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EDITION

DAVID CROTEAU • WILLIAM HOYNES • CLAYTON CHILDRESS

# MEDIA/ SOCIETY

Technology, Industries, Content, and Users



# **Media/Society**

**Seventh Edition**

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# Media/Society

## Technology, Industries, Content, and Users

### Seventh Edition

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# Preface

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One challenge with studying media is that things that are old often get reimagined as new again. For instance, the day before sitting down to write the first draft of this preface, a reporter contacted one of us to comment on his story about how people use AirPods to carve out space for themselves on public transit. The trend, the reporter said, was individuals finding ways to use media to create imaginary bubbles for themselves even when crammed together with others. We agreed that some people very likely do this, but told the reporter that this certainly was not a new trend. To think of it as new is to ignore the 15 years people did this with regular headphones on MP3 players and smartphones, and the quarter century before that in which people did this with Walkmans and Discmans, or the entire history of mass public transit before that in which people did the same thing with books, newspapers, and magazines. That people use media to carve out personal space and time is surely one of the many ways that people use media today, but it's one of the ways people have *always* used media.

Our point is not that *everything* is the same. Clearly, there *are* many significant changes to contemporary media. However, our mission in *Media/Society* is to get readers to think critically about recent media developments as well as the many enduring relationships between media and society. In *Media/Society*, we take an interdisciplinary approach with a sociological focus, and the text is particularly relevant for media-related courses in media studies, communications, and sociology. Our approach to media allows us to cover a wide range of questions. We ask, for example,

- How has the evolution of technology affected the media and how we use them?
- How does the business of media operate, and why does this matter?
- How do the professional norms, economic influences, and regulatory constraints that characterize media institutions influence what we see (or don't see) in our media?
- How well does media content reflect the range of realities in our diverse society and our world?
- How do people use the media in their everyday lives?
- What influences do the media seem to be having on us and our society?

Though the answers to such questions have changed over the years, the questions themselves are among the enduring topics that have long concerned both media scholars and, often, the general public.



The revisions in this new edition incorporate recent scholarship and data that address such enduring questions, as well as new concerns raised by the role of digital platforms, the impact of misinformation online, the role of media during our recent pandemic, and more. These revisions include

1. Updates throughout the book of both examples and summaries of recent academic research, such as how news organizations frame social movements, and how global perceptions of life in the United States derived through media may not match reality.
2. A greater emphasis on the role of digital platforms such as YouTube, Instagram, Facebook, and Spotify in producing and consuming media, as well as the economies that surround them.
3. An update of all figures and statistics across the book to reflect the ever-changing features of our media environment.

This new edition of *Media/Society* is marked by the addition of a young new co-author. (“Young” at least by academic standards!) As an undergraduate student studying with Bill Hoynes, Clayton Childress read a much earlier edition of this book, which helped inspire him to focus his professional life on the study of culture and media. Now the author of an award-winning book about the publishing industry, *Under the Cover*, Clayton pursues his passion at the University of Toronto, where he teaches about media, culture, and society. Just as the study of media is enhanced by incorporating both ongoing trends and new developments, we think *Media/Society* has been improved by integrating Clayton’s fresh perspective with the enduring framework and structure that have made the book a long-time favorite. We hope you agree.

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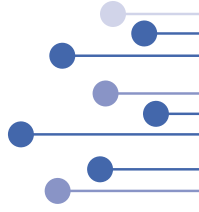
# Introduction

Chapter 1 serves as an introduction and overview of the book. We note the central role media play in our lives and present a model for understanding the media that helps organize the book. This framework highlights the push-pull relationships between elements of the media system—the industry, users, content, and technology—all of which are embedded in a larger social context. Understanding these elements and how they interact is crucial for making sense of enduring questions about the media in any era.



Manan Vatsyayana/Contributor/Getty Images

# Media/Society in a Digital World



In the 21st century, we routinely navigate through a dense media environment that is unprecedented in human history. Our everyday lives are saturated with words, pictures, videos, and sounds that we access through phones, tablets, laptops, televisions, streaming devices, radios, game consoles, books, newspapers, magazines, movie theaters, and more. Not only are we audiences for this vast sea of media content, but sometimes we also help circulate and even create some of it through our social media posts, “likes,” tweets, texts, video clips, online reviews, comments, and other activities. Yet for most of us, all of this is utterly unremarkable. We’re so comfortable with media that we mostly take them for granted. They are like the air we breathe, ever present yet rarely considered.

In extraordinary times, such as during the global COVID-19 pandemic, media play an even more important role in our lives. In March 2020, the early days of the pandemic, the percentage of time people in the United States spent online via mobile devices accessing information about current events and global news more than doubled compared to the previous year. The amount of time people spent watching television, gaming, and using other media also skyrocketed because they stayed at home more due to public health restrictions (Nielsen 2020a).

This book asks you to step back and seriously reflect on important questions about the media environment in which we live, whether during routine or extraordinary times. It invites you to better understand your everyday media activities by placing them in a broader social, economic, and political context. In this book, we don’t lecture about the “evils” of media, nor do we get caught up in the hype about the latest wonders of our digital age. Instead, we ask enduring questions about how the media work and why this matters:

## Learning Objectives

After studying this chapter, you will be able to

- **LO 1.1:** Describe the prevalence of radio, television, and devices in today’s society
- **LO 1.2:** Compare the characteristics of interpersonal and “mass” communication, and describe how the development of the internet has complicated these models of communication
- **LO 1.3:** Outline the broader sociological perspective—specifically the concepts of structure and agency—that informs media and communication systems
- **LO 1.4:** Identify and explain how the four core components of the media model interact with each other and the social world
- **LO 1.5:** Document some of the push-pull dynamics involved in the civil rights struggles of the mid-20th century and the ongoing Black Lives Matters movement of recent years

- How have media technologies changed the way media operate?
- What can we learn about today's media by revisiting media from years past?
- How do companies like Google and Facebook shape what we see—and don't see?
- How are traditional media companies—in print, radio, television, film—still central to our media experiences?
- Why are some images and ideas so prevalent in the media, while others are marginalized?
- How do governments regulate media, and how does that affect media's operation?
- How does social inequality influence both what we see in the media and how we use media?
- How has the internet transformed politics and journalism?
- What is the significance of the ever-increasing globalization of media?
- What impact are media having on our society and on our world?

These questions and others like them are not simple to answer. Indeed, one of the arguments in this book is that popular answers to such questions often overlook the more complicated dynamics that characterize the media process. But these tough questions raise important issues with which we need to grapple if we are to understand the media and their important place in our society.

