-
greement with a romantic partner can be in simultaneous contact with a friend offer-
ing guidance and support and subsequently sharing in the experience. Joyous occasions
and celebrations can likewise be shared with others who are physically absent.

Social Coordination

One of the greatest relational consequences of the cell phone encompasses its use in
coordinating physical encounters with others. Face-to-face interactions are created and
synchronized through the use of cell phones. The ability to establish the physical loca-
tion of others while in public creates opportunities for spontaneous physical interac-
tion. If you call a friend while studying in the library only to discover that he or she is
studying in the adjacent building, this discovery could lead to a decision to meet and
take a break together. The revelation of proximity made possible through cell phones
makes such encounters possible.

Cell phones enable people to synchronize their activities to the point of microco-
ordination. Making plans to meet someone previously involved establishing a fixed
time and physical location for the interaction to occur, but the massive adoption of cell
phones has resulted in time and physical location for contact becoming increasingly
fluid. Microcoordination refers to the unique management of social interaction made
possible through cell phones. Rich Ling (2004) has observed three varieties of microco-
ordination: (1) midcourse adjustment, (2) iterative coordination, and (3) softening of
schedules (see Table 9.2).

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Online Communication and Personal Relationships

Characteristics of Online Communication

Before discussing the influence of online communication on personal relationships, we want to first consider the unique characteristics of online communication. Recognizing that there are a number of unique forms of online communication, such as e-mail, chat rooms, message boards, and instant messaging, we examine the similarities among them.

Richness

One characteristic of online communication—and, for that matter, all text-based interactions—is the lack of nonverbal cues available to help determine meaning. Nonverbal communication, such as vocalics and kinesics, is incredibly valuable when crafting and interpreting messages. The number of verbal and nonverbal cues available through a medium or technology determines its richness. Face-to-face interactions are considered richer than other types of interaction since verbal communication and a range of nonverbal cues are available to convey and interpret meaning. Phone conversations are less rich since they are limited to verbal communication and vocalics. Online communication is limited to verbal communication, with no nonverbal cues available to assist in conveying and interpreting messages.

Accordingly, misunderstandings will more likely occur during online interactions than during telephone conversations or face-to-face interactions. This possibility does not automatically mean that all online interactions will result in misunderstandings, but it does mean that individuals engaging in online communication must carefully consider the messages they craft and carefully interpret the messages they receive. Emoticons, text-based symbols used to express emotions online, often help alleviate problems associated with a lack of nonverbal cues. The general absence of nonverbal cues, however, poses a distinct challenge when interacting online.

Asynchronous

A second characteristic of online communication is its asynchronous nature. In synchronous communication—for example, face-to-face interaction—people interact in real time and can send and receive messages at once. In asynchronous communication, containing a slight or prolonged delay, the interactants must alternate between sending and receiving. E-mail and even instant messaging represent asynchronous communication. Although some online interactions are close to real time, they still contain a delay, and people must take turns being sender and receiver. The asynchronous nature of online communication provides more time to consider the messages of others and to formulate messages.
While sometimes beneficial, the asynchronous nature of online communication also poses a challenge, especially when it comes to instant messaging. Boneva, Quinn, Kraut, Kiesler, and Shklovski (2006) have shown that instant messaging provides as much social support as face-to-face interactions and phone conversations, but people using instant messaging report feeling more disconnected from those with whom they use it to interact. While this finding may be the result of diminished nonverbal cues mentioned above, these authors maintain it may actually be the result of multitasking. Specifically, a person may have multiple instant messaging windows open at the same time, while also browsing the Internet, listening to the radio, watching television, and engaging in other activities.

Quality

Due in large part to fears associated with new technologies mentioned earlier, many researchers have wrongly positioned face-to-face communication as superior to online communication in quality and influence. Conversely, online communication has been positioned as fraught with challenges and potential harm. Baym, Zhang, and Lin (2004), however, have noted that “face-to-face [interaction] may not always be the rich, deep, and inherently superior means of communication that it is often presumed to be” (p. 316). Comparing face-to-face, telephone, and online interactions, these authors found the quality of telephone and face-to-face interactions only slightly higher than that of online interactions. Quite often when online communication is evaluated harshly, the norms and practices of other forms of interaction have been used. This type of evaluation is no more legitimate or fair than using norms and practices of online communication to evaluate face-to-face or telephone interactions.

