

Tuning in to Electronic Media

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Can you think of a day in the recent past when you didn't use some form of electronic media? It would have had to be a day when you were not at home, not in your car, not on campus, not in a hotel, and not in a fitness club, grocery store, or shopping mall. It would also have to be a day when you were not using your cell phone or handheld media player or connected to the Internet—a day that you didn't use Twitter or Facebook.

Chances are good that you can't come up with a day. It is almost impossible to totally escape electronic media in today's world. Even if you don't see it or hear it, electronic media are all around you—signals from broadcast stations, satellites, and wireless Internet connections are pervasive. Even when you are backpacking in a remote area, some signals are there. Your only means of escape would be to ignore electronic media by not using a television, radio, cell phone, MP3 player, or computer.

Would you want to spend many days without electronic media? Not likely. We tune in to find out about our world and to know about the things that affect our everyday lives: the weather, the traffic report, the stock market, the horrors of 9/11, or the local news. We also tune in simply to be entertained by the Super Bowl, *The Simpsons*, *American Idol*, *Law and Order*, the latest popular music songs on a Top 40 radio countdown show, your favorite disc jockey, or a music-downloading site on the

web. Electronic media provide us with messages that influence us in many ways.

This book will “tune in” to many aspects of the electronic media that are not readily apparent, despite their prevalence. We will investigate the history, structure, delivery systems, economics, content, operations, regulation, and ethics of electronic media from the perspectives of what happened in the past (“See It Then”), what is happening now (“See It Now”), and what might happen in the future (“See It Later”).

SEE IT THEN

ORIGINS OF ELECTRONIC MEDIA

The desire to communicate is a part of being human. We have always needed to express ourselves but it took a long time before we could do so successfully. About 100,000 years ago, we developed the capacity to communicate using speech. About 40,000 years ago, we drew pictures on the walls of caves. Through the ages, we've used various systems to send messages like smoke signals, semaphores (flags), pigeons, and human messengers, each of which had its own advantages and disadvantages. Each system worked when the conditions were just right, but

was limited at least some of the time. For instance, smoke signals and semaphore systems did not work at night because they depended on sunlight for the receiver to see the signal. Messengers were slow and could be captured during times of conflict or war. Pigeons could carry very small messages but were susceptible to natural predators and severe weather.

As we became more verbal and communicative and each person's sphere of contacts expanded, efforts to communicate became more sophisticated. This did not happen quickly, however; it took many years for written language to develop. In fact, writing came into use about 5,000 to 6,000 years ago. With written language, we no longer had to rely solely on memory.



FIG. 1 A 1,500-year-old cave painting from South Africa. Photo courtesy iStockphoto. ©Skilpad, image #10277331.



FIG. 2 Hieroglyphics from inside a temple in Egypt. Photo courtesy iStockphoto. ©Tjanze, image #10353358.



FIG. . Native American pictographs from a rock wall in Arizona. Photo courtesy Lea Parker.

There's evidence that as early as 4000 BCE people were writing on clay tablets, which were portable and durable records of transactions and observations. One thousand years later, the Egyptians used the fibrous plant papyrus as a type of primitive paper. At the time, a form of picture writing called *hieroglyphics* evolved. About 2000 BCE, the Egyptians developed an alphabet of 24 characters. In the western United States, early Native Americans carved pictographs in rocks to show others what they saw and how they lived their lives.

In the middle of the fifteenth century, Johannes Gutenberg, a metal worker in Europe, developed a system to print multiple copies of an original page using a system of movable type. Using a modified wine press, Gutenberg printed pages for books by putting together individual letters. The letters were then coated with ink



FIG. .4 The first printing press was built in the fifteenth century.

and pressed onto paper using the press. The result was a printed page that could be duplicated many times with high quality and low cost. For the first time, *one* individual with a printing press could reach *many* people with high-quality copies of a book or newspaper.

In 1844, Samuel F. B. Morse developed a system of communication that used electricity and allowed people to send messages over long distances almost instantaneously. The invention—the telegraph—could send messages from one source point to other points using a system of dots and dashes—short on/off's and long on/off's to spell out words one letter at a time. The telegraph worked well as long as the distant point had the equipment and a skilled operator to receive and translate the coded message into words. Twenty-two years later, in 1876, Alexander Graham Bell invented the telephone, a device that then (as now) only required a person to speak into the mouthpiece. Both of these inventions were designed to facilitate *person-to-person* (or *one-to-one*) communication over distances.

As books and newspapers became popular, the practice of communicating to many people at once became common. This *one-to-many* model of communicating was not a balanced two-way model, however. The audience (the *many*) could possibly communicate back to the sender, but this communication, known as *feedback*, was limited. As such, the one-to-many model became known as *mass communication*. The mass media constitute the channel that uses a mechanical device (e.g., a printing press) or electronic device (e.g., broadcast transmitter) to deliver messages to a mass audience.

FYI: Human Desire to Communicate with Aliens

SETI, which stands for *search for extraterrestrial intelligence*, took over this function for the National Aeronautics and Space Administration (NASA) when a budget crisis caused NASA support to be withdrawn. SETI is a nonprofit organization that monitors the radio spectrum for signals from other star systems in the hopes that it will hear a radio signal from intelligent life on another planet. It uses a huge receiving station located in Arrecibo, Puerto Rico, to monitor millions of radio channels simultaneously, mostly by computer.

SETI hasn't found anything yet. Perhaps extraterrestrial beings don't use radio waves to send signals. Maybe they prefer cable or some other technology that cannot be detected with the equipment used at the SETI site. The point here is that humans have a strong desire to communicate with others (humans or extraterrestrials), and they are willing and able to spend the time and money to make that contact.

To learn more about SETI, go to www.seti.org.

FYI: Communication Models

Shannon and Weaver Mathematical Model

Models are created to help us understand process and concepts. Shannon and Weaver (1949) developed a model based on message transmission that helps explain the process of communicating. That model, also known as a *linear model*, works well to explain telephone communication.

The elements of that model are the *information source*, the *transmitter*, the *channel*, and the *destination*. The information source (a person) uses a transmitter (a telephone) to send a signal through a channel (telephone wires) that is received by a receiver (another telephone) and then heard at the destination (a person). In mass communication, the information source (say, a weathercaster at a television station) uses a broadcast television transmitter to send a signal using broadcast waves through the air (channel) that is received by a television receiver and then seen and heard by the viewer (destination). Additional concepts, such as noise that can interfere with the process, were added to the model to make it more generalizable.