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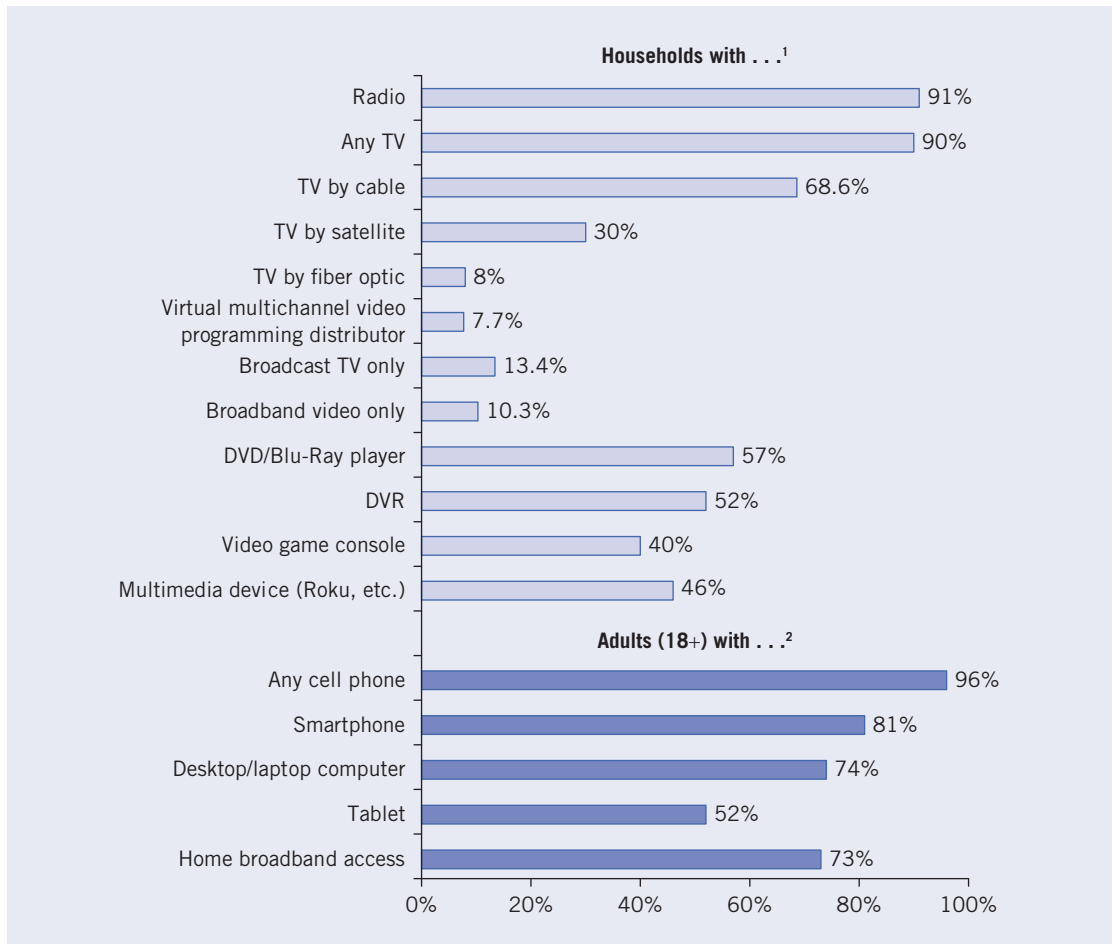
## The Importance of Media

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To realize the significance of media in our lives, consider all the media devices that surround us (see Figure 1.1):

- Radio is a nearly universal presence in U.S. households and automobiles, reaching 91 percent of adults in any given week, more than any other media platform (Nielsen 2020b).
- Television is in almost all homes, with 86.6 percent of TV households paying for access—either through traditional cable (72.7%), broadband only (8.6%), or a virtual multichannel video programming distributor

Figure 1.1 U.S. Adoption Rates of Select Media, 2019–2020



Sources: <sup>1</sup>Nielsen (2020b); <sup>2</sup>Pew Research Center (2019b).

(vMVPD) such as Sling or YouTube TV (5.4%)—while 13.4 percent rely on free, over-the-air broadcast television. Many TV households also have additional television-related electronic devices including DVD/Blu-Ray players (57%), DVRs (52%), video game consoles (40%), and internet-connected devices that enable streaming (48%) such as Roku, Amazon Fire TV, or Google Chromecast (Nielsen 2020b).

- Devices that can connect to the internet are available to most—although not all—Americans. About 96 percent of adults have a cell phone of



some sort; 81 percent have a smartphone (Pew Research Center 2019b). Nearly three-quarters (74%) of U.S. adults have a desktop or laptop computer, and 54 percent have a tablet. Seventy-three percent of adults have broadband internet access at home (Pew Research Center 2019b). Teens, too, use media-related technology, sometimes at a higher rate than adults. For example, 95 percent of U.S. teens ages 13 to 17 have access to a smartphone at home, and about 9 out of 10 (88%) of them have access to a desktop or laptop computer (Pew Research Center 2018).

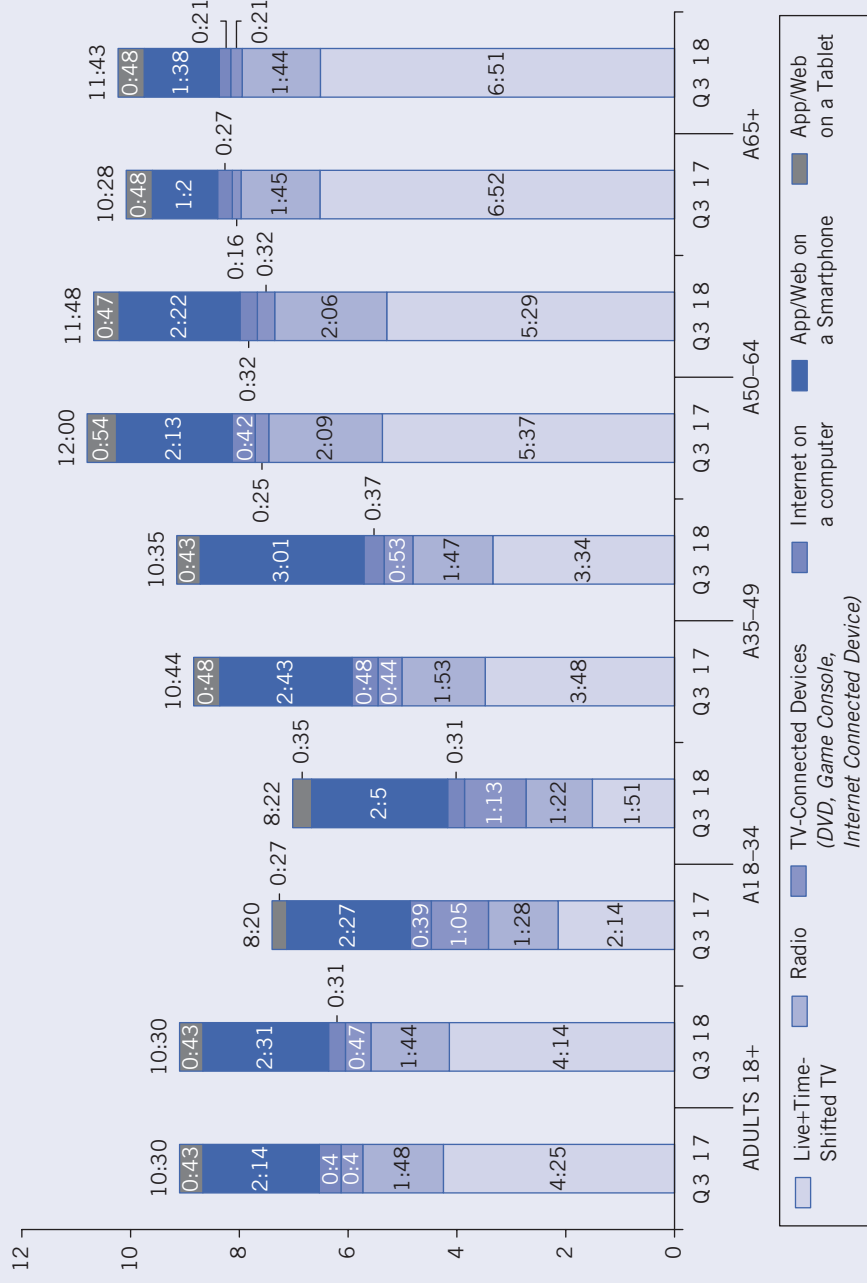
On average, U.S. adults spend 12 hours and 21 minutes per day using a variety of media—amounting to more than 50 percent of their day (Nielsen 2020b).

