ONLINE MEDIA

The Internet, Social Media, and Video Games

Twitter/@Keah_Maria

Keah Brown ✓
@Keah_Maria

Follow

I want to shoutout my Disabled brothers, sisters, & non-binary folks! W/ #DisabledAndCute

9:48 AM - 12 Feb 2017

421 Retweets   1,313 Likes

In May 2017, Keah Brown published an essay in the black fashion/beauty/lifestyle magazine *Essence* where she wrote, "There are three things I never thought I'd be: tall, successful, or cute. . . . I assumed they were impossible because I was just a Black girl with a disability who thought she would never be worthy of anything."[1] Brown has cerebral palsy, which affects her motor skills and coordination. Her disability gives her weakness on the right side of her body, and it bothered Brown that she couldn't put her hair up into a ponytail by herself the way her identical twin sister or friends could.[2]

But it turned out that 2016 was a pretty good year for Brown professionally, with several major magazines publishing her essays, and Twitter giving her the treasured blue check mark showing she was important enough to be verified. Around the same time, Brown says she looked into the mirror and decided that she liked who she saw, that she felt cute. The feeling stayed with her, and so on February 12, 2017, she created the hashtag #DisabledAndCute. Once Brown tried out the hashtag, lots of other people with both visible and invisible disabilities started posting the tag, often with photos of themselves. While Brown started the hashtag on Twitter, it quickly spread over to photo-sharing service Instagram, where as of this writing it has been used more than twenty-nine thousand times. (Which shows us Secret 3—Everything from the margin moves to the center.)

"The hashtag went viral, and magazines I had never felt beautiful enough to belong in, like *Shape*, *Cosmopolitan*, and *Allure*, to name a few, were suddenly interviewing me," Brown wrote.[3]

But not everyone is the broader disability community was happy with the tag. Brown writes, "[S]ome members of the community were upset with my use of the word 'cute' because the word can be very infantilizing when non-disabled people call us cute when we do anything." As is almost always the case in social media, some started attacking Brown. She wondered whether she had done the right thing. Could she have chosen a better word? And then she realized she couldn't make everyone happy. She says she chose *cute* rather than *sexy* or *fine* because that was the word she felt described her.

The photos in the initial wave of posts showed young people with a wide range of disabilities, some visible, some not. Alice Wong, who tweets as @SFdirewolf and is part of the Disability Visibility Project, had a hip-hoppy image

of herself wearing a breathing mask in front of a graffiti-painted wall with the caption "Here's my fierce take on #DisabledAndCute."[4]

Brown's hashtag has had a positive effect across the online disability community. Dayna Troisi was born without a left hand. Since blending in was never really an option for her, she never really tried, adopting an all-black "goth chic" look. But throughout her teens and early twenties, she says she was frustrated with people who, in trying to compliment her, ended up insulting her by saying she was "still pretty" with her bionic prosthetic hand. "It was when I saw Keah Brown's hashtag #disabledandcute that something clicked for me. . . . It wasn't disabled BUT cute, it wasn't cute BECAUSE disabled. It showed that we can be both disabled AND desirable. . . . The most important part of the hashtag is that we get to decide to participate. We pick the pictures. We pick the caption. We can decide how the world sees us."[5]

Another example is Shruti Rajkumar, a Connecticut native whose family is from India. For her senior prom, she dressed in a traditional *lehenga choli*—an embroidered skirt with a midriff-baring blouse—and then decorated her forearm crutches with flowers. When she posted her photos on social media, they were with the #DisabledAndCute tag.[6]

Of course, #DisabledAndCute is not the only body-positive/disability hashtag on social media. YouTuber and disability activist Annie Segarra is a wheelchair user who started the hashtag #hotpersoninawheelchair after she saw an old tweet from seventy-four-time *Jeopardy* star Ken Jennings that read, "Nothing is sadder than a hot person in a wheelchair." The hashtag then spread with other Twitter users, including Australian para-athlete Robyn Lambird, sharing their photos. Lambird treated the tag as not just a statement of affirmation but a response to critics. In an Instagram post, she also included the tags #allbodiesar-goodbodies, #cripplepunk, and #babewithamobilityaid. (If you start searching for some of these tags, be forewarned. Some of them will include marginally NSFW posts.)

Brown says her body positivity movement involves a range of issues including size, race, gender, sexual orientation, and age, as well as disability.

She is using the hashtag as "a conversation starter between the disabled community and the mainstream media."[7] Brown argues that disabled people, and especially disabled people of color, tend to be marginalized by the media with very sparse representation. A study released in 2016 showed that 95 percent of the characters with disabilities in the top ten TV shows are being played by able-bodied performers rather than actors who actually have the disability.[8] One recent notable exception was 2018's surprise hit horror film *A Quiet Place*, starring deaf actress Millicent Simmonds as a deaf character living in a postapocalyptic world where you have to remain perfectly quiet or risk being eaten by monsters. Simmonds is from Utah and lost her hearing as a baby.[9]

In December 2017, Brown sold her first collection of essays, *The Pretty One*. Her publisher, Atria, said the book will "explore what it means to be a black woman with cerebral palsy living in an able-bodied, white-centric society."[10]

The internet is in the process of establishing itself not just as a new medium of mass communication, but also as one where individuals can easily respond to what they see and hear. On the internet, the lines between the sender and receiver are increasingly blurred. You can play video games online, you can watch other people play video games, and you can even interact with other people as you watch them playing video games. In this chapter, we look at the origins of the internet, how it has changed from its original government roots, how it has evolved from a tool for computer sharing into a major new mass medium, and how it has caused social change everywhere from the corporate boardroom to the Middle East.

The Development of the Internet

SECRET 4 ▶ The internet is the most recent of the mass media. It is still rapidly evolving and changing, just as radio did in the 1920s and television did in the 1950s. (Remember Secret 4—Nothing's new: Everything that happened in the past will happen again.) Like radio, the internet was not conceived initially as a mass medium. Instead, the first wide-area computer networks were designed to enable academics and military researchers to share data. But these early users soon found that the most useful benefit of the network was being able to send electronic mail to one another instantly.

Although the earliest components of the internet were in use by 1969, the net was limited largely to interpersonal communication until 1991, when Tim Berners-Lee released the World Wide Web as an easy and uniform way to access material on the internet. Since then, the internet has become a medium unlike any other because it is the only one that incorporates elements of interpersonal, group, and mass communications.