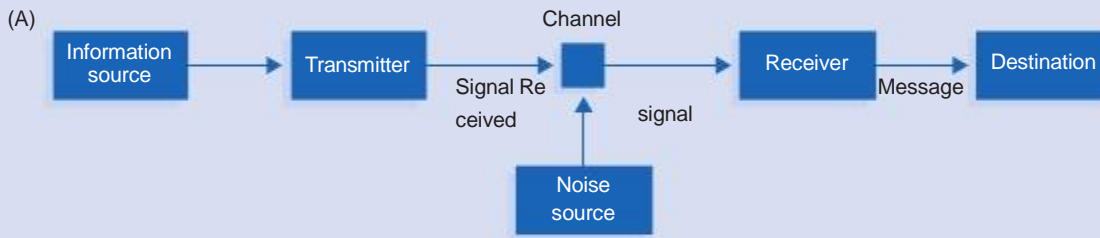


FIG. .5A
Source: Based on Shannon & Weaver, 1949.

Schramm–Osgood Communication Model

Schramm and Osgood (Schramm, 1954) used a simplified model to explain communication. Using only three basic elements—a *message*, an *encoder*, and a *decoder*—this model demonstrates the reciprocal nature of communication between two people or entities. It shows how communication is a two-way process in which the participants act as both senders and receivers of messages.

Schramm Mass Communication Model

In an attempt to create a model to explain mass communication, Schramm (1954) used one source to represent an *organization* that sends out *many identical messages* to the *audience* composed of many individual receivers, who are connected to groups of others and pass along information about the messages from the initial receiver. The dotted lines in the model represent *feedback* from the receivers, which is delayed and not explicit. The organization must then infer the meaning of the feedback (such as ratings for a program) and act accordingly.

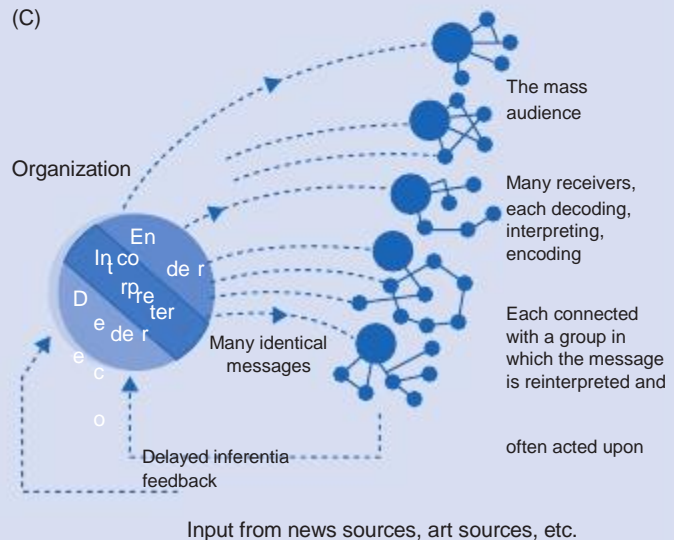
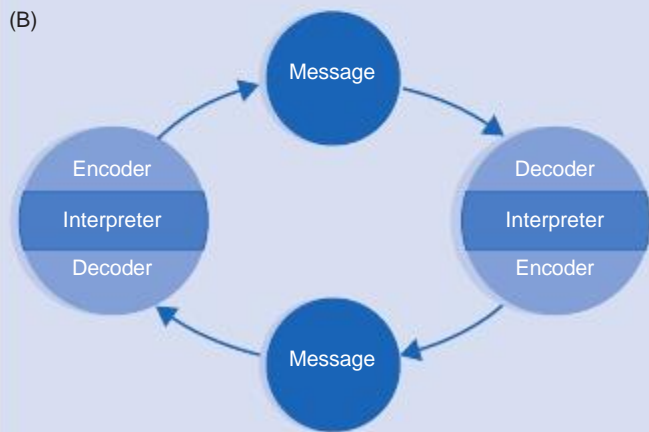


FIG. .5B & .5C
Source: Based on Schramm, 1954.

Although the concept of mass communication using media technology was born in the 1400s with Gutenberg’s printing press. It was not until 1690 when the first information pamphlet was printed for mass consumption by the general public. *Publick Occurrences, Both Foreign and Domestick* was the precursor to the modern day newspaper. Its publisher stated, “the country shall

be furnished once a month with an account of such considerable things as have arrived unto our notice” (“The Massachusetts Historical Society,” 2004). Although the publisher had big plans, the government shut down the paper after the first issue because it was published without legal authority and because it contained salacious content—an item about incest in the French royal

family. Other pamphlet/newspapers came and went but finally in 1833 the *New York Sun* established itself as the first daily newspaper created for the mass audience. Publisher Benjamin Day set the price of his paper, the



FIG. .6 The *New York Sun* was the first of the so-called penny press newspapers.

New York Sun, at one penny, hence the term the “penny press.”

The masses were now being reached by print, but not yet by sound. In the early twentieth century, Guglielmo Marconi developed radio telegraphy, which could send a signal from point to point. This technology was similar to Morse’s telegraph but without the wires. Soon after radio telegraphy became viable, other inventors produced a system for transmitting the human voice and other sounds, such as music. Radio signaled the beginning of broadcasting and eventually the start of commercial electronic media. Newspapers, magazines, clubs, and even schools promoted radio and stimulated interest in the new medium. In the late 1920s, the fascination with radio grew as music and other programs hit the airwaves.

Radio enjoyed its place as the only instantaneous and electronic medium for over 30 years. During this time, it developed most of the programming formats (some of which were later used for television), enjoyed financial success, and was a mainstay in American culture. Radio’s stature changed after World War II, when television broadcasting got off to a roaring start. Many of the popular shows on network radio shifted over to television, providing the new medium with an audience already familiar with the program.

Since the early 1950s, television has been a media powerhouse, dominating the national audience. Television is in great demand by advertisers, who often have to wait in line to buy time on desirable network shows. Beginning in 1946 and lasting into the 1980s, the three major networks—ABC, CBS, and NBC—claimed almost 90 percent of the national prime-time viewing audience. Since then, the viewing audience has moved to cable, satellite, and the Internet. Even so, the broadcast television industry remains a dominant force in the national media, which we will look at later in this book.