Two observations about the quality of online communication and other forms of interaction become clear. First, all forms of interaction have unique benefits and challenges. In this regard, online communication is no different from face-to-face communication, telephone conversations, or any other interaction. Second, how online communication is...
used has as much to do with its quality as its actual nature. Again, this use makes it no different from other forms of human communication. What does differentiate online communication is that it is still a relatively new form of interaction for many generations. People’s perceptions of quality surrounding online communication are likely associated with their comfort and familiarity with interacting online, and as they continue to integrate online communication into their lives, it will become just as normal and commonplace as face-to-face communication.

Personal Relationships and Social Networks

Online communication enables people to maintain and enhance existing relationships, reinvigorate previous relationships, and create new relationships. Fears that the Internet will decrease social interaction and diminish the quality of relationships appear unfounded. In fact, increased use of the Internet allows for increased interaction with friends and family, not only online but also face-to-face and over the telephone. Furthermore, the majority of Internet users indicate that it has improved the quality of their relationships (Howard, Rainie, & Jones, 2002).

Accessibility of contact is perhaps what makes online communication so useful in maintaining existing relationships. Relationships take a great deal of effort to maintain, the basis of which involves enacting them through regular contact. The ease with which contact can be made online may very well increase the likelihood that it will take place at all.

Online communication appears to supplement rather than replace traditional forms of interaction. As people use the Internet to connect with friends, family, and acquaintances, it appears as if face-to-face interactions and telephone calls actually increase. While it seems everyone spends a great deal of time online, face-to-face communication remains the most frequent type of interaction among college students (Baym et al., 2004).

The type of online communication used appears to be associated with distance. People use both e-mail and instant messaging when interacting with others regardless of distance. However, they are less likely to use e-mail to contact people who live nearby and more likely to use it to contact long-distance friends and family (Quan-Haase & Wellman, 2002). On the other hand, people are much more likely to use instant messaging to interact with others living nearby (Boneva et al., 2006).

Social Networks

Online communication is dramatically changing the construction and nature of social networks. For instance, Internet users are more likely to maintain larger and more diverse social networks. Studying the impact of the Internet on social networks, Boase, Horrigan, Wellman, and Rainie (2006, p. 5) distinguished two types of connections in social networks: core ties and significant ties (see Table 9.3). Core ties tend to remain the same
regardless of Internet activity, while Internet users report a greater number of significant ties. While the size of core ties may remain, Internet use has been shown to increase the diversity of core ties. For instance, Internet users are more likely to have nonrelatives as members of their core network (Hampton, Sessions, Her, & Rainie, 2009).

Another consequence of online communication is the geographic diversity of social networks. Traditionally, social networks have developed around geography-based communities. In other words, people in social networks tend to live in the same town or at least nearby. While physical proximity still plays a large role in the development of social networks, online communication has resulted in more geographically dispersed networks (Boase et al., 2006). Some people decry the fact that fewer and fewer people socialize with or even know their neighbors, but this does not necessarily mean people are antisocial or lack strong social support in times of need. Socialization and social support increasingly come from the Internet rather than next door. At the same time, Internet users are still just as likely as nonusers to visit with their neighbors (Hampton et al., 2009).

The Media Equation

While a great deal of research has focused on technology’s impact on relationships between people, one research program has instead looked at relationships between people and technology. Before you start making dinner reservations at a fancy restaurant for you and your computer, this research program has not revealed the co-construction of shared meaning, reality, and other features of human-to-human relationships. It has, however, uncovered something incredibly fascinating.

Introduced by Byron Reeves and Clifford Nass (2002), the media equation maintains that interactions with technology are the same as interactions with other people, and people use the same social rules and expectations when interacting with both. You interact with your computer as if it is an actual person.

When they first hear about the media equation, many people deny that they treat technology similarly to people. Yet, have you ever pleaded with your computer to go faster when experiencing a slow connection or yelled at your computer when it crashed? You may even have talked to or humanized other inanimate objects and technology. Accordingly, it may not be so inconceivable that your interactions with technology mirror your interactions with other people, especially given the interactive nature of more recent technological innovations.