So what is the **internet**? A national panel on the future of the internet defines it this way: "The Internet is a diverse set of independent networks, interlinked to provide its users with the appearance of a single, uniform network."[11]

The net starts with the link from your computer to an internet service provider (ISP). For an ISP, you might choose AOL, a cable company, your telephone company, or possibly a small local company that sells internet service in one or two counties. The messages then flow from the

Packet-Switching Networks
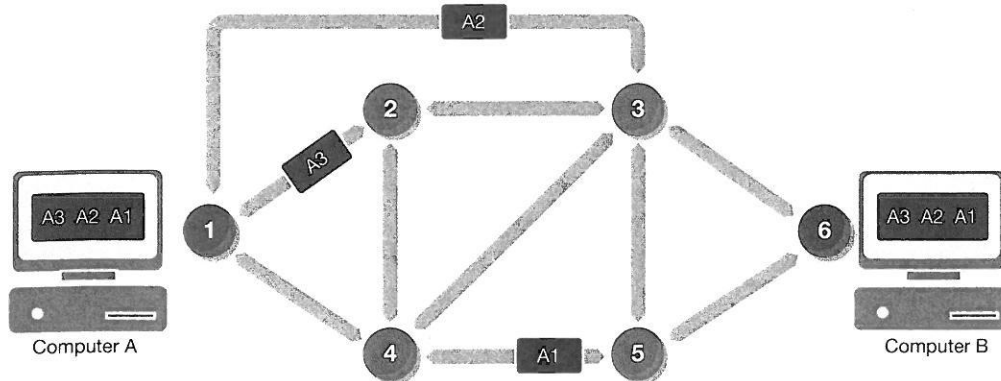
Packet switching is at the core of how wide-area computer networks operate. The sending computer breaks down the message into a number of smaller pieces, or packets, that can be sent separately across the network. These packets each follow their own routes to the destination computer, where they are reassembled into the original message.

smaller links into bigger and bigger digital pipelines (the internet's "backbone") that carry millions of messages across the country.

The backbone was initially a set of high-speed data lines controlled by the National Science Foundation as part of a replacement of its original network, but these lines have since been replaced by high-speed fiber-optic lines run by about a dozen major communication companies.

Packet Switching: Letting Computers Talk to Each Other

Today, people use the internet to communicate with other people, but the technology was originally developed to let computers talk to one another. In the early 1960s, researchers on both sides of the Atlantic Ocean were working on the problem of how to transfer information stored on one computer to another.

In 1964, engineer Paul Baran was designing a military communication network that could survive a nuclear strike. He sought to design a network in which every computer was connected to several other computers so that if one computer failed, an alternative route using different computers could be established. Baran's second insight was that computers could break large messages into a number of smaller message blocks, or packets, which could be sent independently across the network. **Packet switching**, as Baran's scheme came to be known, cuts messages into little pieces and sends them along the easiest route to their final destination (see Figure 10.1). The receiving computer starts reassembling the messages and asks for any missing packets to be resent.[12]

The U.S. Air Force was initially willing to implement Baran's network, but AT&T, which had a monopoly on long-distance phone service at the time, refused to cooperate, so Baran put his idea on hold.[13] Meanwhile, in England, researcher Donald Davies was working on a proposed public communication network. Davies and Baran, working independently, came up with remarkably similar notions for packet switching.[14]

ARPAnet

Eventually the U.S. military built the first nationwide packet-switching network. However, the network that was built was intended to serve the needs of academic researchers, not to survive nuclear war.

The network was built by a farsighted division of the Pentagon called the Advanced Research Projects Agency (ARPA).[15] In 1968, the contract to build the network was given to a Boston-based consulting firm on the condition that it be built in under one year. By the fall of 1969, ARPAnet connected four different institutions, and the first component of the

Drawing of Four-Node Network
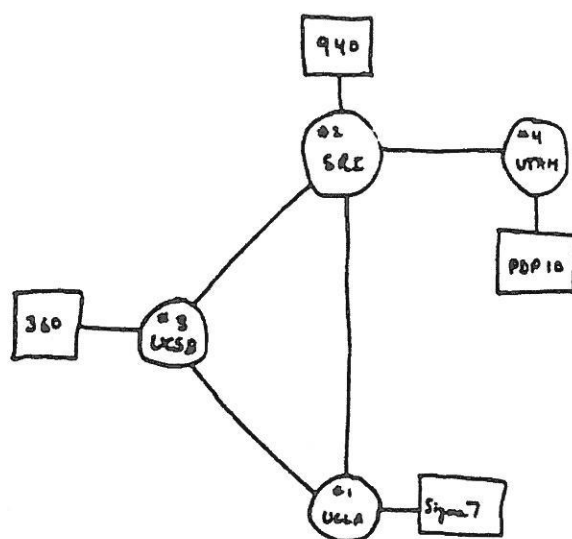
THE ARPA NETWORK

DEC 1969

4 NODES

This is a schematic of the original four-node ARPAnet, including University of California–Los Angeles, Stanford Research Institute, University of California–Santa Barbara, and University of Utah.

Source: Courtesy of Computer History Museum.

internet was running. As the hand-drawn map of ARPAnet in Figure 10.2 shows, the initial nodes were University of California–Los Angeles, Stanford Research Institute, University of California–Santa Barbara, and University of Utah. **ARPAnet** came online at about the same time as the first moon landing. Whereas Neil Armstrong's "one small step" was noted throughout the world as one of the great achievements of humanity, no one outside of ARPA was aware that a new, world-changing medium had just been born.[16]

Connecting Incompatible Networks

As ARPAnet expanded to more and more universities, other networks were formed. Each of these small networks worked well in its own limited and defined sphere, but they couldn't communicate with one another. How could they be linked together?

Creating the Internet's Protocols. The answer came from work done by Bob Kahn and Vint Cerf. The pair envisioned a box, or gateway, that would serve as a translator for all the various incompatible networks. The individual networks would talk to the gateways using a common set of rules, or "protocols." Their protocol was known as **TCP/IP**. TCP stands for *transmission control protocol*, which controls how data are sent out on the internet. IP stands for *internet protocol*, which provides the address for each computer on the internet. The term *internet* was coined in 1973 as an abbreviation for "internetworking of networks."