Television, in its many forms—broadcast, cable, satellite, videocassette, DVD, and now online at sites like Hulu.com

FYI: Technology Timeline

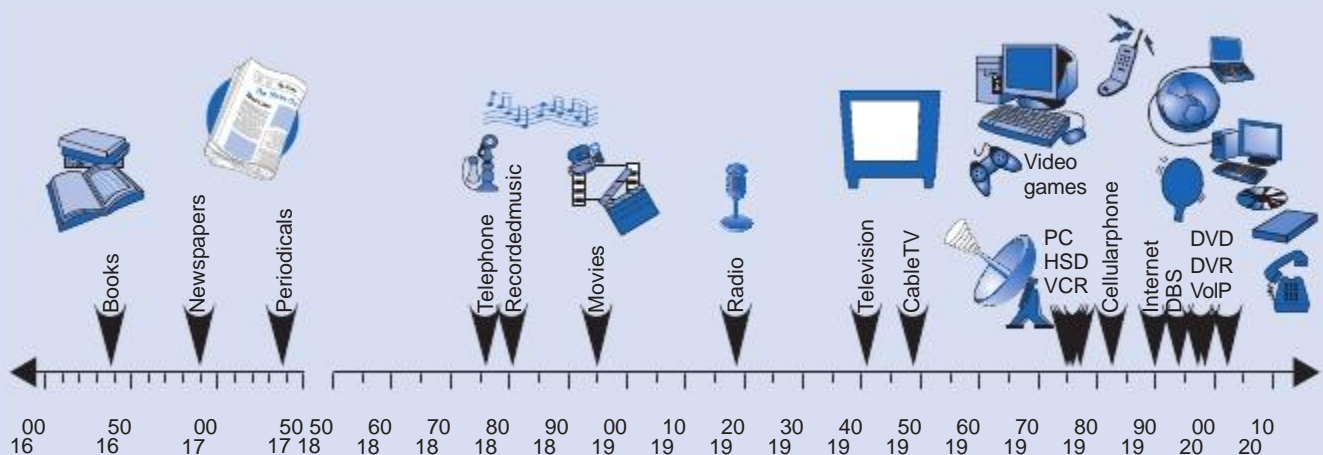


FIG. .7 Communication technology timeline. Source: Grant & Meadows (2008).

and through our cell phones—has been the center point of media for over 50 years. The Internet, the network of networks that connect computers to each other, allows users to find information, entertainment, and personal communication and to do so easily for a low cost. Although everyday use of the Internet is still in its infancy (since the early 1990s), the Internet is a *paradigm breaker*—a medium that defies previous models of electronic media. It has grown more rapidly than any other medium in history. We will discuss the Internet later in this chapter and also in Chapter 5.

CHARACTERISTICS OF TRADITIONAL MASS MEDIA

Each mass medium has specific benefits and is best suited for specific types of communication, for example, television for broadcasting messages to a large, geographically and demographically diverse audience; radio for airing local information to a local audience and delivering specialized programming to specialized audiences; and so on. Each medium can be differentiated from the others by considering the following characteristics: audience, time, display, distribution, distance, and storage.

AUDIENCE

Traditional media differ in the audiences they reach. Radio and television are single-source media that reach large audiences simultaneously, while other media, such as the telephone, reach only one person at a time.

TIME

Media also differ in terms of whether they transmit and receive information in an asynchronous or synchronous manner. With asynchronous media, there is a delay between when the message is sent and when it is finally received. Newspapers, books, and magazines—which are printed well in advance of delivery—are all asynchronous media, as are CDs, DVDs and films. With synchronous media, there is no perceptible delay between the time the message goes out and the time it is received. Synchronous messages from television, radio, and telephone are received almost instantaneously after transmission.

Just because a medium is synchronous doesn't mean that it's interactive, however. Radio and television broadcasts are synchronous but not considered interactive per se. Listeners can call radio request lines, and viewers can call in to vote for their favorite on *American Idol*. But this is *feedback* (an audience message sent back to the source of the communication), rather than true interactivity.

DISPLAY AND DISTRIBUTION

Media also differ in how they display and distribute information. Display refers to the technological means (e.g., video, audio, text) used to present information to audiences or individual receivers. Distribution refers to the method used to carry information to receivers. Television's audio and visual images are distributed by broadcasting, cable, microwave, or direct broadcast satellite. Radio is generally transmitted over the air, although

direct broadcast satellites now send radio signals to subscribers across the country.

DISTANCE

Mediated messages are transmitted over both short and long distances. Some media are better suited for long-distance delivery and others for short or local transmission. Print media need to be physically delivered to their destinations, a process that can be cumbersome and expensive over long distances. Electronic media deliver messages through the airwaves, telephone lines, cable wires, satellites, and fiber optics, giving them a time and cost advantage over print.

STORAGE

Message storage is limited to media that have the means of housing large amounts of information. For instance, CDs, DVDs, and computer flash and hard drives have the capacity to store millions of bits of data, whereas newspaper publishing offices typically have limited space for storing back issues. Until recently, television stations had to rely on small videotape libraries, but most are in the process of changing to digital storage of all programs.

LISTENING AND VIEWING BEHAVIOR

Electronic media have affected the lives of Americans for the past hundred years. The effects are many and can be categorized in three general areas:

- L *Cognitive effects:* Electronic media bring a flood of information to us. We learn about the weather, the stock market, our favorite sports team, world news, health, science, nature, and just about anything we can think about. As a result of using electronic media, we are more knowledgeable about the world and gain insights into topics that we would never experience on our own. Through electronic media we know what the inside of a prison looks like, we can vicariously experience the thrill of skydiving, and we can even observe the horrors of war.
- L *Emotional effects:* Electronic media give us information that may influence our attitudes. For instance, watching a show about how the local animal shelter is underfunded and forced to euthanize animals might make the audience more sensitive to the idea of spaying or neutering their pets. Even hearing a sentimental or raucous song on the radio might cause our mood to change.
- L *Behavioral effects:* The electronic media can persuade us to change our behavior or induce us to action. After watching a show about people who lost their homes to a wild forest fire, audience members might donate money to help provide emergency food and shelter. Hearing the pledge drive on a local National Public Radio station might prompt listeners to phone in their pledges for money.