As users embrace new technology, they continually change the landscape of media equipment. For example, the proliferation of smartphones led to the decline of telephone landlines. More than 9 out 10 U.S. households once had a landline; by 2019, only about 40 percent of adults and 30 percent of children lived in a household with a landline (Blumberg and Luke 2020). The growth of “connected televisions” (TVs with internet access) and video streaming services led to a steady increase in “cord-cutters,” people who do not subscribe to traditional pay TV via cable, satellite, or fiber optics (Dawson 2017). Non-linear television is becoming increasingly prominent in U.S. households as Amazon Prime, Disney+, HBO Max, Hulu, Netflix, Peacock, CBS All Access, and so on provide a catalogue of film and television options to audiences. Voice-activated “smart speakers,” such as Amazon’s Echo devices and Google Home, are mostly used now for music streaming and their digital assistants (Consumer Intelligence Research Partners 2017). Increasingly, though, such devices will likely be the household hub for the “internet of things” (IoT)—the network of internet-connected objects that enables machine-to-machine (M2M) communication—that will link media devices with each other and with non-media gadgets, altering the landscape again.

All of these media devices are an indicator of the enormous amount of time Americans spend watching, listening to, reading, or otherwise using various forms of media. For example, Nielsen (a firm that measures media audiences) estimates that, on average, Americans spend about 6 hours a day watching television or video, including live TV (3:43), recorded programs (:33), streaming via multimedia devices (1:06), and video on a computer, tablet, or smartphone (:34). Obviously, people are often doing other things while the TV is on—cooking meals, getting ready for work, and so on. Still, over the course of a year that amounts to more than 90 days of TV exposure! Those numbers vary by age; older Americans watch more than double the amount of television that young adults do (see Figure 1.2). (That’s just one of the ways that media use varies by social grouping.) With vast exposure to media at all ages, it can be argued that the media are the dominant social institution in contemporary society, supplanting the influence of older institutions, such as schools, religion, and sometimes even the family.

With the pervasive presence of media throughout our lives, our media and our society are fused: media/society. If that seems like a convenient overstatement

Figure 1.2 Daily Time Spent with Select Media by Age Group in Hours and Minutes, United States, 2017-2018



Source: Nielsen 2019c.



**Photo 1.1**

We live in a media/society. Media are so central to our daily lives that we often use more than one form at a time. Multitasking is common, and media devices—many of them portable—are deeply integrated into social life.

game with our friends, or binge new shows to keep up to date and be part of the conversation. We would not use our phones to text or call friends. We would not post pictures or updates about ourselves—or look at others’ posts—on Facebook, Twitter, Instagram, or other social media sites. Our understanding of politics and the world around us would be vastly different because we would not have websites, newspapers, radio, television, and books to explain what is happening in our world. Indeed, our world would be much “smaller” because we would know little beyond our direct experience. It would also be much “slower” because the pace of information reaching us would be greatly decreased. Even our perceptions of ourselves would be different because we would not have social media posts, television characters, and advertising images to compare ourselves against. For example, we might not concern ourselves so much with the latest fashions and celebrities if ads and social media posts did not imply that we *should* be concerned with such things.

With no media, we would have a great deal of time on our hands, and like earlier generations, we would probably spend much of it interacting with other people face-to-face. We might entertain ourselves by playing musical instruments or games. We might attend meetings and lectures or discuss politics and current events to learn what was going on. We might take up hobbies or learn new skills to pass the time. Our social lives—how and with whom we interact—would change radically in the absence of media. We would likely develop more intense local relationships while losing touch with people who are physically farther away.

Of course, changes would reach well beyond our personal lives. The behavior of politicians, business executives, and leaders in other fields would change without media. Presidents wouldn’t tweet, campaign ads wouldn’t exist, and government would operate differently. Without advertising, business would be fundamentally different. Education, religion, and every other social institution would also be different without media, as would social movements and citizens’ organizations. Our point is not that the world would be objectively better or worse without

from the authors of a textbook titled *Media/Society*, then consider this simple thought experiment: Envision life *without* media. Imagine that you wake up tomorrow in a sort of parallel universe where everything is the same except that media do not exist: no smartphones, internet, or social media; no videos, shows, or movies; no recorded music or video games; no books, magazines, or newspapers.

If the media disappeared, nothing else would be the same. Our entertainment would be different.

We would not watch sports on TV,

media. This isn't that type of book. Our point is that a world without media would be almost unrecognizably different.

So, yes, our media and society *are* intertwined and fused together in ways that make it difficult to imagine their ever being separated. In studying media, we are examining a central feature of our society and our daily lives. But before we go any further in our discussion, let's consider a question that is not as simple as it seems: What are "the media"?

## Models of Communication Media

What are the media? Answering that seemingly simple question has gotten more complicated in recent years as media have evolved. But let's try to clarify some terms and their significance by reviewing some basic communication models (McQuail and Windahl 1993).

### Interpersonal and "Mass" Communication

The word *media* is the plural of medium. It is derived from the Latin word *medius*, which means middle. Communication media are the different technological processes that facilitate communication between (and are in the middle of) the sender of a message and the receiver of that message (Figure 1.3). Print, telephone, radio, over the air and cable television broadcasting, film, and the internet are among the many types of media that exist.

This basic communication process applies to you talking on a cell phone to a friend. It also applies to, say, a radio station broadcasting a program to listeners. But there are crucial differences between these two types of communication. Your phone call is a one-to-one *interpersonal communication*; you are contacting a single person that is likely known to you. By contrast, radio is a one-to-many form of *mass communication*; a station uses airwaves to send a radio signal to an unknown and potentially mass audience (see Figure 1.4). Various mass media involve a known sender and generally anonymous receivers. For example, readers typically know the author of the book they are reading, but authors clearly cannot know who, exactly, is reading their book. When we watch a television program or go to the movies, the names of the producer, director, and actors are prominently displayed, whereas the moviegoers and television audiences are unknown to the creators.

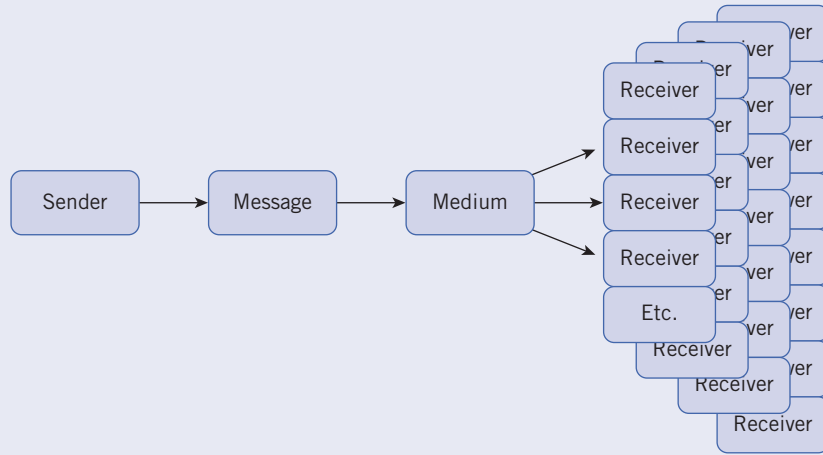
Figure 1.3 Basic Communication Media Model

All mediated communication involves a sender, message, medium, and receiver. The different technologies that make up the medium are what result in different communication experiences.