To test the media equation, Reeves and Nass (2002) found research involving people–people interaction; erased one of the references to people and replaced it with computer, television, or another technology; and conducted the study using the same techniques that established the people–people findings. If the study found “people like people who

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<th>Table 9.3 Core Ties and Significant Ties</th>
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<td><strong>Core ties</strong> include people with whom you have a very close relationship and are in frequent contact. You often discuss important matters in life with core ties, and you often seek their assistance in times of need.</td>
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<td><strong>Significant ties</strong>, though more than mere acquaintances, represent a somewhat weaker connection. You make less contact with significant ties and are less likely to talk with them about important issues in your life or to seek help from them, but they are still there for you when needed.</td>
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compliment them,” they would change this finding to “people like computers who compliment them,” and then they would test it using the same methods that established the original findings. The results of the people–technology experiments consistently mirrored the results of the original people–people experiment.

I Am Me; I Am My Computer (Personality)

People generally prefer to be around and interact with people who are similar to them rather than people who are different. If you have a dominant personality, you will prefer interacting with other people with dominant personalities. Likewise, if you are submissive, you will prefer interacting with other submissive people. People, it turns out, not only perceive computers as having dominant or submissive personalities but also prefer computers whose personality is similar to their own. Furthermore, people are able to recognize that these computers have such similar personalities.

Computers Say the Kindest Things (Flattery)

Remember that “brownnoser” or “suck-up” from your high school, the one who always complimented the teachers on their clothing or that “wonderfully crafted and inspirational” examination or assignment? That person knew what he or she was doing. The official term for this behavior is ingratiation, and it turns out to be quite effective, whether or not it is genuine or deserved (Gordon, 1996). People like other people who compliment them, and the same evaluative response holds true for computers: People, it was discovered, like computers who offer them praise more than computers that offer no evaluation.

Be Nice to Your Computer (Politeness)

When someone asks for your feedback on a project he or she has completed or asks about his or her performance on a task, you generally provide him or her with a positive response. If someone else asked you about that person’s performance, your response would be more negative than if that person asked you directly. Not necessarily deceitful, you are just not being as negative as you could be because you do not want to hurt his or her feelings. The same patterns of interaction were found to take place with computers. When asked to evaluate a computer while using the same computer to type their responses, people responded much more positively than when typing their responses on a different computer. They did not want to hurt the computer’s feelings. On a personal note, we would like to acknowledge the extraordinary contribution of the computer we are using to type this section of the book—and we hope it does not crash!
FOCUS QUESTIONS REVISITED

1. **How have emerging technologies generally been viewed?**
   The emergence of any new communication technology has historically elicited choruses of concern and anxiety, surprisingly similar in nature. Of course, the introduction of a new technology is not without its supporters, although voices of praise are usually overwhelmed by those of criticism. As with similarities among the concerns, the praise offered for each emerging technology is often quite similar. At the center of all criticism and praise of technologies rest their influence and effect on social interaction and connections among people. This influence is probably why criticism and praise surrounding each emerging technology have sounded so similar; relationships among people have been the one constant throughout all human technological development.

2. **What factors influence identity construction through the use of relational technologies?**
   There are a number of factors influencing the meaning of relational technologies. For instance, media generations develop unique standards and methods for evaluating technology and consequently respond to relational technologies in different ways. The actual use and incorporation of relational technology by a social network will determine the social meanings that subsequently develop. The speed at which new technologies are adopted will influence the meaning associated with the use of particular products and services. Further, specific meanings are associated with the use of particular products and service providers within a social system. Ringtones do not simply inform someone of an incoming call or message; they also can be viewed as a method of identity construction. Finally, the use of relational technologies can be considered a performance through which identities are constructed. The proper use or performance of technology has been established socially and includes such issues as where relational technologies should be used and content.

3. **What do your screen name and e-mail address tell others about you?**
   The selection of a screen name or user name may inform others of genuine perceived characteristics or characteristics you wish to establish online. E-mail addresses can reveal service providers, professions, affiliations, and other personal information.

4. **How are content creation and social networking sites impacting the construction of identity and self-disclosure?**
   Social networking pages, blogs, and the posting of original pictures, videos, reviews, comments, and other personal online creations enable people to share and display their thoughts, interests, talents, and experiences and convey themselves to others in ways they wish to be viewed and understood. Social networking sites, especially, have led communication scholars to question classic studies and observations related to disclosure. Self-disclosure on these sites does not take place gradually; rather, people provide a tremendous amount of personal information all at once. Furthermore, they reveal relatively minor information at the same time as deeper personal information. Finally,
they give the same personal information to everyone instead of disclosing certain information to or hiding certain information from individuals with whom they share a particular relationship.