How we experience the electronic media also influences how we live our lives. Starting in the late 1920s, people gathered around the living room radio in the evening to

FYI: TV Use Statistics

Research shows that the average U.S. adult watches almost 4½ hours of TV each day. In each TV household (more than 99 percent of all households in the United States), the television is on for 6 hours and 47 minutes. This includes watching while eating, a habit of 66 percent of all Americans. And 49 percent of those surveyed said that they watch too much TV.

Although during the period 2004–2009 young people spent less time watching regularly scheduled TV (25 minutes or less), they spent more time—about 7½ hours total—in front of some type of screen, such as a TV, a videogame, or a handheld media player (Eggerton, 2010).

listen to popular network programs. This habit of relying on radio for home entertainment at night set the stage for the popularity of television. Americans were already in their living rooms each night, ready to be entertained. When television finally became a reality after World War II, people sat around their TV sets watching Milton Berle, Arthur Godfrey, Lawrence Welk, and Lucille Ball, along with baseball games and boxing matches. Gone were the days of sitting out on the porch, taking a stroll in the neighborhood, and sitting around the parlor singing and playing the piano.

With the introduction of television, radio narrowed its focus to attract specialized audiences—for instance, rock 'n' roll music programming to attract teenagers. Stations that did not program rock 'n' roll attempted to reach an adult or family audience by using a different type of music and less repetition. Radio listening became a popular activity outside the home with the advent of the transistor radio in the 1950s. It was small and light and could be carried anywhere. At the time, being properly equipped for the beach meant bringing along a portable transistor radio. The notion of personal electronic media was born, as both mass and personal forms offer easily accessible interpersonal media use.

Transistors found their way into the design of television sets as well. Audiences moved away from the living room and the large console TV set and began viewing small TVs in other rooms of the home, especially the bedrooms. Although these sets were not truly portable, because they required standard AC electrical power, television viewing became more of an individual activity. The electronic media had become personalized.

SEE IT NOW**CHARACTERISTICS OF THE WORLD WIDE WEB**

Although popular use of the Internet is less than 20 years old, it has become an incredibly important part of our daily media behavior, mostly because of that portion of

the Internet that allows the use of graphics, sound, and video known as the World Wide Web.

WHAT IS THE INTERNET?

Simply stated, the Internet is a worldwide network of computers. Millions of people around the globe download information from the Internet every day. The Internet also provides an opportunity for people to upload material. An individual can create a web site that could potentially be viewed by millions.

Before any medium can be considered a *mass medium*, it needs to be adopted by a critical mass of users, which is generally about 50 million users. The Internet emerged as a new mass medium at an unprecedented speed. Radio broadcasting (which began in an era with a smaller population base) took 38 years of operation to reach the magic 50 million mark, and television took 13 years. The Internet surpassed 50 million regular U.S. users sometime in late 1997 or early 1998, only about five years after emergence of the World Wide Web.

The Internet is a product of convergence, which one researcher defined as the “coming together of all forms of mediated communication in an electronic, digital form, driven by computers” (Pavlik, 1996, p. 132). Another researcher defined *convergence* as the “merging of communications and information capabilities over an integrated electronic network” (Dizard, 2000, p. 14). The Internet is a convergence of many of the characteristics of traditional media (text, graphics, moving pictures, and sound) into one unique medium.

TECHNOLOGY

The World Wide Web is a technologically separate and unique medium, yet it shares many properties with traditional media. Both its similarities and differences have made it a formidable competitor for the traditional mass media audience.

When comparing traditional media, each can be distinguished by unique strengths and weaknesses. Radio is convenient and portable and can be listened to even while the audience is engaged in other activities. Television is aural and visual and captivating; print (magazines, newspapers, and books) is portable and can be read anytime, anywhere. The web has some of these same advantages. For example, people can listen to online audio while attending to other activities, they can read archived information anytime they please, and they can sit back and be entertained and captivated by graphics and video displays. The Internet also offers benefits that aren't found in traditional media: two-way communication through email, social media, and interactivity at web sites. In addition, the Internet provides online versions of print media, which can be read electronically or even printed to provide a portable version—for instance, the *New York Times* at www.nytimes.com; *Rolling Stone* at www.rollingstone.com; *Elle Magazine* at www.elle.com; and *Spin Magazine* at www.spinmagazine.com.

Although the Internet's proponents highly tout this medium, it falls short of traditional media in some ways. A computer, cell phone, game console, or Wi-Fi-enabled device (such as an iPod touch) is required to access online material. Although the Internet seems almost ubiquitous, there are many places where getting an Internet connection is an inconvenience. Unlike broadcasting, access to the Internet often requires a subscription to an Internet Service Provider (ISP) for your home or workplace, or an account that can be charged whenever you are in a Wi-Fi area that is restricted to account holders (e.g., in a Starbucks).

CONTENT

What makes the web unique is that it can display information in ways similar to television, radio, and print media. Radio delivers audio, television delivers audio and video, and print delivers text and graphics. The web delivers content in all of these media, often from a single page or web site, thus blurring the distinction among them.

The web's big advantage over traditional media is its lack of constraints in terms of space and time. Radio and television content are both limited by available air-time, and print is constrained by the available number of lines, columns, or pages. These limitations disappear online. News and entertainment on the Internet are not confined to seconds of time or column inches of space but are instead free-flowing, with the amount of content being determined by writers or web page designers.

Although the amount of content is unlimited, the speed of online delivery is limited by bandwidth, which is the amount of data that can be sent all at once through a communication path. Think of bandwidth as a water faucet or a pipe. The width of the faucet or pipe determines the amount of water that can flow through it and the speed at which it flows. Similarly, bandwidth limits the speed of information flow and thus affects content. Web designers may reduce content to increase speed, for example. Bandwidth is becoming less of a concern, however, now that broadband connections with fast data speeds are commonplace.

Webcasters are concerned about the licensing fees that have been imposed by the organizations and companies that represent older media. The Recording Industry Association of America (RIAA) imposed music-licensing fees on webcasters that were costly enough to force many stations to terminate their audio streams. Additional fees in the form of a "performance tax" that would impose a tax on radio stations for playing music free on their stations have also been proposed by record companies.