Figure 1.4 Traditional Mass Media Model

Traditional “mass” media are characterized by a single sender and a potentially large and typically unknown set of receivers. Senders and receivers using such media traditionally have limited or no interaction.



Furthermore, your phone conversation is likely to be highly interactive, featuring a back-and-forth dialogue; you are both a producer and receiver of messages. Unless it incorporates a different medium—as with call-in programs—a modern radio broadcast or podcast is not interactive; media personnel send a “message” out to an audience. These one-way communication channels create a clear distinction between producers and receivers of media content. With traditional mass media, the producers of most content are professionals in commercial companies, nonprofit media organizations, and governments, whereas members of the public are limited to being in the audience. Audiences have always been active in “reading” or interpreting mass media content (something we’ll explore in more detail later in the book), but traditional mass media allow for only very limited interaction between receivers and the sender.

So the distinctions between interpersonal and traditional “mass” media are fairly clear. Personal communication tends to (a) be one-to-one, (b) involve a single known receiver, and (c) be very interactive. Traditional mass media tend to (a) be one-to-many, (b) involve a potentially large and unknown audience, and (c) feature limited, if any, interaction. But today such distinctions have eroded.

## Variable Boundaries and Active Users

A few decades ago, our discussion of communications models would end with the distinction between interpersonal communication and mass media. However, the development of the internet blurred the lines between the two, enabling users to play different sorts or roles if they so choose. For example, you can use the internet

to send an email to someone you know—a regular one-to-one personal communication. But you can also post a public video on YouTube that could potentially go viral, reaching a mass audience. Or you could send a tweet to a friend with a link to a newspaper story that alerts the journalist who wrote it by including their username—which could be retweeted by many other users, ultimately reaching a mass audience. It can all get a bit complicated!

So what is the internet: interpersonal communication or mass media? Clearly, it's both. The fact that the internet encompasses nearly all forms of communication is a big part of what made it a game-changer. As we will see later in the book, the variable boundaries between private interpersonal communication and public mass communication were an important change that produced a number of issues with which we are still grappling today.

In addition to blurring boundaries between private and public, the internet enabled people to be much more active, more easily, than they could with traditional media. Today, we can be *users* of media—the term we favor in this book—rather than merely receivers or audience members. With the internet, media users can be more active in the following:

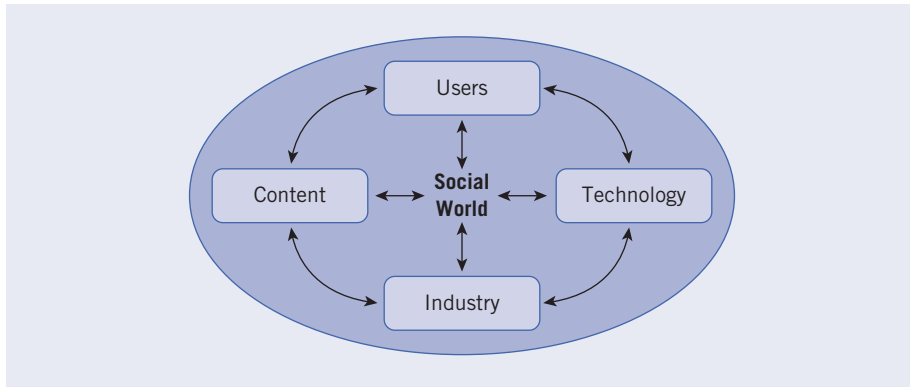
- choosing *what* media content they will access from a range of choices that is broader than ever;
- deciding *when* they will use media rather than being dependent on scheduled broadcasts (e.g., via video-on-demand streaming, podcasts, music streaming);
- sharing, promoting, and distributing media content (e.g., Facebook “likes,” reposting on Instagram, retweeting);
- responding to and commenting on media content (e.g., using a website’s comments section; using hashtags and Twitter as a “second screen” while watching TV);
- creating their own media content (e.g., social media posts, uploaded photos and videos, product or Yelp reviews, blog posts, podcasts).

With this level of user activity, traditional mass communication models—showing merely “receivers” of a message—fail to capture the dynamic interplay that potentially exists between the media industry and nonprofessional media users. By adopting the term *user*, we intend to encompass this full range of activities.

## Communication Today: A First Look

So how can we summarize today’s communication in a simple media model? In this book, we use the model in Figure 1.5A, which we explain in more detail later in the chapter. For now, let’s just note some of the elements that have changed from the traditional models:

Figure 1.5A Simplified Model of Media and the Social World



- The four primary elements of the model have changed:
  - *Industry* replaces *sender* to flag the professional and usually commercial nature of media organizations responsible for most media content.
  - The term *content* replaces *messages* to better reflect the wide range of media subjects as experienced by users.
  - *Technology* replaces *medium* to isolate the material elements of media.
  - *Users*, who both actively consume content created by industry professionals and create their own content, replace *receivers*.
- The entire model is embedded within a vital new element—the social world—which includes a variety of social forces and non-media actors that affect the communication process, such as cultural norms and government regulation.
- All of the arrows that indicate contact between elements in the model are double-headed, reflecting the potentially interactive nature of media.
- Finally, because users are more active than in the past, our contemporary media model is circular rather than linear. This suggests the endless feedback loops that occur among these components.

It is this more dynamic and sociological model of media that underlies this book.

The media world described by this model includes both “traditional” mass-media *and* internet-based communication. For a time, observers distinguished between these two by referring to them as “old” and “new” media. However, as we will explore throughout this book, they have blurred together in many ways. The

internet, it turns out, is in many ways very similar to older media, and as popular podcasters, YouTube celebrities, and Instagram influencers professionalize, perhaps even increasingly so.

## A Sociology of Media

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Sociologists are not the only ones who study media. Political scientists are sometimes interested in the media's role in politics. Literary scholars might examine the media as cultural texts. Some psychologists are interested in the effect of media on individual behavior. Most important, media studies and communication scholars explore a wide range of media issues that often emphasize how media institutions work.

The lines between the different approaches to the media are rarely clear. It is common to see references to sociological theories and concepts in the communication literature. In fact, some communications scholars were trained as sociologists before turning their attention exclusively to the media. In turn, sociologists draw on the work of media studies and communications scholars. But although they can overlap, there is a difference between these disciplines. The field of media or communications studies is defined by a particular substantive area of interest, whereas sociology is a perspective that is applied to a wide range of substantive areas, including the media. Not all sociologists study the media, and not all communications researchers use a sociological perspective.

Throughout this text, we will draw upon classic and contemporary media research that implicitly or explicitly employs a sociological perspective. A sociological perspective also informs our organization of this text, which emphasizes the interactions among the elements of our media model and the larger social world. Before we explore that specific model in more detail, let's consider the broader sociological perspective that informs it.

## The Sociological Perspective

At its most basic level, a sociological perspective encourages us to focus on relationships between individuals and the broader social context in which they live (Croteau and Hoynes 2019). Collectively, people have created the social world, and in turn, they are influenced by it. For example, students make “personal” decisions about attending college. However, a sociological perspective reminds us that our society features an economy (in which higher education is required for many occupations), a dominant culture (in which formal education is highly valued), a government (which maintains public universities and offers funding for some—but not all—students), families (who often encourage children to attend college), and even the media (which often features positive portrayal of graduates and commercials for for-profit colleges). All of these social forces combine to make the desire to attend college not really even feel like a “personal” decision at all. Thus, students



do not make decisions about college in a vacuum; they are affected by the social context in which they live. A century ago, the percentage of young people “choosing” to go to college was much less than it is today; the social context of the time—including its even more limiting race, class, and gender-based barriers—influenced individual opportunities for actions in radically different ways.