Commercial Networks. As academics started making personal use of the internet, nonacademics became interested in computer communication and started buying access to network services through companies such as CompuServe, Prodigy, and AOL.[17]

The Next-Generation Internet. With all the public and commercial traffic flowing on the internet, next-generation networks are now under construction to serve the same purpose as ARPAnet—to provide academics and other researchers with high-speed links to computers around the world, especially the limited number of supercomputers. These new and improved networks have the potential to move data ten to twenty times faster than the conventional internet, given ideal conditions. Their primary advantage is that they make possible video and interactive applications that are of much higher quality. For example, students at medical schools in different parts of the country can view an interactive medical simulation simultaneously using the new network, something that would have been impossible with the older, slower lines. As of 2018, more than 562 member organizations, including universities, corporations, government agencies, and nonprofits, belonged to the Internet2 consortium, one of the leading next-generation networks, which connected to a broader, ninety-four-thousand-institution community spread across more than one hundred countries.[18]

What Are Online/Mobile Media?

With the coming of networks, and especially the internetworking standards, computers were transformed. Bob Taylor, who helped oversee the creation of ARPAnet, said,

"Computers were first born as arithmetic engines, but my own view . . . is that they're much more interesting and powerful as communication devices because they mediate human-to-human communication."[19] The thing that makes computer-based communication so powerful is that it includes virtually every level of communication, from the interpersonal communication of email and instant messaging to the mass communication of the World Wide Web.

Email

Although its original purpose was the sharing of resources, the most important factor in the development of the internet was **electronic mail (email)**, defined simply as a message sent from one computer user to another across a network. Primitive email existed prior to the internet, but people could send messages only to other users on the same physical computer. There was no way to send a message from one computer to another.

In 1972, ARPAnet's Ray Tomlinson wrote a simple file-transfer program that could send a message from one system to another.[20] When the software that operated ARPAnet was updated, Tomlinson's email application was sent out over the net so that everyone would have the same materials. Tomlinson also created the form of address using the @ symbol. It was a way of saying, "This is a message for a person 'at' a particular computer." The other reason was that the @ symbol did not appear in users' names or locations. It was the one symbol that meant what Tomlinson wanted it to mean and that was not already in use.[21] Even with all the growth online communication has undergone throughout the decades, email continues to be one of the most important online applications for the largest number of people, even if it isn't as trendy as newer technologies.

Texting and Direct Messaging

Interpersonal communication on the internet has expanded beyond email through a variety of texting and "chat" services accessed through mobile phones or other mobile devices. These originated with text messages that could be sent using Short Message Service, or SMS. The protocol for sending these messages over mobile networks first went online in 1992, and by 2010, it was the most widely used application on mobile phones.[22] While SMS is convenient and can be used as a way of connecting to numerous social media networks, there are also alternative ways of sending instant messages, or ways of engaging in instantaneous communication with others over online and mobile networks. The granddaddy of these was AOL's Instant Messenger (AIM). At one point in the 1990s, it seemed as though AIM was everywhere. But as the former dial-up internet giant gradually lost relevance, it also neglected the development of its **instant messaging (IM)** product. On December 15, 2017, following a twenty-year run, AOL shut down AIM.[23] In the late 2010s, the two most popular apps in this category belong to Facebook—Facebook Messenger and the globally popular WhatsApp.[24] (You can read more about the rise and fall of AOL in Chapter 3.)

The World Wide Web

Until 1990, using the internet for anything more than email was a challenge. Information was scattered about in various places, with no easy way to access it. All that changed with the invention of the World Wide Web by British physicist Tim Berners-Lee. Berners-Lee, who built on the ideas of several internet pioneers, created the software that allows the internet to work as a medium of mass communication. He developed a system that is easy to use, allows users to access any type of information, and has a simplified single addressing system for accessing any document located on the web anywhere in the world.

Predecessors of the Web. The idea of the web dates back to the 1960s. In 1968, Stanford researcher Doug Engelbart staged a demonstration of his vision of an interactive computer. He used a pair of computer terminals in an "online" session that included word-processing
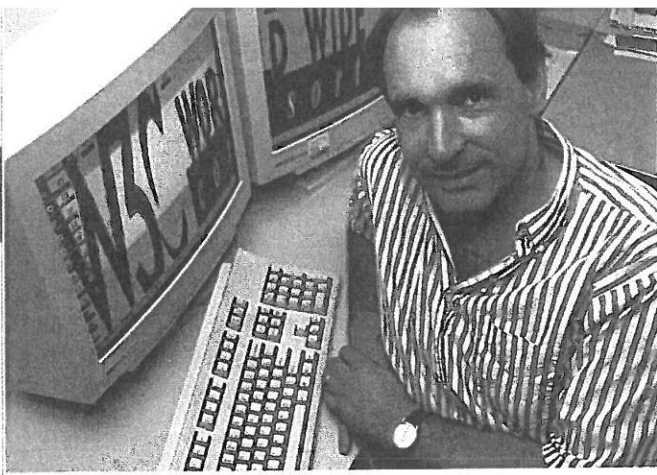
Tim Berners-Lee is the British physicist who created the World Wide Web software as a side project while working at the CERN high-energy physics lab in Switzerland.

documents, hypertext documents, and live video images (sent over closed-circuit analog lines). Engelbart was ahead of his time and largely ignored, but his work was the first expression of what would come with the Macintosh, Microsoft Windows, and videoconferencing.[25]

Another early vision of the web, more philosophical than technical, came from Ted Nelson. Nelson described a form of "nonsequential writing" that he called **hypertext**—material formatted to contain links that allow the reader to move easily from one section to another and from document to document. The most commonly used hypertext documents are web pages.

Tim Berners-Lee and the Birth of the World Wide Web. When Tim Berners-Lee was a child, his parents owned a Victorian-era advice book called *Enquire Within Upon Everything*. What would it be like, Berners-Lee wondered, if there really was a book that contained everything you might want to know? In 1980, he made his first attempt to create such a resource by writing a program called Enquire to organize documents, lists of people, and projects on his computer. The hypertext program would let him find and connect any of his documents. Although Enquire was limited to Berners-Lee's computer, the young British physicist thought about the possibilities of the program extending beyond his own computer to every computer in the world:

> Suppose all the information stored on computers everywhere were linked . . . Suppose I could program my computer to create a space in which anything could be linked to anything. All the bits of information in every computer . . . on the planet would be available to me and to anyone else. There would be a single, global information space.[26]

Berners-Lee was never asked to create the web; he simply thought it would be a good idea for researchers to be able to find documents they needed regardless of which computer those documents resided on. In 1989, he returned to his Enquire idea and started writing the software for a system he called the **World Wide Web**, which allows users to view and link documents located anywhere in the world using standard software.