The unique nature of the Internet has traditional media constantly looking over their shoulder, as online entertainment continues to attract audience time and attention. Ted Turner, the media magnate who started the WTBS Superstation and the Cable News Network (CNN), and Michael Crichton, author of *Jurassic Park* and other best-sellers, have both proclaimed that old-style media, especially newspapers, are dinosaurs on their way to extinction in this age of new communication technology. However, traditional media may not have as much to

fear from the Internet and convergence as they think. Looking back, a new medium has never brought about the demise of an old medium. Radio did not erase print media from the face of the earth, and television did not eliminate radio. Newer media have, however, eroded the audiences of existing older media and thus have affected their ability to generate advertising dollars. Older media may certainly have to adapt to new viewer and listener preferences and behaviors.

Traditional media must adapt to a new competitive environment if they want to survive. Many media outlets have done so by delivering their content online, by extending their existing services and adding new ones, and by repackaging their content. For many people, the Internet is supplementing existing media rather than replacing them. Younger audiences, however, who are growing up in an environment where media content is always available on the Internet or on their own storage devices, are using traditional media less and less. The nature of traditional media has been linear programming, where content is available at specific times only (e.g., *The Tonight Show with Jay Leno* is shown at 11:35 p.m. on the coasts and 10:35 p.m. Mountain and Central time zones). Online sites such as Hulu.com, a content site jointly owned by Fox, NBC, and Disney make clips and full episodes of programs like *The Office* or *The Tonight Show* available at any time. Episodes of some shows are available for only a certain period of time after they air on the television network.

WHY DIGITAL?

Digitization of mass mediated content is probably the most revolutionary innovation since the printing press. That statement may be a stretch but digitization is transforming the media and way consumers use the media. Transforming analog signals (continuous waves) into binary or discontinuous signals compresses (reduces) data so they are more easily stored and sent. In binary format, large amounts of information can be archived and retrieved. Users no longer have to search through torn pages or garbled video and audiotapes to find the information they are seeking. Plus, digitized material fits onto miniature, but powerful, portable devices, such as laptops, smartphones, iPods, and electronic books. A digitized dictionary, encyclopedia, and 10 years of *The New York Times* can all be slipped into your back pocket.

Later chapters of this book explain how the Federal Communications Commission (FCC) regulates electronic media and controls the use of portions of the electromagnetic spectrum in this country. It was the FCC that mandated that all broadcast television stations change their signals from analog to digital on June 12, 2009, and return the frequencies used for analog television broadcasting to the FCC to allot to other services, such as cell phones. Digital television is the new "must have" product. The picture is sharp, crisp and clear, it's almost like you've stepped into the picture. And when connected to a high quality audio system it can be hard to separate real life from television life.

Digitization has also been very kind to our ears. Satellite direct digital radio service began in 2002 with satellite services XM Satellite Radio and Sirius Satellite Radio. These

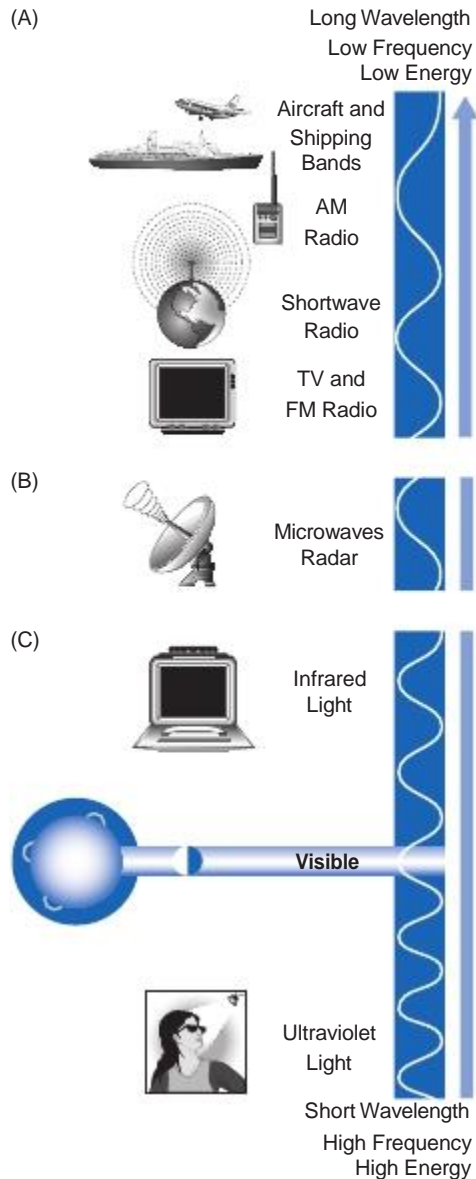


FIG. 1 The electromagnetic spectrum is the range of electromagnetic energy that radiates in waves from a source. At different frequencies the waves have different properties and can be used for a variety of purposes. Source: U.S. Government, NASA, http://imagine.gsfc.nasa.gov/docs/science/known_11/emspectrum.html.

services send out audio signals to a satellite, which then transmits them to your satellite receiver radio. The best part is that the signals travel with you. If you're on a cross-country trip you can listen to the same station the whole way—there's no such thing as losing the signal. Of course, satellite radio requires a special receiver and a paid subscription, but it can certainly be worth it when you consider that you have access to over 200 channels of music, talk, sports and news. Satellite radio has been a bit slow to catch on and so in 2008, XM and Sirius pooled their resources and became one company, Sirius XM Radio.

If satellite radio isn't to your liking, try digital terrestrial radio, also known as *HD radio* (*high-definition radio*). Digital broadcasting (technically called *in-band on-channel, IBOC*) lets a radio station use the same frequency to broadcast its analog and digital signals, which translates to clearer,

static-free radio, and it is compatible with your old analog radio and your new digital one. Better yet, stations can offer more than one "channel" or station in their allotted frequency. In other words, an HD station that is broadcasting at 103.1 MHz can program several subchannels with a variety of formats.

TRENDS AND TERMINOLOGY

The electronic media industry has changed dramatically over the past 20 years, most notably since 1996, when the Telecommunications Act was signed into law. As the technology and rules regarding ownership change, it will be important to understand a number of issues in the field of electronic media.

CONVERGENCE

One of the dominant trends in electronic media in the past 20 years is convergence. In addition to the definitions of convergence provided earlier in this chapter, *convergence* also refers to the blurring of the boundaries between the different types of electronic communication media. The media and other telecommunication services, like voice telephony and online services, have traditionally been distinct, using different methods of connecting with their audiences or users as well as different *platforms*, such as television sets, telephones, and computers. Moreover, these services have been regulated with separate laws.