More broadly, the individual is a product of social interaction to varying degrees. The language we use, the education we receive, and the norms and values we are taught are all part of a socialization process through which we develop and embrace a sense of self. We become who we are largely through our social relations with others.

Furthermore, our daily activities usually take place within the context of groups and institutions. Family, friendship circles, school, teams, work, community—these are the collective contexts in which we develop our roles and identities as kids, friends, students, athletes, employees, citizens, and so forth. Each role brings with it a set of expectations about our actions; being a “good” student, employee, or friend usually involves conforming to those expectations. In this way, too, sociology teaches us that, to understand people’s actions, you must consider the larger social context in which they occur. That’s because, although people collectively create the features of society—families, government, schools, and so on—those creations in turn influence how people act.

Our concern here is with media, not college attendance or the general socialization of individuals, but the principle is the same. To best understand media, we need to see it as a social institution comprising various elements that constantly interact. Furthermore, to understand this media system we need to put it in the larger context of the social world. This enables us to better see how media relate to other actors and social institutions as well as how media influence this larger social world. This push-pull interaction between elements of our model reflects sociology’s broader interest in the role of structure and agency.

## Structural Constraint and Human Agency

Sociologists often link discussions of interaction and social relations to the concepts of structure and agency. In this context, structure suggests constraint on human action, and agency indicates independent action. Combined, the push-pull interactions that result from structure and agency are essential to understanding social life, the media included.

### Structure

Structure is not something physical. In the broadest sense, social structure describes any recurring pattern of social behavior. For any one individual, the weight of social structure can be experienced as “pressure” from an unnamed source to think, act, or behave in any particular way. For example, we can talk about *family structure* as a pattern of behaviors associated with the culturally defined idea of family. The “traditional family” is actually a quite recent and geographically

specific phenomenon (Coontz 2016). During the post–World War II years in Western countries, the “traditional family” usually meant married, heterosexual couples with children. In such relationships, the expected role of the wife was to work at home raising children, especially in white, middle-class families. The expected role of the husband was to work for income to cover the household bills.

When sociologists speak of the change in family structure, they are referring to the changes in the pattern of expected family behavior. Traditional expectations that a family include two parents, that the parents be married, that they be heterosexual, that a woman work only in the home, and so forth, have changed dramatically. Single-parent families, blended families, two-income families, unmarried couples, child-free couples, gender-nonconforming couples, and same-sex couples, to name a few, have supplemented the “traditional” family. The family structure—the pattern of behavior associated with families—has changed.

It’s easy to see from today’s perspective that the “traditional” family structure was an attractive one for some people. It enabled them to fit neatly into clearly defined roles that brought them significant rewards. Husbands and children were usually nurtured and cared for. Wives were spared the pressure of holding down a job outside the home, while often enjoying autonomy in the home. These are examples of how structures can be enabling; they help people achieve something. However, it is also easy to see that such a structure limited the options of many people. It constrained their behavior by encouraging or coercing them to conform to the accepted standards of family-related behavior. For example, wives were denied the opportunity to use their skills outside the home in paid employment, whereas husbands were denied the experience of participating significantly in raising children. These are examples of how structures can be restrictive or even coercive; they deter people from doing something.

A more immediate example of social structure is the complex pattern of institutions that make up the educational system in the United States, within which students, teachers, and administrators fulfill their expected roles. This structure can be enabling to students who successfully navigate through the system and eventually receive diplomas. Schooling often helps these students achieve higher-paying jobs, and the financial security that comes with them. However, as all students know, the educational structure can also be very constraining. Required courses, assignments, deadlines, and grades are all part of a structure that limits the actions of students and teachers. It is this constraint feature that is most important when considering structure.

## Agency

When sociologists discuss structure, they often pair it with agency. Agency is intentional and undetermined human action. Human agency reproduces—or sometimes changes—social structure. The “traditional” family structure and the education system continue only as long as new generations of people accept the roles they are asked to fill within them. Most of the time, that’s exactly what our actions do; they help reproduce existing social structures. But when enough

people began to demand the right to choose from a wider set of possible family roles, including women having a career outside the home and same-sex couples being legally recognized, the “traditional” family structure began to change. With education, students have some leeway in what they study, how much time and energy they spend on schoolwork, and whether or not they even continue their studies. But, overall, their actions typically reinforce an existing model of education that has evolved only modestly in the last century. In both cases, while structure constrains agency, it is human agency that either alters or maintains social structures.

## Structure and Agency in the Media

With respect to the media system, the relationship between structure and agency is present on at least three levels. We can express these three levels of analysis as three pairs of questions about structural constraint and agency.

- **Relationships among institutions.** How do social structures, such as government and the economy, affect the media industry? How does the media industry influence other social structures?
- **Relationships within an institution.** How does the structure of the media industry affect media personnel and, indirectly, media content? How do media personnel influence media content and media organizations?
- **Relationships between an institution and the public.** How does the media industry influence the users of media? How do the choices and actions of media users affect the media industry?

One reason why media are often controversial is that different groups expect the media to play different—and often incompatible—roles. For users, the media can serve as the source of entertainment and information about the world beyond direct experience. For advocates of various sorts—from advertisers, to politicians, and to social movement organizers—media are important vehicles for transmitting messages they want others to be exposed to; they hope the media will change users’ beliefs in their favor, or even better, guide users’ actions. For media workers, the media industry offers jobs, with resulting income, prestige, and satisfaction, as well as a place for the development of a professional identity. For media owners, the media are a source of profit and, perhaps, a source of political power. For society at large, the media can be a way to transmit information and values (socialization) and can serve as a check on the abuse of political and economic power. By considering structure-agency dynamics, we can see the tensions between these sometimes divergent roles.

## Relationships between the Media and Other Social Institutions

First, our broadest level of analysis is the tension between structure and agency produced by different institutions. We cannot adequately understand the media system without considering the social, economic, and political context in which it exists. Institutions outside the control of media personnel set certain legal and economic limits within which the media industry must operate. In turn, the media industry has agency in the sense of acting on its own and perhaps influencing other social institutions. A totalitarian regime, for example, is likely to exert extreme constraint on the press in that society. There would be little room for agency by the mainstream news media, although outlawed underground media may emerge to challenge the status quo. Labeling a society *democratic*, on the other hand, includes the suggestion that, at least in theory, the media are free of severe constraint by the government and thus have significant agency. Indeed, media in democratic societies can themselves exert a constraining influence over other institutions. However, media in democratic societies are often commercial ventures and so are subject to influence and limitations placed on them by corporate owners.

In the real world, there is always a mixture of structural constraint and independent agency. Media researchers, therefore, examine both how social structures external to the media affect the industry and how the media affect other social structures. This level of analysis includes questions such as these: Should the government enforce a policy of net neutrality? Have economic changes threatened the existence of journalism? How has the emergence of “fake news” in the media affected political campaigns? Does it matter who owns major media outlets?

## Relationships within the Media Industry

Second, to understand the decisions made by journalists, writers, producers, filmmakers, media executives, and other media personnel, we must understand the contexts in which they work. This means that we must be familiar with both the internal workings of mass media organizations and the processes of professional socialization. The sociological emphasis here is on social positions, roles, and practices, not on particular individuals. Relevant issues of concern include the structures of media institutions, those who wield power within them, what professional norms and expectations are associated with different positions, and so forth.