By 1990, the European Organization for Nuclear Research (CERN), where Berners-Lee was working at the time, had the first web server and a simple browser. (A web server is a program that makes web pages available on the internet. A browser is a program for viewing web pages.)

The World Wide Web has three major components:

1. The **uniform resource locator (URL)**—the address of content placed on the web. An example is www.mysite.com.

2. The **hypertext transfer protocol (http)**—the standard set of rules used by web servers and browsers for sending and receiving text, graphics, or anything else on a website. When you type http://, you are telling your web browser to use this protocol, or set of rules.

3. The **hypertext markup language (HTML)**—the programming language used to create web pages. It consists of all the tags (brief computer commands) that say how text ought to be presented, where graphics should be placed, and what links should be included.

Although the web has grown immensely in complexity since it was invented, these three basic elements remain central to how it operates.

Berners-Lee released the web software in the summer of 1991 on several internet newsgroups. These early users helped him test and debug the program and made suggestions for improvement, and the web started spreading around the world.

Whereas Berners-Lee developed the web on a NeXT computer system, the development of browsers for a wide range of computers was done on a volunteer basis by people around the world. These individuals were willing to share their work, but language barriers sometimes posed a problem. One of the early browsers had documentation only in Finnish. (You can read more about Steve Jobs and the NeXT computers in Chapter 3.)

The most surprising thing about the World Wide Web may be that it was developed almost entirely as a collaborative, nonprofit venture. "What amazed me during the early days was the enormous amount of free energy that went into developing that technology," says Michael Folk, one of the early web developers. "People from all over the world contributed huge amounts of time and ideas in a surprisingly noncompetitive, collaborative way."[27]

Mobile devices, such as the one being used by this Uygur woman in a Chinese bazaar, bring internet access to developing areas without easy access to traditional computers.

A Vision for the Web. Although the World Wide Web has grown far beyond what anyone could have imagined and has changed immeasurably, it is still shaped by the basic vision of Tim Berners-Lee. His goal was to create a completely decentralized system for sharing information that would have no central hub. With no central control, the whole system could scale—that is, grow almost indefinitely—yet still work properly. Berners-Lee was looking for a system in which any computer could link to any other computer: "The power of a hypertext link is that it can link to absolutely anything. That's the fundamental concept."[28]

The success of the World Wide Web illustrates one of the major strengths of the internet: Although users can buy a web browser or web server, the basic technology is free. According to Dave Walden, who worked on the original ARPAnet software,

[Berners-Lee] brought out something, he gave it to a few of his friends, they tried it, they saw that it was good, and he gave it away. It went all over the world. That's how the World Wide Web standard came on the world.[29]

The next time you go surfing on the web, look for evidence of the principles—openness and accessibility—on which it is based:

- Information of all kinds should be available through the same window, or information space. This means that you don't have to use one program to look up phone numbers and another to find the news.

- All documents on the web must be equally accessible.

- There must be a single address that will take users to a document.

- Users should be able to link to any document at any space.

- Users should be able to access any type of material from any type of computer.

- Users should be able to create whatever types of relationships between information that they want to. It should be possible to link a document to any other document.

- The web should be a tool not just for information, but also for collaboration. It is designed for interaction, as well as publication.

- There is no central control of the web.

- The web software should be available free to anyone who wants to use it.

What's the first thing we do when we wake up? For many of us, it involves checking our phone and clicking through Facebook, Twitter, Tumblr, and maybe even Snapchat.

Bringing the Net to the Public. Before 1993, the internet and the World Wide Web belonged primarily to university and military personnel who had used ARPAnet. But in his history of the internet, *Nerds 2.0.1*, Stephen Segaller notes that three things happened during the early 1990s to turn the internet into a significant social force: The World Wide Web code was posted to the internet, commercial users were allowed onto the net for the first time, and the first easy-to-use graphical web browser was written and posted to the net. With these changes, the internet outgrew its military and research origins and became a public medium.

Mosaic. Although Berners-Lee had created a browser as part of the original World Wide Web, it was limited in terms of the computers it would run on, and it could not display anything other than text. **Mosaic**, the first easy-to-use graphical web browser, was created by a group of student programmers led by Marc Andreessen at the University of Illinois at Urbana-Champaign. The developers wanted to create a tool that would make it easier to find things on the internet and that would provide an incentive to put information on the web. As with the original web software, Mosaic was posted on the internet, free for users to download. More than one million users downloaded Mosaic in 1993 (the year it was released), and Andreessen, then twenty-one and a graduate, founded Netscape Communications.[30]

Search as a Medium

The question of whether the internet's search capability is a news medium is significant because various governments around the world want to put limits on internet searching. And companies such as Google, Microsoft, and Yahoo all seem willing to build limits into their portals as part of the price of doing business in countries that have more restrictions on free speech than the United States. Sometimes the censorship of searches is relatively noncontroversial, such as France's attempts to make Yahoo filter out all references to Nazi paraphernalia.[31]

But despite the fact that major tech companies would love to have access to the massive Chinese market, they are largely blocked from doing business there. Google was blocked starting in 2010 when it allowed Chinese users access to its uncensored search engine. Facebook and Twitter have been blocked since 2009, though apparently President Donald Trump was able to tweet during his visit to China in 2017.[32]

Blogs

When Tim Berners-Lee created the World Wide Web, he viewed it not just as a convenient and inexpensive place to access published materials, but also as a forum where people could interact and create their own materials. "We ought to be able not only to find any kind of document on the Web, but also to create any kind of document, easily," he wrote in his history of the web. "We should be able not only to follow links, but to create them—between all sorts of media. We should be able not only to interact with other people, but to create with other people."[33]

Blogs are in many ways a throwback to the early days of magazine publishing, when authors wrote without expecting to be paid. While there are subsidized blogs, the vast majority are run simply to give the writers a forum.[34]

SECRET 2 ▶ I made the case earlier in this book that blogs can be almost as mainstream as what we consider to be the mainstream media. (Remember Secret 2—There are no mainstream media). One test of the importance of a news source is whether it is included in the LexisNexis online news database. LexisNexis is part of a giant subscription service that gives clients access to the full text of major newspapers, magazines, financial reports, and court documents. As of 2006, LexisNexis started including text from selected blogs, including NPR's *Planet Money* economics blog and *Goats and Soda*, a global health and development blog.[35]

HUMANS OF NEW YORK

This is one of the thousands of portraits Brandon Stanton has shot and posted online as part of his *Humans of New York* blogging project.