With digital technology, you can use various media at the same time over one device. In other words, when you are connected to the Internet via a broadband connection, you can listen to an online radio station, retrieve your email, listen to your own iTunes music library, download a book, or use instant messaging to have a real-time conversation (including both audio and video) with people located anywhere in the world. Using your "Smart" phone, maybe an iPhone or a Blackberry, you can receive calls, send and receive text messages, digital pictures and video, store and play MP3 music files, and surf the web.

Digitization has also changed how we read books. Buy a Kindle iPad or another type of e-book device and download hundreds of pages of your favorite reading. Instead of lugging a backpack full of books, you only need to carry one paperback-sized e-book. So, are books still considered print media if you can download them on your computer or e-reader? Clearly, digitization and convergence have blurred the lines that distinguish one medium from another, such that the traditional definitions of these media need to be reevaluated.

CONSOLIDATION

Media companies are quite aware of how convergence has changed the electronic media business. Companies like News Corporation, owner of the Fox network, are buying other types of media. For example, News Corp. owns MySpace.com, and SKYTV, a satellite television company. This type of business *consolidation*, was facilitated by the Telecommunications Act of 1996, which relaxed most of the limits on media ownership.

FYI: Convergence

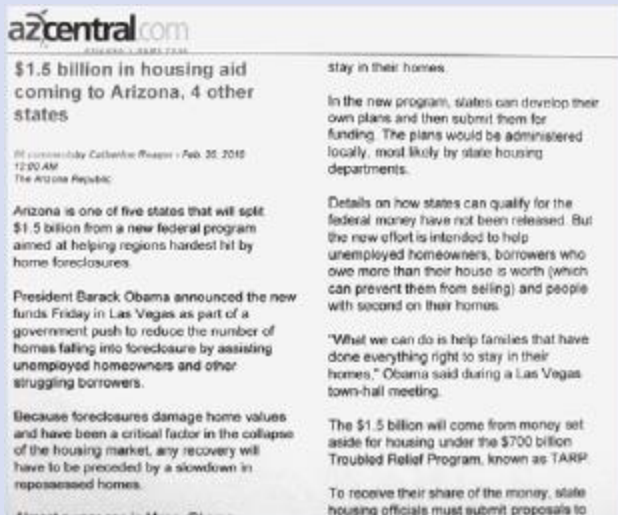
The term *convergence* has been a buzzword in the world of media for some time now. When the term first came into common use, many people thought that traditional media would be replaced and converged or that digital media would take over or supplant the old media. But in fact, the old and new media are still coexisting. Much of the content in any given *print* newspaper can be obtained by going to that newspaper's web site. Although most papers hold back some content for subscribers, newspapers are reaching out for readership in many ways. Large daily newspapers like the *New York Times* have services that will send stories from the day's paper to your email. Instead of paying 50 cents or more for a paper copy of the newspaper, wouldn't you rather go directly to the web and get some of that content for free? The problem, obviously, is that you must have a computer or reading portable device with you when you want to read the paper. Despite the fact that laptops, netbooks, smartphones, iPads, and e-readers like the Kindle have become very popular, such devices

still require a Wi-Fi connection, cell phone line, or downloaded content to allow users to read the news of the day wherever they are.

So people are still buying newspapers and hard copy books because it still fulfills their needs and fits their lifestyle. But newspapers have experienced tremendous financial difficulties because of the recession that began in 2008. As the costs of paper, ink, labor, and distribution have increased along with decreases in circulation and advertising dollars, many papers have been forced to consolidate, stop hard copy publication, or just publish web versions of their "newspaper." Digital media have not replaced traditional media, but they have taken over a large portion of the audience. As technological innovations surface and are adopted into our daily lives, old habits do change. One thing that will not change is the audience's desire to get news, information, and entertainment via mass media, whether that means paper delivery or electronic delivery of content.



(A)



(B)

FIG. . A & . B Most daily papers will have stories that are "converged" in other media. This figure shows an example of the hard copy of a story from a large daily (left) and the online version (right).

Big electronic media companies aren't stopping with consolidation, they are also acquiring newspapers. Cross-media ownership is not a new concept, it actually can be traced to the 1920s but it has mostly been discouraged by the government, because it reduces the diversity and number of media "voices" in a given market. (Read more about this in Chapter 12.)

IT'S NOT CALLED SHOW ART, IT'S CALLED SHOW BUSINESS

Although most media consumers like to think that the sole purpose of the media is entertain them, the harsh reality is that stations are on the air to make money. Broadcast stations, cable and satellite channels, and media-related web sites cost money to operate and often have investors who demand a return on their investment.

The "media are here to entertain us" fantasy may have been somewhat true up to when many broadcasting stations were small, privately held businesses that took pride in having a dedicated audience that they bent over backwards to please with interesting programming. With profit margins at about 10 percent to 25 percent independent broadcasters were thriving, at least until the 1990s, when media became much more competitive and the business model emphasized profits. Nowadays consolidation has led to fewer companies owning more stations. Plus, many ownership groups are publicly held and so look to the bottom line to please their stockholders.

Buying a station is an expensive endeavor and the purchasers more often than not incur a huge debt that takes many years to pay off. Station owners entice the largest possible audience to its programming so it can

sell advertising for the highest possible price to bring in enough profit to support the enterprise and pay back its investors and debt holders. In a weakened economy, advertising is cut back, often leaving stations in dire straits and ripe for takeover or purchase by a media conglomerate.

MONETIZATION

Media companies are faced with the challenge of reaching their target audience that is distracted by other entertainment outlets. As the audience moved to the Internet, the media created their own web sites. As they moved to smart phones and Twitter, companies followed with promotional tweets. As the audience moved to social network sites, media companies started their own social network groups. Radio and television find themselves chasing their listeners and viewers from one media landscape to another. But if they don't they could lose them, and with the audience goes the advertising dollars and the ability to finance new electronic and digital endeavors to lure the audience back. Electronic media companies are scrambling to find ways to make up for lost advertising revenue by attempting to *monetize content* or generate revenue from the new delivery systems (e.g., web sites, podcasts).