Within the media industry, the tension between structure and agency is related primarily to how much autonomy media personnel have in doing their work. The amount of autonomy will vary depending on the position an individual occupies, as well as the industry and media organization in which they work. The questions raised include the following: To what extent do standard journalistic practices shape the process of news reporting or the content of the news? How do economic considerations enter into the decision-making process of Hollywood moviemaking? How “free” are musicians to create their music? How have media platforms

like Twitter influenced the norms and routines of commercial news media? In the language of sociology, structural considerations may significantly affect the individual agency of media personnel. At the same time, the collective agency of those who work in the media has the potential to alter the structures that constrain individual media professionals.

## Relationships between the Media and the Public

A third kind of social relationship involves how media content and technology potentially influence users and, in turn, how media users can impact the media industry and the content it produces. Media users are not passive sponges that soak up the many messages they come across in the media. This would imply a one-way relationship with the media determining the thoughts and behaviors of users. Instead, as we noted, media users are often active on several fronts: choosing *what* media content they will use and *when* they will use it; promoting, redistributing, criticizing, or ignoring content; and even creating their own content. Media users also interpret media messages through their own social lenses; they are active “readers” of media content.

When we interpret the words of someone speaking with us face-to-face, we interactively construct the conversation. We can elicit more information from the speaker by asking a clarifying question or by using facial expressions to convey our reactions. We can comment on statements and thereby affect the course of the conversation. Such interaction between speakers helps promote mutual understanding about the messages being communicated.

Media content, however, usually does not allow for the intimate interaction of sender and receiver that characterizes interpersonal communication. We cannot ask a stand-up comedian on television to explain a joke. We either get it or we don't. It's unlikely that a question we pose on Twitter to our favorite musical artists will be answered. Media users, therefore, must rely on other resources to make sense of the messages in media content.

Relevant resources available to users might include knowledge and information gained from personal experience, other people, formal education, or other media content. These resources are neither randomly nor equally distributed. The interpretive lenses that people bring with them to their viewing, listening, and reading are shaped by aspects of social structure, such as class, race, gender, and education. Thus, in constructing their own individual interpretations of the media, people constantly draw on collective resources and experiences that are shaped by social factors.

Active users are important, but the thousands of hours people spend with the media do have some influence on them. Users are not completely immune to the impact of media content and media technology. Here too, we have to explore the dynamic interplay between the power of social structure and the (always partial) autonomy of human activity. How powerful is media content in influencing how we think, feel, and even behave? For example, does racist internet content embolden people to be more overtly racist? How does media technology affect our

social relationships? Do smartphones undermine or enhance face-to-face communication? How do the algorithms that drive search engine results affect how people use the internet? Ultimately, these are complex questions that do not lend themselves to easy answers involving all-encompassing media power or complete individual freedom. Instead, we need to pay attention to the push-pull relationships between structure and agency throughout the media system if we are to understand the role of media in the social world.

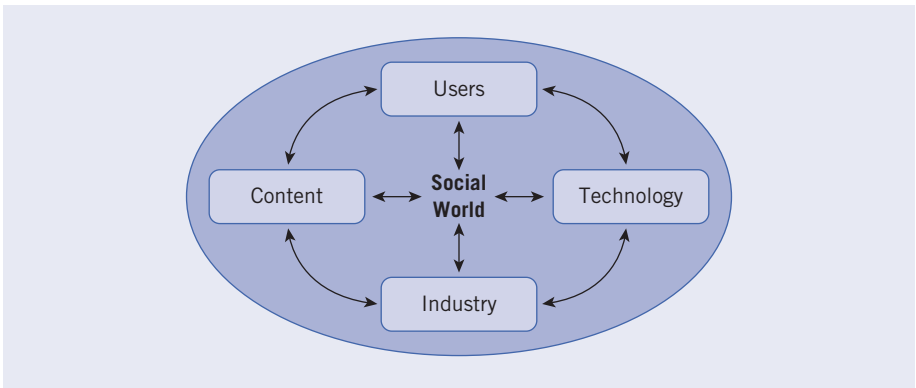
## A Model of Media and the Social World

How can we begin to make sense of the complex relationships we have identified? Let's return to Figure 1.5 and examine our simple graphic representation of these relations in more detail.

Four components, each represented by a separate box in the diagram, make up the core of our model. All four elements are simultaneously a part of the social world and surrounded by the social world (the shaded area). The graphic organization of these four elements is arbitrary; there is no “top” or “bottom” to the process; rather, it is a circular process. Double arrowheads represent the potential relationships among these components, although not all relationships will be relevant in all situations. We will first describe the elements represented by the four large boxes and then turn our attention to the unique status of the *social world* (represented by the shading), which is both in the center of the model and simultaneously surrounding it.

The box at the bottom of the model represents the *media industry*, by which we mean the entire organizational structure that makes up the media, including all media personnel. The media industry is affected by changes in *technology* (e.g., the invention of television) but is also instrumental in influencing the direction

Figure 1.5B Simplified Model of Media and the Social World



and application of technology (e.g., the use of computers for film animation). The media industry is the producer of the media *content*. For example, a book is written by an author, designed, typeset, printed (or formatted as an e-book), distributed by a publisher, and sold, either physically or electronically. However, the conventions of particular genres of media products also influence the creators of the content. The murder mystery genre, for example, requires the existence of a crime.

*Users* may be influenced by the media content they see (e.g., learning about an impending snowstorm from the weather report), but they must actively interpret and construct meaning from that content (e.g., deciding whether to trust the forecast and whether to act differently as a result). Sociologists call the process of actively creating meaning in this way the social construction of reality. This means that, although reality exists, we must negotiate the meaning of that reality. A student who sports a series of prominent tattoos is an objective reality. However, different people will interpret such body art in different ways. Is it a sign of conformity to a fad? A rebellious political statement? A playful snubbing of mainstream norms? A disgusting mutilation of the body? Or is it just an act of personal expression? The meaning of the tattoos must be constructed by those observing them. The same is true for the meaning of messages in media content. That is one reason why users—who must “read” and interpret media content—are such an important part of the media process.

As we have noted, users always had the capacity to respond to the media industry, for example, by writing a letter to a television network. But the internet has enabled much more active media users. In fact, “users” sometimes take on roles that used to be limited to the “industry,” such as creating content to be widely distributed. Our simple model doesn’t explicitly show this blurring of roles, but it is a dynamic we discuss throughout the book.

The direction and development of technology is affected by how the *users* choose to use it—or not to use it. Google Glass—a computer headset worn like a pair of glasses—generated curiosity when it was introduced in 2013, but users—as yet—have not embraced this particular type of wearable technology, forcing Google to withdraw the product. In turn, technology has a potential impact on the public. For example, movie viewing usually requires close attention because the medium communicates via both sound and images. This contrasts with audio-only media, such as music streaming, which does not demand our full attention. Unlike movies, which we must both watch and listen to if we want to fully follow, music streaming allows us to do other things while still attending to it, such as drive a car, exercise, cook dinner, or work. Each medium, therefore, tends to produce a different experience for the users. This is one effect of technology.

The middle—and broader context—of the model is the *social world*. This contains all the social elements not included in the four main boxes. Some of these elements are crucial for an understanding of the workings of the media and thus can be thought of as being at the center of the model. For example, the role of government and broader economic forces are non-media social factors that influence all the elements of our model.

