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Introduction to

Soci- ology 2e.

8 Media and Technology



Figure 8.1 Facebook, Twitter, and Instagram are just a few examples of social media that increasingly shape how we interact with the world. (Photo courtesy of Khalid Albaih/flickr)

8.1 Technology Today



Figure 8.2 Technology is the application of science to address the problems of daily life, from hunting tools and agricultural advances, to manual and electronic ways of computing, to today's tablets and smartphones. (Photo (a) courtesy of Wikimedia Commons; Photo (b) courtesy of Martin Pettitt/flickr; Photo (c) courtesy of Whitefield d./flickr; Photo (d) courtesy of Andrew Parnell/flickr; Photo (e) courtesy of Jemimus/flickr; Photo (f) courtesy of Kārlis Dambrāns/flickr)

It is easy to look at the latest sleek Apple product and think technology is a recent addition to our world. But from the steam engine to the most cutting-edge robotic surgery tools, **technology** has described the application of science to address the problems of daily life. We might look back at the enormous and clunky computers of the 1970s that had about as much storage as an iPod Shuffle and roll our eyes in disbelief. But chances are thirty years from now our skinny laptops and iPods will look just as archaic.

What Is Technology?

While most people probably picture computers and cell phones when the subject of technology comes up, technology is not merely a product of the modern era. For example, fire and stone tools were important forms that technology developed during the Stone Age. Just as the availability of digital technology shapes how we live today, the creation of stone tools changed how premodern humans lived and how well they ate. From the first calculator, invented in 2400 B.C.E. Babylon in the form of an abacus, to the predecessor of the modern computer, created in 1882 by Charles Babbage, all of our technological innovations are advancements on previous iterations. And indeed, all aspects of our lives today are influenced by technology. In agriculture, the introduction of machines that can till, thresh, plant, and harvest greatly reduced the need for manual labor, which in turn meant there were fewer rural jobs. This led to the urbanization of society, as well as lowered birthrates because there was less need for large families to work the farms. In the criminal justice system, the ability to ascertain innocence through DNA testing has saved the lives of people on death row. The examples are endless: technology plays a role in absolutely every aspect of our lives.

Technological Inequality



Figure 8.3 Some schools sport cutting-edge computer labs, while others sport barbed wire. Is your academic technology at the cusp of innovation, relatively disadvantaged, or somewhere in between? (Photo courtesy of Carlos Martinez/flickr)

As with any improvement to human society, not everyone has equal access. Technology, in particular, often creates changes that lead to ever greater inequalities. In short, the gap gets wider faster. This technological stratification has led to a new focus on ensuring better access for all.

There are two forms of technological stratification. The first is differential class-based access to technology in the form of the digital divide. This digital divide has led to the second form, a **knowledge gap**, which is, as it sounds, an ongoing and increasing gap in information for those who have less access to technology. Simply put, students in well-funded schools receive more exposure to technology than students in poorly funded schools. Those students with more exposure gain more proficiency, which makes them far more marketable in an increasingly technology-based job market and leaves our society divided into those with technological knowledge and those without. Even as we improve access, we have failed to address an increasingly evident gap in **e-readiness**—the ability to sort through, interpret, and process knowledge (Sciadas 2003).

Since the beginning of the millennium, social science researchers have tried to bring attention to the **digital divide**, the uneven access to technology among different races, classes, and geographic areas. The term became part of the common lexicon in 1996, when then Vice President Al Gore used it in a speech. This was the point when personal computer use shifted dramatically, from 300,000 users in 1991 to more than 10 million users by 1996 (Rappaport 2009). In part, the issue of the digital divide had to do with communities that received infrastructure upgrades that enabled high-speed Internet access, upgrades that largely went to affluent urban and suburban areas, leaving out large swaths of the country.

At the end of the twentieth century, technology access was also a big part of the school experience for those whose communities could afford it. Early in the millennium, poorer communities had little or no technology access, while well-off families had personal computers at home and wired classrooms in their schools. In the 2000s, however, the prices for low-end computers dropped considerably, and it appeared the digital divide was naturally ending. Research demonstrates that technology use and Internet access still vary a great deal by race, class, and age in the United States, though most studies agree that there is minimal difference in Internet use by adult men and adult women.

Data from the Pew Research Center (2011) suggests the emergence of yet another divide. As technological devices get smaller and more mobile, larger percentages of minority groups (such as Latinos and African Americans) are using their phones to connect to the Internet. In fact, about 50 percent of people in these minority groups connect to the web via such devices, whereas only one-third of whites do (Washington 2011). And while it might seem that the Internet is the Internet, regardless of how you get there, there's a notable difference. Tasks like updating a résumé or filling out a job application are much harder on a cell phone than on a wired computer in the home. As a result, the digital divide might mean no access to computers or the Internet, but could mean access to the kind of online technology that allows for empowerment, not just entertainment (Washington 2011).