Back in 2010, Brandon Stanton was a young bond trader working in Chicago. He had a semiprofessional camera and spent some of his free time taking photos around Chicago. Then he lost his job and suddenly had a lot more free time, so he started taking a lot more photos. "Instead of updating my resume and looking for a similar job, I decided to forget about money and have a go at something I really enjoyed."[38]

After traveling around taking photos in a number of U.S. cities, he moved to New York City with the goal of taking ten thousand portraits of ordinary people. Anyone who has tried going up to random people on the street and asking them if he or she can take their picture knows how hard that can be. The project came to be known as *Humans of New York*, and Stanton posted his best photos, along with a short caption/story, on Facebook and Tumblr. It took about a year, but finally he started getting followers, and talk. His blog got some positive comments from Tumblr founder David Karp, but the *Washington Post* says that most of the credit for *Humans of New York*'s fifteen million followers goes to Stanton himself.

In a 2014 speech in Ireland, Stanton said it's all about being willing to just go up and talk to people:

The way I figured this out was just by doing it 10,000 times and getting beaten down, beaten down, beaten down, beaten down. There was no way I'm the best photographer in the world, no way that I'm the best journalist in the world, but I have approached over 10,000 people on the streets of what is stereotypically . . . one of the colder cities in the world and have asked them for their

photograph. So I'm thinking by about this time I might be just about the best in the world at stopping random people on the street and getting them to let me take their photograph.[39]

Stanton's blog posts take a standard format—they have a photo of one or two people along with a quote that tells a very short story about the person(s).

While *Humans of New York* clearly exists and is shared on social media, it also illustrates the importance of social interaction outside of the online component. As Stanton says, the thing that makes *Humans* such a success is not the brilliant quality of the photos or writing, but the fact that he is socially interacting with all these people. Karp says, "It's become this community effort where people actually send in stories about the dude that makes them a bagel every morning who just always has a great story to tell or the dude with an epic mustache that I see walking down the street every day. They send in these stories about these people and Brandon goes, finds them [and] takes these gorgeous portraits of them, and uploads them with that story that led him to that person."[40]

Since his start in 2010, Stanton has traveled around the world taking *Humans* photos in a range of countries including Iran and Pakistan.

You can see the entire blog on Facebook or at www.humansofnewyork.com.

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WHO is the source?

Who is Brandon Stanton? What did he do before he was a photographer?

WHAT is he doing?

Of whom is Stanton taking photos? How does he present them?

WHAT evidence is there?

How does Stanton find the people he takes photos of? How does he get their cooperation? How is his work on the *Humans of New York* project social media?

WHAT do you and your friends think about this?

Take a look at several of Stanton's photographs and read the captions that go with them. Which one is a favorite of yours? Why? How does it capture your attention? Have you ever tried to go up to strangers to try to interview them or take their photograph? Was it easy or hard? Why? If you want, you can try doing your own *Humans* photos and post them through your social media channels.

Berners-Lee's original idea was that every web browser would also be an editor that ordinary people could use to create content as well as to view it—a vision that the early web browsers did not support. But the late 1990s brought a new development called the **weblog** (or **blog** for short), which is a collection of links and commentary in hypertext that can be created and posted on the internet with relatively little effort. Blogs can be public diaries, collections of photos, or commentaries on the news. They often also allow readers to comment on and annotate what the owner has posted.

A prominent example of the influence of bloggers came when Dan Rather, on the CBS news-magazine *60 Minutes II*, reported on a set of memos that seemed to show that President George W. Bush's superior officer had been critical of his service in the Air National Guard. The story ran a couple of months before the 2004 election, and it drew immediate criticism from the conservative blogs *Power Line* and *Little Green Footballs*. The bloggers pointed out inconsistencies in the typefaces used in the memos, suggesting that they looked more like the product of a modern word processor than that of a 1970s vintage typewriter. They also raised questions about the motives and honesty of the source of the documents. Criticisms coming from these and other blogs led to Rather stepping down as the anchor of the *CBS Evening News*.[36]

Blogs have also given readers different perspectives on stories than they might receive otherwise from independent voices. Obsessed Apple blogger John Gruber runs *Daring Fireball*, which Recode.net calls "the world's most powerful one-man media company." Gruber publishes tech and business news about Apple, comments on related issues, and discusses whatever else he wants to. Gruber makes his decisions about what to write about based on the idea that his audience is himself. "It's somebody out there who's exactly like me and isn't writing Daring Fireball," he said.[37] Everest and Himalayan climbing blogger Alan Arnette is one of the world's leading sources on news about Himalayan mountaineering, and he posts daily updates during the peak climbing season. Aside from delivering information you would have a hard time finding anywhere else, Arnette uses his blog to raise money and awareness about Alzheimer's disease. If you do a search on Arnette while people are summiting in the Himalayas, you will find him being quoted in newspapers from Minneapolis to Nepal to Borneo to London. (He's also personally summited Everest and K2.)

Podcasts and Streaming Media

The internet, through blogs, podcasts, and user-video sites such as YouTube, has opened up the options for long-tail news that doesn't get out through legacy (or mainstream) channels. Take the concept of **citizen journalism**. Often when we talk about citizen journalism, we're talking about a newspaper-like blog that posts reports about hyperlocal issues, such as neighborhood events or elementary school sports. These provide valuable alternatives to stories carried in traditional newspapers or on local television news. But they have more in common with the old-time community newspapers that ran stories about who had dinner with whom than with cutting-edge journalism.

But news video posted through sites such as YouTube can lead to amateur cell phone video having international implications. Following the disputed elections in Iran during the summer of 2009, a large number of protesters took to the streets. These protests were suppressed by police, who did not allow journalists to cover the events taking place. But that didn't stop people from shooting cell phone video and then posting it to the internet.

One of the most dramatic examples of this was the news about the murder of Neda Agha-Soltan, a twenty-six-year-old Iranian woman who was studying philosophy and vocal music. Though accurate details about Agha-Soltan are scarce, the *New York Times* reported that she was engaged, valued freedom, and was killed while stopping to get some fresh air after driving home from a singing lesson.[41] When she got out of the car near where protesters were marching, she was

shot by a sniper. Her death was captured on cell phone video. The person who captured the video emailed it to a friend, who then forwarded it to the Voice of America, the British newspaper the *Guardian*, and several other friends. One of those friends, who lives in the Netherlands, posted the video to Facebook. From there, it moved on to a report on CNN.[42] All of this allowed the person who shot the video to bypass official Iranian censorship efforts to block internet, cell phone, and text message traffic.[43]

The first use of the internet by the movie industry was to promote films through brochure-like web pages. Then came *The Blair Witch Project*, which showed how interaction on the web could draw in viewers (see Chapter 8). But this has evolved into the internet being used as the screening venue for short films. But now film sites on the web have become the minor leagues of the movie and television industry. Aspiring filmmakers first establish themselves with a short, low-cost internet film in the hope that someone in the industry will notice them.[44] Of course, on user-generated content sites, such as YouTube, the short films can be beyond low budget.