Notice that the top and bottom elements of our model include human agents—real people—whereas the left and right boxes are human creations. People are the medium through which media content and technology affect each other. Similarly, the relationship between the media industry and most media users is mediated by content, technology, and other factors in the social world. Note, too, that any single component of the model simultaneously relates to other components. For example, media content is simultaneously influenced by the media industry that creates it and the users who access or ignore, interpret, share, and critique it as well as by other aspects of the social world, such as government regulation.

Our simplified model is meant to identify some of the key components in the sociology of media and to clarify some of the relationships among these components. Like all models, it cannot fully account for the infinite complexities of the “real” social world. However, applying the model to analyze the media can alert us to important questions and help us clarify the workings and social significance of mass media.

## Applying the Model: Civil Rights in Two Media Eras

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To illustrate briefly how the model can alert us to important real-life issues, let us consider the U.S. civil rights struggles of the 1950s and 1960s (Branch 1988; McAdam 1982; Morris 1984) and the ongoing Black Lives Matter movement that began in the mid-2010s (Ray, Brown, and Laybourn 2017). These movements existed in two different eras, and so their interactions with media varied significantly. We can think of these social movements as a part of the non-media social world insofar as they exist independent of our four components of the media model. For the moment, then, imagine each movement as being the element of the social world that occupies the center position in our model.

### Mid-20th-Century Civil Rights Movement

In the mid-20th century, the civil rights movement launched a series of nonviolent direct-action campaigns to challenge the injustices of U.S. racial segregation. These campaigns, which were mostly in the South, sometimes were met with violence from segregationist counter-demonstrators and police. Often, these confrontations attracted media coverage, which helped raise awareness about racial injustice among mainstream, mostly white, Americans.

Our media model can be used to consider some of the push-pull dynamics involved in this effort. We'll work our way around the model components.

- **Industry-content.** The media industry created content featuring the civil rights movement; in turn, journalists were constrained by the genre norms of “news” coverage at the time. For example, reporters



typically wrote stories about the movement to fit the journalistic convention of a balanced presentation of facts, including quotes from counterdemonstrators. Generally, journalists also performed their roles as independent observers by not offering their personal opinions about what was happening.

- **Content-users.** The media content about the civil rights movement affected many media users, who in turn, were interpreting the meaning of those messages. For example, some supporters in the North were moved by media accounts to make financial contributions to movement organizations in the South or even to volunteer for movement efforts. In contrast, others sympathized with the forces of segregation, often seeing civil rights activists—and the media organizations that covered them—as troublemakers. The media content had an impact, but media users could interpret the meaning and significance of the messages in quite distinct ways.
- **Users-technology.** Media users of the 1950s and 1960s relied on technology, especially print and recently introduced television, to access media content. Meanwhile, technology may have indirectly influenced users, with the immediacy and impact of television pictures of police violence against demonstrators.
- **Technology-industry.** Technology was also helping change the media industry; the availability of lighter, handheld cameras allowed reporters more mobility to file “on-the-scene” stories that would not have been possible in an earlier era. Journalists often chose to use this technology to capture dramatic clashes during the demonstrations. Television footage of police using firehoses and unleashing dogs on civil rights demonstrators became iconic images that are well-known even today.

Now, let’s move to the center of the model, where the movement itself was a part of the social world interacting with the media process.

- **Movement-industry.** The movement’s tactics of escalating nonviolent confrontation made it more difficult for the media industry to ignore their cause. Segregation was not new, but now the movement’s efforts drew the attention of national news organizations that had long defined civil disturbances as newsworthy. In the long term, the civil rights movement had additional impact on the media industry (and other social institutions) by helping reduce its discriminatory practices in hiring and promotion. The racial diversity that exists today in the media industry—even though limited—would not have come about without the influence of this social movement and the resulting changes in legislation and social norms. However, the media industry also had an impact on the

civil rights movement. In this era, the only way a movement could reach a large and broad audience was through mainstream media coverage. Consequently, social movements often crafted strategies to try to attract such coverage, such as staging marches and demonstrations. By altering their behavior to fit media norms and routines, social movement activists were affected by the media industry even before the media produced any coverage of the group.

- **Movement-content.** Media content affected the civil rights movement as it tried to develop favorable media coverage and, in some cases, altered strategies to minimize negative coverage. The movement did not affect media content directly but instead did so indirectly by trying to influence the journalists who were covering the movement. In the long term, it also affected the industry as a whole and the content it produces. A media industry that employs more people of color in positions of power, for example, is more likely to be sensitive to race issues in its content.
- **Movement-users.** The civil rights movement was trying to get citizens—who were media users—to support their efforts. Thus they had an indirect influence on users through the content to which they were exposed. In the long term, the movement has also had a direct impact on media users because the presence of this movement has meant more social equality. At the same time, media users have sometimes acted in their role as citizens to support social movement efforts, illustrating the interaction between these two components of the model.
- **Movement-technology.** The technology of the 1950s that the civil rights movement relied on to communicate its messages seems ancient by today's standards, but it was an integral part of the ongoing organizing effort, both enabling and constraining what could be done. Because they had little or no access to television and radio, movement organizers relied on print for nearly all of their work. For example, if a leaflet announcing a meeting needed to be distributed, stencils might be cut for hand-cranked mimeograph machines often owned by Black churches. Black-owned newsletters and magazines were a source of movement information. By today's standards, these sorts of print media were very slow in spreading news, but they enabled the movement to build systematically and expand their base. Once the movement began growing, it staged larger demonstrations that drew the attention of mainstream media, helping spread their message.

Even in this cursory summary, the usefulness of our model for investigating issues related to the media should be apparent. But what happens when the media environment changes? Do the kinds of dynamics described here still apply? Another brief case study can illustrate the enduring relevance of these dynamics.

## Black Lives Matter

A half century after the peak of the civil rights movement, the Black Lives Matter (BLM) movement emerged in protest of the killing of Trayvon Martin. Over time, BLM expanded to address broader issues of systemic racial injustice, as a variety of decentralized efforts sought to draw attention to—and ultimately address—contemporary structural racism. Important changes in the media industry and technology means that BLM has operated very differently from the older movement. But the elements of our media model remain just as relevant in understanding these new dynamics. We won't repeat many of the features that BLM shares with the earlier civil rights movement. Instead, we'll note a few of the major differences that exist.

First, BLM has taken full advantage of new media technology, which transformed the role of some media users. BLM emerged from a Twitter hashtag (created by Alicia Garza, Patrisse Cullors, and Opal Tometi in July 2013), so from the very beginning it was activist-users who were creating media content that reached both their supporters—who often helped circulate this content—and the broader world of non-activist media users. (Opponents of BLM have also used Twitter and other social media to spread their own All Lives and Blue Lives Matter hashtags.) As street demonstrations emerged, BLM activists often live-streamed events or posted video highlights to various social media platforms—video that sometimes went viral and was picked up by mainstream news outlets.

Unlike previous generations of activists, BLM was less dependent on mainstream news media to get out its message. Instead, not only movement activists, but even regular social media users could disseminate videos of police violence, as well as coordinate fundraisers for victims. For example, in 2020 use of the BLM hashtag on Twitter dramatically spiked after the killings of Ahmaud Arbery, Breonna Taylor, and George Floyd, ultimately leading to mass public demonstrations around the world. Traditional news coverage still mattered a great deal in helping shape mainstream media users' understanding of the movement, but the movement itself could use social media platforms to get out sometimes different and unfiltered content quite broadly. (At this writing, the main Black Lives Matter Twitter account [[@Blklivesmatter](#)] has nearly 1 million followers, and the Instagram account has nearly 4 million followers.) This was done in real time, dramatically speeding up the process of growth for the movement. Such rapid growth can be impressive but also challenging, thrusting the movement onto a national stage before a clear agenda, leadership roles, and organizational structures have fully developed (Sands 2017; Tufekci 2017).