SEE IT LATER

As mentioned earlier, this book focuses on electronic media, which have traditionally been defined as mass media delivered electronically. The book also presents an expanded view of electronic media including personal media. Innovations in personal media (e.g., the ability to download music from a file-sharing source) have prompted noticeable changes in the way young people listen to and learn about music. Specifically, they are moving away from broadcast radio and toward the web. This movement has caused a shakeup in the music industry, which is losing money due to decreased CD sales. The topics discussed in the following section are all relevant to what is happening now in electronic media and are certain to influence media and media use in the future.

CURRENT AND FUTURE INFLUENCES

USER-GENERATED CONTENT/DESKTOP PRODUCTION

Audiences are now generating their own content and displaying it on the Internet to potentially millions of users. Since 2005, people from all over the world have uploaded millions of videos onto YouTube. Almost any kind of video can be quickly uploaded using Adobe Flash and MPEG-4 encoding. The site is a phenomenon and a favorite among young people who enjoy short clips of video about anything and everything. Purchased by Google in 2006, this site attracts millions of viewers

each day who spend at least a few minutes watching user-generated video content.

That YouTube videos are produced mostly by amateurs attests to the changes in the video production process. In the last ten years, more and more of that process of making programs has been accomplished using computers. Although there are still some quality differences, small computers can now perform many of the production tasks that were performed by expensive standalone equipment in the past. People can edit video or audio on their laptops and thus produce television or radio programming in their own homes. The ease of producing and displaying homemade video is causing the networks and cable channels to rethink their scheduling and programming strategies, and they may even change the length of their programs. Networks and cable channels may find a way to make money without having to make 30- or 60-minute programs, which are costly and very risky.

Perhaps having the ability to produce programs with desktop computers will lead to greater media literacy, in which the audience has knowledge and understanding not only of the meaning of the content of the media but also of the power of the media, the intent of the media, and the influence of the media.

EMAIL/INSTANT MESSAGING

Consider that the Internet was seen as "an obscure technical toy" until the development of user-friendly browsers in 1992. And even though email was available before 1992 through online services like Prodigy, America Online, and Compuserve, it was not widely used. Since then, email has become a vitally important way to communicate with others. We conduct business and keep in touch with family and friends quickly, easily, and for almost no cost. Although email is generally asynchronous, we constantly check it for recent messages.

Some synchronous services like instant messaging and text messaging allow us to communicate with others in real time. Instant messaging, or IM, provides a one-to-one electronic conversation channel. We can type real-time messages to people who are on our "friends" lists. Services like Skype provide a video and audio link to anybody else with a computer and the Skype software. Compared to the days when the only means of long-distance communication was writing a letter or making an expensive phone call, the Internet provides an inexpensive, quick, and efficient means for keeping in close (and sometimes constant) communication with others.

There's little room to argue the Internet's profound impact on us socially and culturally. Electronic person-to-person communication via e-mail has revolutionized our whole social structure and the way we communicate with one another. Our friendships are now segmented according to how we communicate electronically. We phone, text, instant message, and tweet our closest friends. The next lowest level of friends get sent emails and pithy messages on Facebook. Acquaintances and distant friends are sent notices about blog postings and chain emails. And people you really don't care to associate

much with but still want to keep in contact with get the group email wishing everyone "happy holidays."

CELL PHONES

Just fifteen years ago, it was unusual to find a college student with his or her own cell phone, because they were expensive and considered a luxury for almost everyone except frequent business travelers. Now, it is unusual to find a college student without one. Students talk to each other between classes and most other times when they aren't in their dorm rooms or apartments, where their so-called landline phones are located. As cell phone calling plans now commonly include free long-distance calls, no roaming charges, and unlimited text or picture messaging, keeping in contact with friends and relatives either locally or at great distances is easy and not very expensive.

In addition to making voice calls, a popular feature of cell phone plans is text messaging. The user can tap in a short message using the keypad of the phone and send it as easily as making a call. Students use text messaging and programs like Twitter when they can't talk, such as during classes, in movies, and at work.

SOCIAL NETWORKS

Non-electronic social networks have been around for a long time. People form a social relationship because of common interests or values. Members of fan clubs, religious groups, and political parties are social networked through common interests. The Internet has made social networking an everyday activity for millions of people because of the ease of communicating. On Facebook people create circles of friends who link to other circles of friends. Sometimes on Facebook we learn more about our friends than we really want to know.

BLOGGING

Web logs, also known as *blogs*, are web pages posted by individuals (bloggers) who want to express themselves on a variety of topics. Commonly, bloggers deal with political issues, citing sources like newspaper articles and other bloggers and giving their own commentary and opinion. Sometimes the blogs are similar to personal diaries of everyday lives. But because social network sites are easier to use and connect to more people, social blogging has given way to social networking.

Both social networks and blogs allow one-to-one and one-to-many communication, such that people from all over the world can find out about the lives and opinions of individuals. As with many of the services provided by the web, these types of electronic communication simply did not exist before the mid-1990s. Yet the use of social networks and blogging is a fast-growing trend that is certain to influence how we get and respond to information in the future. These innovations encourage the audience to interact with the media, something that was uncommon in the days of traditional media. Clearly, technology is changing how we receive and respond to the electronic media, and the changes are occurring more rapidly than ever before.

DOWNLOADING MUSIC AND MOVIES

Portable media devices have changed our music listening habits. Back in the 1980s when we wanted portable music we could pop a cassette tape into our Sony Walkman. But it was a hassle to lug around an assortment of tapes. But now with portable media devices like the iPod, we can download and carry around thousands of songs in the front pocket of our jeans or attached to our upper arm when out on a jog. Although the downloading from free file-sharing sites raises serious copyright and ethical questions, legal file sharing is widespread.

Nifty little media devices also store full-length feature films. It's quite amazing to think that you can sit on park bench or on the beach and watch a movie that's playing on a device that fits into the palm of your hand.

The electronic media comprise a large, dynamic, and high-profile industry that is moving us in new cultural and social directions. Satellite and HD radio, digital television, personal and portable media devices, email, social networks, blogging, chatting, instant messaging, Twitter, and wikis are innovations that weren't even in the public consciousness 20 years ago.