Eagle vs. Shark (2007)/Photofest

Eagle vs Shark director Taika Waititi, center, on the set with stars Loren Horsley (left) and Jemaine Clement (right). Waititi would go on to make the blockbuster *Thor: Ragnarok*, but this earlier indie film can be streamed on Fandor.

Another thing the internet can do is air films that may be too avant-garde for conventional media. The streaming service Fandor serves up an eclectic mix of art house film, vintage B movies, and offbeat documentaries. But *New York Times* film critic Glenn Kenny says what really makes the streaming site stand out is its interesting menu structure. Look for action/adventure, and you'll see subchoices of "Martial Arts," "Sword and Sandal," "Wilderness," and "Treasure Hunting." The viewer can also search by running time of the movie or year of release. The choices here are clearly different from what pops up on Netflix or Amazon Prime. On the front page as this is being written is a promo for the 2007 New Zealand comedy *Eagle vs Shark* by Taika Waititi, who burst onto the world stage in 2017 with *Thor: Ragnarok*.[45]

But, of course, as we discussed in Chapter 9, online is definitely the place for watching mainstream television and movie programming from services such as Netflix, Hulu, and Amazon Prime. Programs can be had through streaming video podcasts and digital downloads of movies and television shows through online services such as iTunes or Amazon.com. From there, users can view their video on computers, smartphones, tablets, or smart televisions. Back in 2000, Martin French, who worked for the internet film site MeTV, put it this way: "Let's be honest, nobody wants to sit in front of the PC and [watch movies]. It's not a comfortable position."[46] Obviously, people are willing to view video on their computers, tablets, and even smartphones. It is true that alternative devices have gotten better, but there is an ongoing cultural change on how people view video.

Social Media: Sharing Our Lives Online

SECRET 1 ▶ Like so much of the media, social networks (also known as **social media**) are a central part of how we live (remember Secret 1—The media are essential components of our lives). While time and distance used to be barriers to communication, these can now be crossed with relative ease if you have access to some basic online technology, whether through desktop computers or mobile devices. We think of mobile phones as a transformational technology, but the social networks we can access through these phones can transform things even further.

What Makes Media Social?

What is a social network? According to researchers M. Chethan and Mohan Ramanathan, "Social networks connect individuals or groups over a common platform. Once connected, the human tendency to share information or chat (talk?) trivia becomes the driving force, creating a mind-boggling amount of information and traffic."[47] What do social media have that makes them social? Chethan and Ramanathan write that there are five basic characteristics that make social media social:

- **User-created generated content**—Social networks aren't websites where you go just to consume content; you go there to create it. This content can include written words, photos, podcasts, and streaming audio and video.

- **Comments**—The communication doesn't just flow from one creator to other consumers. Everyone who is active on the social network is commenting on what others are posting. This interaction can range from extensive online debates to things as simple as "liking" a photo on Facebook.

- **Tagging**—People tag, or mark, photos and text in which they are featured. They can also tag ideas or keywords within their posts, such as the hashtags in Twitter. Although the hashtag is now seen as an essential part of Twitter culture, it was more than a year after the service started that the hashtag was first created as an organizing principle on social media.[48]

- **Social networking**—People are able to share what they post online with groups of friends or like-minded people. These can be groups of friends on Facebook, stories on Snapchat, or followers on the simple blogging service Tumblr.

- **Customization**—People can make their social network pages unique. For example, on your Facebook page, you get to choose a small profile photo and a larger "cover" photo. On your Twitter page, you get a small "avatar" image, and you can set the colors and background.

Among the most popular social networks are Facebook, the giant of the field; microblogging site Twitter; the professionally oriented LinkedIn; and pinboard site Pinterest. A 2018 study of teen and twentysomething social media use found that Snapchat was the most popular social network at 28 percent, followed closely by photo-sharing service Instagram at 27 percent. Unsurprisingly, the study found that teens are more interested in sharing photos and video than text.[49]

While we often think about social media as being primarily for recreational or social purposes, they can also be used by businesses and organizations for collaboration, public relations, and crowdsourcing—a fancy term for getting other people to do your homework.

Who Are Our Social Media?

YouTube. YouTube was founded by three friends who were early employees at Elon Musk's internet payment company PayPal. When eBay bought out PayPal in 2002, Chad Hurley, Steven Chen, and Jawed Karim had their chance to try something new.[50] The three got the idea for YouTube after a dinner party at Chen's house where many of the guests, who were shooting video using video cameras or cell phones, wanted to share their videos.

"We found it very easy to share the photos with one another," Chen says. "But when we tried to share the movies, and we tried to e-mail the movies, they kept getting rejected, bounced back . . . This was going to be more and more of a problem for different people."[51]

"We saw an opportunity to help people with video," Hurley said. "People have access to devices that have video capability from digital cameras to cell phones and don't have an easy way to share those clips with one another. So we went about simplifying this process to empower everyone with the ability to use video online."[52]

The following year, Google bought out the founders, and YouTube has grown into the biggest video-sharing site online. And while much of the content now is entertainment programming put up to make money with advertising, the roots of the social video-sharing site that it started as are still there. YouTube is considered to be the most popular social media network, used by 94 percent of people ages 18–24.[53] (See Table 10.1.)

Facebook. As anyone who has seen the movie *The Social Network* knows, Mark Zuckerberg created Facebook while he was a student at Harvard back in 2004. As a child, Zuckerberg created a simple messaging program that solved the problem of how his father's front office could announce that a dental patient had arrived. Instead of playing computer games, he created them, according to a profile of him that ran in the *New Yorker*.