Mossberger, Tolbert, and Gilbert (2006) demonstrated that the majority of the digital divide for African Americans could be explained by demographic and community-level characteristics, such as socioeconomic status and geographic location. For the Latino population, ethnicity alone, regardless of economics or geography, seemed to limit technology use. Liff and Shepard (2004) found that women, who are accessing technology shaped primarily by male users, feel less confident in their Internet skills and have less Internet access at both work and home. Finally, Guillen and Suarez (2005) found that the global digital divide resulted from both the economic and sociopolitical characteristics of countries.

Use of Technology and Social Media in Society by Individuals

Do you own an e-reader or tablet? What about your parents or your friends? How often do you check social media or your cell phone? Does all this technology have a positive or negative impact on your life? When it comes to cell phones, 67 percent of users check their phones for messages or calls even when the phone wasn't ringing. In addition, "44% of cell owners have slept with their phone next to their bed because they wanted to make sure they didn't miss any calls, text messages, or other updates during the night and 29% of cell owners describe their cell phone as 'something they can't imagine living without'" (Smith 2012).

While people report that cell phones make it easier to stay in touch, simplify planning and scheduling their daily activities, and increase their productivity, that's not the only impact of increased cell phone ownership in the United States. Smith also reports that "roughly one in five cell owners say that their phone has made it at least somewhat harder to forget about work at home or on the weekends; to give people their undivided attention; or to focus on a single task without being distracted" (Smith 2012).

A new survey from the Pew Research Center reported that 73 percent of adults engage in some sort of social networking online. Facebook was the most popular platform, and both Facebook users and Instagram users check their sites on a daily basis. Over a third of users check their sites more than once a day (Duggan and Smith 2013).

With so many people using social media both in the United States and abroad, it is no surprise that social media is a powerful force for social change. You will read more about the fight for democracy in the Middle East embodied in the Arab Spring in Chapters 17 and 21, but spreading democracy is just the tip of the iceberg when it comes to using social media to incite change. For example, McKenna Pope, a thirteen-year-old girl, used the Internet to successfully petition Hasbro to fight gender stereotypes by creating a gender-neutral Easy-Bake Oven instead of using only the traditional pink color (Kumar 2014). Meanwhile in Latvia, two twenty-three-year-olds used a U.S. State Department grant to create an e-petition platform so citizens could submit ideas directly to the Latvian government. If at least 20 percent of the Latvian population (roughly 407,200 people) supports a petition, the government will look at it (Kumar 2014).

Online Privacy and Security

As we increase our footprints on the web by going online more often to connect socially, share material, conduct business, and store information, we also increase our vulnerability to those with criminal intent. The Pew Research Center recently published a report that indicated the number of Internet users who express concern over the extent of personal information about them available online jumped 17 percent between 2009 and 2013. In that same survey, 12 percent of respondents indicated they had been harassed online, and 11 percent indicated that personal information, such as their Social Security number, had been stolen (Rainie, Kiesler, Kang, and Madden 2013).

Online privacy and security is a key organizational concern as well. Recent large-scale data breaches at retailers such as Target, financial powerhouses such as JP Morgan, the government health insurance site Healthcare.gov, and cell phone providers such as Verizon, exposed millions of people to the threat of identity theft when hackers got access to personal information by compromising website security.

For example, in late August 2014, hackers breached the iCloud data storage site and promptly leaked wave after wave of nude photos from the private accounts of actors such as Jennifer Lawrence and Kirsten Dunst (Lewis 2014). While large-scale data breaches that affect corporations and celebrities are more likely to make the news, individuals may put their personal information at risk simply by clicking a suspect link in an official sounding e-mail.

How can individuals protect their data? Numerous facts sheets available through the government, nonprofits, and the private sector outline common safety measures, including the following: become familiar with privacy rights; read privacy policies when making a purchase (rather than simply clicking "accept"); give out only the minimum information requested by any source; ask why information is being collected, how it is going to be used, and who will have access to it; and monitor your credit history for red flags that indicate your identity has been compromised.

Net Neutrality

The issue of **net neutrality**, the principle that all Internet data should be treated equally by Internet service providers, is part of the national debate about Internet access and the digital divide. On one side of this debate is the belief that those who provide Internet service, like those who provide electricity and water, should be treated as common carriers, legally prohibited from discriminating based on the customer or nature of the goods. Supporters of net neutrality suggest that without such legal protections, the Internet could be divided into "fast" and "slow" lanes. A conflict perspective theorist might suggest that this discrimination would allow bigger corporations, such as Amazon, to pay Internet providers a premium for faster service, which could lead to gaining an advantage that would drive small, local competitors out of business.

The other side of the debate holds the belief that designating Internet service providers as common carriers would constitute an unreasonable regulatory burden and limit the ability of telecommunication companies to operate profitably. A functional perspective theorist might point out that, without profits, companies would not invest in making improvements to their Internet service or expanding those services to underserved areas. The final decision rests with the Federal Communications Commission and the federal government, which must decide how to fairly regulate broadband providers without dividing the Internet into haves and have-nots.