5. How do cell phones impact interactions with others?
Cell phones have come to represent constant connection to those who possess your number. Giving someone your cell phone number or denying someone access to your number establishes both the boundaries and the degree of closeness desired and expected within your relationship with that person. A new relational expectation of constant availability has developed as a result of the constant availability made possible through cell phones. Also, shared experience develops from the actual use of cell phones and from the immediate transmission of voice, picture, sound, and video. Finally, the use of cell phones makes possible the microcoordination of physical social interaction.

6. What makes online communication different from other forms of communication?
The richness of a medium or technology, determined by the number of verbal and non-verbal cues available, differs among forms of communication. Online communication is considered less rich than face-to-face and telephone interactions. Further, online communication is considered asynchronous, meaning there is either a slight or a prolonged delay of the sending and receiving of messages. Face-to-face and telephone interactions are considered synchronous, meaning the people involved interact in real time and can be at once senders and receivers.

7. How is online communication impacting personal relationships and social networks?
Online communication enables people to maintain and enhance existing relationships, reinvigorate previous relationships, and create new relationships. Online communication also appears to supplement rather than replace traditional forms of interaction. Further, online communication enables people to maintain larger and more diverse social networks.

8. Do people interact with technology like they interact with other people?
According to the media equation theory, people’s interactions with technology are the same as their interactions with other people, using the same social rules and expectations. While the media equation corresponds with basic views of human interaction, it has not yet been applied to the more advanced conceptions of human interaction and relationships examined in communication studies.
QUESTIONS TO ASK YOUR FRIENDS

1. Ask your friends at school how they feel when someone’s cell phone rings during class. Do they find it irritating or believe it is acceptable behavior? If you have friends attending another school, ask them how they feel when someone’s cell phone rings during class. How do their answers compare with those of friends at your school?

2. If you have your own page on a social networking site, ask your friends to compare how you present yourself on this page to how you present yourself off-line. In what ways are they different and similar?

3. Ask your friends about their most recent technology purchase and why they purchased that particular product. Are there any similarities in the products purchased by your friends? Are there any similarities in their reasons for making the purchase?

MEDIA LINKS

1. Examine how characters on television programs use and perform relational technology. Do their use and performance of technology parallel that of your friends, family, coworkers, or classmates?

2. Describe how relationships are featured in the television, print, and Internet advertisements of cell phone companies.

3. Visit the official websites of various television series and movies. How many of these sites have chat rooms or discussion boards available to connect fans and viewers? How might establishing these relational connections influence the number of people watching these series and films? How might the establishment of these connections influence the interpretation and use of this material?

ETHICAL ISSUES

1. In many ways, it is easier to fool people in chat rooms or when instant messaging than when talking with them face-to-face. Do you think deceitfulness online is more pardonable than being deceitful when talking with someone face-to-face?

2. Students have been suspended from some schools for content on social networking sites. Should schools be allowed to suspend students for this content? Would your assessment change depending on whether the content did or did not pertain to school-related issues, activities, or people?

3. Employers have based hiring decisions on social networking site content. Do you believe these actions are justified? In what ways do employers using social networking sites for the evaluation of job candidates compare and contrast with school officials using these sites for student discipline?
**ANSWERS TO PHOTO CAPTIONS**

**Photo 9.1**  The generations in which these gentlemen were born will likely influence their perceptions and use of technology.

**Photo 9.2**  It is never a good idea to use a cell phone in the classroom. The use of cell phones annoys classmates just as much as it annoys instructors—and it really annoys most instructors!

**Photo 9.3**  Identity construction on social networking sites includes the creation of profiles along with status updates, uploading photos, sharing websites, commenting on the profiles, playing games, and other activities.

**Photo 9.4**  Shared experience derived from the use of cell phones can come from a shared technological experience and from enabling people to engage in shared experiences when physically separated.

**Photo 9.5**  Webcams increase the richness of online interaction by increasing the number of nonverbal cues available. They also enable online communication to become more synchronous.

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**STUDENT STUDY SITE**

Visit the study site at [www.sagepub.com/boc2e](http://www.sagepub.com/boc2e) for e-flashcards, practice quizzes, journal articles and additional study resources.

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**REFERENCES**