While there is controversy as to who developed the idea of Facebook, there can be little doubt that Zuckerberg turned the concept into an incredibly popular tool for communicating with friends. He told journalist Jose Antonio Vargas (whom we will talk about further in Chapter 14) that when he was in college, he and his friends would speculate about how people would use the internet. "We'd say, 'Isn't it obvious that everyone was going to be on the Internet?'" he said. "'Isn't it, like, inevitable that there would be a giant social network of people?' It was something that we expected to happen."[54] As of 2018, more than 68 percent of the American adults who were online were on Facebook, and more than 2.2 billion people were active on Facebook worldwide, making it far and away the biggest social network.[55] Facebook differs from much of the web and has more in common with the old AOL than with the web in general. It is a "walled garden" where people can play games, share articles, and post cute videos of cats. Central to Facebook is the idea that advertisers will be able to reach exactly the consumers that they want to based on information people have shared on Facebook. I can't be certain, but I'm pretty suspicious that the ad offering a good deal on the Blu-ray set of the *Alien* movies was targeted at people like me who are tagged as fans of director Ridley Scott. In any event, the ad worked. I ordered the set. (You can read more about Facebook and concerns over its privacy policies at the beginning of Chapter 3.)

Instagram. Instagram was born on July 16, 2010, and for all the photo-sharing site's evolution and growth into a social media powerhouse, in some ways, it hasn't changed that much. The very first post was by cofounder Mike Krieger with a filtered image of a marina shot through a window. The second was a workplace photo of cofounder Kevin Systrom. Later in the evening, there was a photo of beer and dinner, puppies, and people having fun for the evening. Everything except the selfie![56]

Instagram changed a lot over the following years, adding video, full frame as an option to the original square photo, and more and more and more filters. One important change has been the addition of tools to make it clearer when social media stars are putting up sponsored posts, where

▼ TABLE 10.1

Top Social Media Sites

Channel	Ages 18–24	All Adults
YouTube	94%	73%
Facebook	80%	68%
Snapchat	78%	27%
Instagram	71%	35%
Twitter	45%	24%
Pinterest	31%	29%
LinkedIn	25%	25%
WhatsApp	25%	22%

Source: Data are from Aaron Smith and Monica Anderson, "Social Media Use in 2018," *Pew Research Center*, March 1, 2018, http://www.pewinternet.org/2018/03/01/social-media-use-in-2018/.

Josh Edelson/AFP/Getty Images

▲ In 2018, Facebook announced that 1.3 billion people are using Messenger each month. The app that everyone hated when it was announced in 2014 is now one of the most used messaging platforms.

they are being paid to feature a product in their photo.[57] The other big change happened in 2012 when Facebook paid $1 billion for Instagram. At the time, Instagram only had thirty million users and no revenue. Five years later, however, it had more than six hundred million users, and it is making significant income for its owners. It also paved the way for Facebook to buy the global messaging app WhatsApp and the virtual reality company Oculus.[58]

Like Snapchat, Instagram is much more heavily used by young people than adults (see Table 10.1). Instagram users also are likely to visit the site frequently.[59]

Snapchat. Snapchat is among the most popular social media channels among young people, but once you get out of that demographic, its usage falls way off. Among Americans ages 18–24, the instant message and photo-sharing service is used by 78 percent, but only 27 percent of the overall adult population uses Snapchat. To those who use it, however, it is incredibly popular, with 71 percent of its young users visiting it multiple times a day.[60]

While Snapchat is wildly popular among young social media users, it's had trouble making money. Part of the reason is that its stripped-down design makes it harder to use for those who aren't on it several times a day. The app recently underwent a major, and somewhat controversial, redesign that simplified using the service. The design has been accused of making it look more like Facebook. Although Snapchat has a significant audience with 178 million global users, it's still an order of magnitude smaller than the 2-billion-subscriber Facebook. *New York Times* reporter Kevin Roose writes that it was Snapchat's differences from Facebook that always made it stand out, with its auto-disappearing photos and messages. It was, as Roose writes, "temporary instead of permanent, private instead of public, candid instead of rehearsed."[61]

Although Snapchat is seen heavily as a youth-oriented social media service, thirty-five-year-old California congressman Eric Swalwell, who live streamed a Democratic anti-gun sit-in on the House floor using Periscope, uses the app to connect with constituents. Unlike most politicians, Swalwell does his snapping himself rather than relying on his staff. Swalwell started sharing short videos, photos, and details about his daily life in a format where the material would be gone in a day as a way to connect with younger voters. "I realized that so many of our constituents were on Snapchat," he told the *Hill*. "It wasn't just young people, but their parents had figured out that's where their kids are."[62]

Twitter. In 2006, three college dropouts developed Twitter, a medium that combines elements of mobile text messaging, online instant messaging, and a good dose of blogging. By 2017, it had more than 330 million people answering the question, "What are you doing?"[63] Evan Williams, Jack Dorsey, and Biz Stone started the microblogging Twitter service as a project while they were working for the podcasting company Odeo.[64] Twitter is designed to let people communicate with their friends, family, and coworkers using messages no longer than 140 characters. The little messages, known as tweets, can be delivered to your friends, your acquaintances, or anyone in the world who can be bothered to read them. You can send and receive tweets as emails, on Facebook, through a widget on a web page, or on your cell phone as text messages.

Technology consultant Charlene Li told the *Sunday Times* of London that Twitter can be valuable to businesses because they can use it to set up a two-way relationship with their customers, creating a sense of interaction. At a time when many consumers decide not to watch television commercials
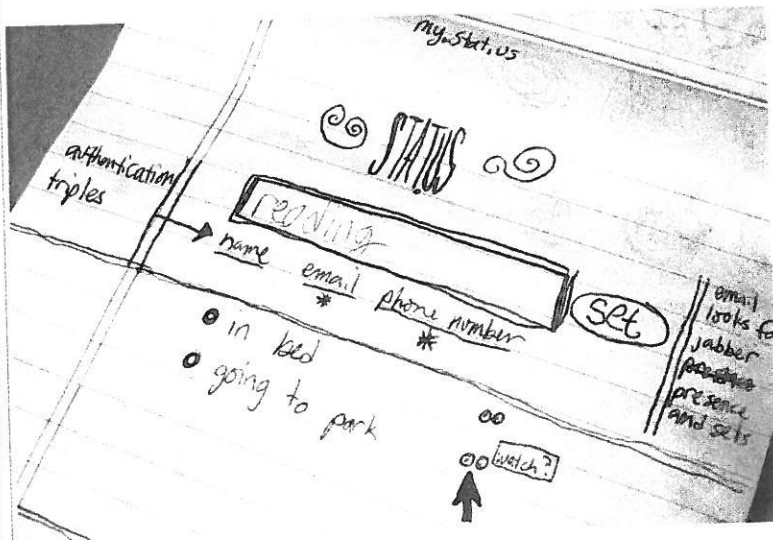
▲ Jack Dorsey's original sketch of what would become Twitter. In this version, he called it stat.us.