FAQ: FREQUENTLY ASKED QUESTIONS ABOUT STUDYING ELECTRONIC MEDIA

When we have questions about how things work, how to get help, how to understand things, or just how to get more information about something we now go to electronic media (the Internet) to find out more. Many sites have FAQ sections to help people with common questions. Following are some typical questions about studying electronic media:

1. How much time do we spend with electronic media?
Few things command as much time and attention in our lives as our interactions with electronic media. In each household that has a television set, it is on for an average of 7 hours and 44 minutes per day, which is more than the time spent working, going to school, shopping, or exercising. Sleep is the only activity that is more time-consuming.
2. Has electronic media viewing/listening changed?
Today's video program content is viewed on more than just television sets. Consumers are watching via the Internet and on cell phones, in-home and out-of-home, live and time-shifted, free and paid, and rebroadcasts and original program streams. Radio, traditionally listened to at home, at work, in autos, on the beach, and while working out, is now listened to on cell phones, MP3 players, and all Internet-enabled devices.
3. Electronic media present us with the icons of pop culture. How many people have not heard of Madonna, Michael Jackson, Marilyn Monroe, Elvis

- Presley, David Letterman, Jay Leno, the Beatles, Brad Pitt, Bart Simpson, Justin Timberlake, and Katie Couric? These people, so familiar in our everyday lives, became prominent with the help of electronic media.
4. Is there a social benefit to watching and listening to electronic media?
We talk about things we see on television and hear on the radio: *American Idol*, *Survivor*, *Dancing with the Stars*, *Wheel of Fortune*, *Star Trek*, *Adult Swim*, and the weather forecast. We talk about movies that we have downloaded and seen on DVDs.
 5. Is electronic media are an ambassadors of our culture?
American electronic media content is pervasive in many parts of the world. That means that the perceptions that people in other countries have formed about us are based on what they have seen in the movies and on television.
 6. Isn't watching/listening to the electronic media enough? Why do we know so much about media personalities?
This industry gets quite a bit of news coverage. Some shows are dedicated to news about the electronic media and movie personalities. Many people are fascinated with the lives of prominent and famous people Shows like *Entertainment Tonight*, *TMZ*, and *Access Hollywood* get more viewers when famous people like Britney Spears or Lindsay Lohan do foolish or scandalous acts that generate entertainment news stories.
 7. How do electronic media actually influence us?
 - Speech—We learn new phrases and meanings for words and slang.
 - Customs and traditions—The portrayal of holiday festivities, like the dropping of the “apple” on New Year’s Eve, shapes how we observe these holidays.
 - Styles of clothing, cars, and technology—We see and hear about these products through electronic media, and we are tempted to try them out.
 - Sense of ethics and justice—We view many stories of good and evil and even experience real courtroom dramas by viewing one of the many courtroom shows on television.
 - Perceptions of others in our society and distant countries—*National Geographic* programs show us how people in South America live, for example.
 - Lifestyles—We learn about other people’s lives and our own by watching talk shows, self-help shows, and advice shows.
 8. Are people today different than they were years ago because of electronic media?
By the time we finish high school, we have been subjected to many thousands of hours of electronic media. What effect does that have on us? Are we different than our parents or grandparents because we have used so much electronic media? Do electronic media have a quick and direct effect on us or a slow, subtle, cumulative effect? Many

people who study media, including psychologists and sociologists, believe that contemporary digital media equipment sets young people apart from older people (e.g., those over 30 years old). Young people don’t remember a time when they weren’t constantly connected and available to their peers and to the world. Entertainment can be customized and even individualized. People born since 1990 were introduced to technology early in life. They are comfortable at multitasking. They can seek out and even create their own entertainment content. They expect change and innovation at a much faster pace than people who grew up with traditional analog media.

9. Can studying electronic media help us in our everyday lives?
Studying electronic media and becoming media literate will help us to be discriminating consumers who can make good media choices. By knowing more about the history, structure, economics, and regulation of electronic media, we can better understand and even predict the future of media. It also helps us to understand how the constant connectivity of today will influence all of us in the future.
10. Will studying electronic media help us in our careers?
Few industries have undergone and continue to undergo the dramatic technological and business changes that we have seen in electronic media in the past ten years. The electronic media are always changing, and as they change, so do we. For college students interested in a career in electronic media, knowing about these changes will present appropriate strategies for job seeking.

SUMMARY

Until recently, the number of people we could communicate with was limited to those we could see face-to-face or contact by letter. Since the mid-nineteenth century, electricity has enhanced various forms of communication and allowed us to communicate to one or to many people over long distances with one message. Through the use of electronic media—radio, television, and the Internet—we now can communicate with a huge number of people almost instantaneously.

Traditional mass media share characteristics such as audience, time, display, distribution, distance, and storage. Electronic media are not constrained by time and distance. Electronic media can have cognitive, emotional, and behavioral effects on the audience, influencing and changing people’s lives.

The Internet has emerged as a new mass medium at an unprecedented speed. It was adopted rapidly and represents a combination or convergence of various mass media. The Internet enables communication with a large audience for low cost and short turnaround time. The process of digitization has simplified the format through which information is transmitted.

Numerous trends are changing the media industry and how we relate to and use electronic media. Convergence is the combining of media and thus the blurring of the distinctiveness among them. Consolidation involves fewer companies owning more electronic media stations and businesses. Some trends have resulted directly from changes in technology. For example, desktop production has been fueled by digital technology and faster computers, which allow individuals to create content for electronic media on a single computer.

Technology has also provided new ways of communicating with others. Email and instant messaging facilitate our communication with others across distances in either a synchronous or asynchronous time frame. Cell phones make personal communication easy and inexpensive and encourage us to keep in touch with others on a more regular basis; they are also capable of text messaging and allow surfing the Internet and even receiving broadcast signals. People communicate with many others through social network sites to share their personal experiences, preferences, and observations. Bloggers create personal web pages that tend to focus on their individual views of political issues and observations of the world in general and to simply let other people know about their lives and opinions.

The study of electronic media is important not only as a field of intellectual pursuit, but also as a means of preparing oneself for a successful career in a media-related field. In addition, because electronic media are so pervasive, we need to be critical consumers of both the content and the activity that consumes so much of our time. American electronic media provide a window for the rest of the world to view our culture. Finally, we should recognize that electronic media are dynamic forces in our society that are constantly changing. We need to study the changes and understand that they affect us deeply.

NOTE

1. In the 1920s, some newspapers were encouraged to start radio stations in their communities, because they had mass media experience and the resources to experiment with the new medium of broadcasting. Some of these historic cross-ownerships still exist today; for example, the owners of the *Pittsburgh Post-Gazette* also own television station KDKA in Pittsburgh.