SHOULD THE PRESIDENT BE TWEETING?

Donald J. Trump ✓
@realDonaldTrump   Follow ∨

Network news has become so partisan, distorted and fake that licenses must be challenged and, if appropriate, revoked. Not fair to public!

5:09 PM - 11 Oct 2017

19,070 Retweets **84,227** Likes

○ 49K   ⇄ 19K   ♡ 84K   ✉

Twitter/@realDonaldTrump

Donald J. Trump ✓
@realDonaldTrump   Follow ∨

North Korean Leader Kim Jong Un just stated that the "Nuclear Button is on his desk at all times." Will someone from his depleted and food starved regime please inform him that I too have a Nuclear Button, but it is a much bigger & more powerful one than his, and my Button works!

4:49 PM - 2 Jan 2018

185,647 Retweets **490,550** Likes

○ 154K   ⇄ 186K   ♡ 491K   ✉

Twitter/@realDonaldTrump

A year following his election to the White House, real estate developer and former reality television host Donald Trump credited his use of social media, and Twitter in particular, for getting him elected. The president told Maria Bartiromo at Fox Business Network, "I doubt I would be here if it weren't for social media, to be honest with you."[67] Trump said he liked using Twitter because he could respond immediately and directly to his critics: "So when somebody says something about me, I am able to go bing, bing, bing, and I take care of it. The other way I would never get the word out."[68]

Communications professor David Gerzof Richard says President Trump has made a major transformation, going to social media rather than news media to get his messages out. "President Trump uses the platform to tell his story, his way," he said. "There is no editorial board, no fact checkers, no advisers, not filters—just a direct conduit to tens of millions of followers."[69]

Trump's effective use of Twitter harkens back to the work of Canadian economist and media theorist Harold Innis who wrote back in the 1950s that new media that are biased toward rapid distribution of information rather than lasting a long time will tend to upset the social order.[70] (You can read more about Innis and his ideas back in Chapter 2.)

President Trump's most popular tweet of 2017 was of a video from 2007 that had Trump body slamming someone at WWE's WrestleMania. The video had been altered so that the man Trump slammed had his head replaced with a CNN logo. The tweet was discussed on the Sunday morning talk show, and so it got amplification from the legacy media.

His second most popular tweet was part of an exchange of insults between the president and the head of North Korea.

President Trump wrote: "Why would Kim Jong-un insult me by calling me 'old,' when I would NEVER call him 'short and fat?' Oh well, I try so hard to be his friend—and maybe someday that will happen!"[71]

The president's use of a social media channel to handle much of his public communication has been controversial at a number of levels. In addition to his reputation for saying anything he wants to on social media, President Trump has had a history of blocking people who are critical of him. That means that not only does he not see what his critics post, but his critics can't see or comment on his posts.

In May 2018, federal district court judge Naomi Reice Buchwald ruled that President Trump's Twitter feed is a public forum, and so therefore he cannot block people from seeing or interacting with it. Judge Buchwald had previously suggested that if the president or other politicians did not want to see what critics were saying, they could "mute" them. Muting controls what the president would see but not what his followers would see.[72] This has First Amendment implications because presidential tweets are likely official government communication that must be freely available to everyone.

In November 2017, for eleven minutes, a rogue Twitter contract employee disabled President Trump's Twitter account on his last day on the job. While the president's account was quickly restored, the company faced extensive criticism for allowing it to happen in the first place.[73]

There have been suggestions that Twitter should block President Trump because some of his messages (such as the one apparently threatening nuclear war against North Korea) violate the company's terms of service. But the company says it does not intend to block any world

(Continued)

(Continued)

leaders. In an unsigned blog post, Twitter said, "Blocking a world leader from Twitter or removing their controversial Tweets, would hide important information people should be able to see and debate. It would also not silence that leader, but it would certainly hamper necessary discussion around their words and actions.[74]

••

WHO is the source?

Who is Donald Trump? How does he differ from other people on Twitter?

WHAT is he saying?

What is President Trump saying on Twitter and social media? Why is what he is saying controversial?

WHAT evidence is there?

Should the president be able to block people on Twitter? Why or why not? Why is it different from you blocking someone you don't like? Why does Twitter not control what the president and other world leaders post?

WHAT do you and your friends think about this?

Do you think that the president of the United States should be on Twitter? Why or why not? Is that an appropriate place for him to comment on world affairs or to criticize people he doesn't like?

by fast-forwarding through them using their DVRs, they are still willing to receive messages such as electronic coupons. "Twitter is a great platform to push out those messages," Li said. "I don't mind Starbucks making an announcement on my Twitter page but I don't want them in my inbox."[65]

In November 2017, Twitter made its biggest change to its microblogging service by doubling the maximum character count from 140 to 280. Twitter reports that the increased length did not cause most people to write longer tweets, but it did increase levels of traffic and engagement.[66]

Going Mobile

The World Wide Web, which even in the age of mobile apps is still a major part of how we go online, is now nearly thirty years old. And over that time, our access to computers and computer-based media has changed dramatically. If we go back to 1983 in the years before the World Wide Web, a Harris poll found that 10 percent of adults had a home computer and that 14 percent of that small number had a modem to go online using a slow landline phone connection. (If you solve out that story problem, you find that 1.4 percent of American adults were online that year.) Tim Berners-Lee launched the earliest version of the web in 1989, and by 1995, 14 percent of American adults had internet access, primarily using dial-up. But perhaps more significantly, 42 percent of Americans had not even heard of the internet.[75]

By the year 2000, 37 percent of us were online, but only 3 percent had the fast, always-on broadband connection. **Broadband service**, such as a cable modem from a cable television provider or a digital subscriber line (DSL) from a phone company, offers connections that are many times faster than dial-up service. But broadband offers more than just increased connection speed. With a broadband connection, subscribers are connected to the net whenever their computer is turned on. This means that they don't have to download their email; it's always there. It means that things such as online radio, instant messaging, and streaming video are easily accessible.

By 2018, 89 percent of American adults were using the internet in one way or another. But it's that "another" that is transformative. More than two-thirds of Americans (68 percent) go online with mobile devices like smartphones or tablets. Beyond that, one-third of all cell phone owners say their mobile device is their primary way of going online. And in its own way, the move to mobile connectivity is just as revolutionary as the move from dial-up to broadband. For while broadband gave us "always on" connections, mobile internet gives us "anytime-anywhere" access to information.[76]