Second, the media industry was vastly different in the 21st century from what it was in the mid-20th, affecting coverage of BLM. With the earlier civil rights movement, there were only three national television networks in the United States, each creating one nightly news broadcast that was seen by vast swaths of society. With BLM, the earlier rise of cable television and the internet had created highly fragmented news audiences spread across many different outlets. In the 2010s and

2020s, these outlets offered breaking news and commentary 24 hours a day that often incorporated dramatic videos of protest events. These many channels hosted lengthy and often partisan discussion and debate about the merits of the movement.

So compared to the earlier civil rights movement, BLM's emergence in the digital age meant the following:

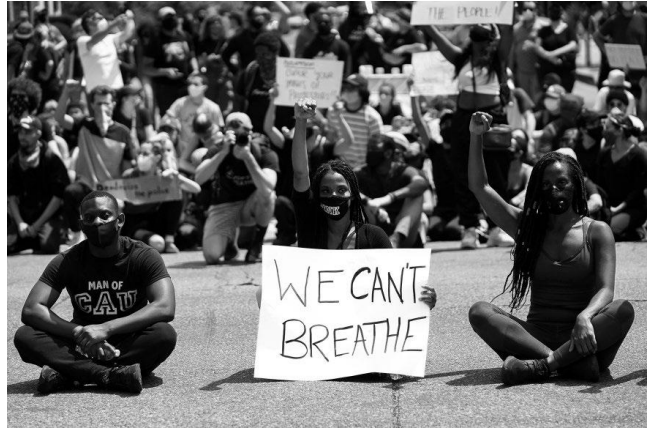
- New *technology* could be employed to gather and share *content*, often in real time.
- Some *media users* could play a more active role in creating and sharing this content; mainstream users, though, were divided into fragmented audiences seeing and reading very different types of coverage of the movement.
- The *media industry* was structured to produce more and quicker coverage across numerous outlets.

Although the particulars of this movement had changed from the earlier one, the basic elements of our media model remain as relevant as ever in alerting us to important social dynamics. This illustrates the utility of a sociological approach to understanding how media interact with the social world, regardless of the historical era.

## Conclusion

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It is difficult to overestimate the importance of media in today's society. But it is hard to think analytically about a system that is so vast, pervasive, and complex. A sociological approach to the study of media encourages us to pay attention to key elements of the media process and to locate media in a larger social context. That's exactly what we do in the model of media and the social world presented in this chapter. This model is the underlying framework for the rest of the book, helping us identify questions we should ask when we study the media. The upcoming chapters focus on the push-pull relations among components of our model—technology, industry, content, and users—as well as the broader social world. Examining the relationships among these key elements is the first step toward developing a nuanced understanding of the role of media in our society.



Warick Page/Contributor/Getty Images

### Photo 1.2

In part because they do not have regular access to the mainstream media, many social movements must adopt tactics that will attract attention and increase their chances of gaining media exposure. A common strategy is the public demonstration, featuring eye-catching signs, props, and chanting.

## DISCUSSION QUESTIONS

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1. What evidence is there that the media play a significant role in your life? Do you have access to many of the devices mentioned in the chapter? Does your daily routine involve using media?
2. How does the presence of media affect your life? How would it be different without access to media? What aspect of media would you miss the most? Why?
3. What is meant by the terms *structure* and *agency*? What is a media-related example that shows how the two concepts are connected to each other?



# Technology

In Chapter 2, we survey how media technology has evolved from the creation of print to the evolution of the internet. We highlight the distinctive features of each new technology and how they might have enabled significant social change. We also consider how social forces helped shape these technologies in unexpected ways.

We begin with technology in large part because technological innovations have enabled the significant transformation of the media industry in recent years. With the digitization of media and the maturing of the internet, boundaries among different media forms have blurred, new media forms have emerged, and fresh questions about what this all means are plentiful. Ironically, one of the best ways to make sense of our rapidly changing media technologies is to look back at the evolution and impact of earlier technologies.





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News > Media > Press

# The Independent becomes the first national newspaper to embrace a global, digital-only future

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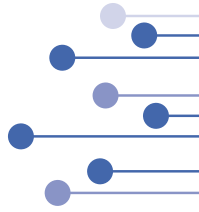
The Independent will cease as a print publication at the end of March

The Independent is to become the first national newspaper title to move to a digital-only future, owners ESI Media have announced.

**i100**

Dan Kitwood / Staff / Getty Images

# The Evolution of Media Technology



From printed paper to digital screens, technology underlies all systems of mediated communication. To understand how media work, we need to consider these technologies and their significance. In this chapter, after briefly reviewing the history of media technology, we examine some of the scholarly approaches to understanding technology and then use some of these ideas to explore the evolution of media technologies from print up through the internet. As we will see, technology matters in making each medium unique. However, each technology is influenced by a variety of social forces, including how the media industry elects to deploy it, whether and how users choose to adopt or adapt it, and whether and how governments opt to regulate it. Together, all of these elements—which are components of the media model from Chapter 1—make up technology's story.

## The History of Media Technology

One way to tell the story of media is through the history of its technology (Brigs and Burke 2009; Kovarik 2016). For most of human history, communication was conducted face-to-face. Then, centuries of one-of-a-kind creations followed, including artwork on cave walls, carvings in stone, impressions on clay tablets, and marks on bamboo or papyrus. Along the way, humans invented numbers and written language. But it was not until the invention of paper in China around the year 100 and printing, 500 years later, that communication using a medium began to be reproducible. By about 800, book printing began, using a single, carved wooden block to reproduce each page. For the first time, technology enabled the preservation and distribution of human thought to many others through the creation of duplicate copies. We had become a “world on paper” (Olson 1994).

## Learning Objectives

After studying this chapter, you will be able to

- **LO 2.1:** Pinpoint significant developments in the history of media technology
- **LO 2.2:** Identify variations of technological determinism
- **LO 2.3:** Describe the features of social constructionism
- **LO 2.4:** Document the tension between technological determinism and social constructionism as new media technologies emerged from print through television
- **LO 2.5:** Describe the birth, growth, and characteristics of the internet



Over time, the printing process was improved, but for 1,000 years print was media technology (see Figure 2.1). However, 19th-century industrialization drastically increased the pace of technological innovation, bringing the telegraph, camera, telephone, phonograph, radio, and motion pictures in rapid succession. The world of media technology became much more diverse. In the 20th century, these media—along with television and the internet—were refined and developed into the commercial industries we know today, utterly transforming communication worldwide. Technology in the 21st century has enabled new social transformations by integrating digital multimedia platforms into all aspects of our lives and by making media-creating technology more accessible to ordinary users.

Figure 2.1 Timeline of Select Media Developments

Year	Media-Related Advancement
100	Papermaking is developed in China
600	Printing using carved blocks of wood begins in China
800	First books are printed in China, using a single wood block for an entire page of text
1000	Movable clay type—with one piece of type for each character—used in China
1200	Movable metal type developed in Korea
1450	Modern, hand-operated printing press with movable type is developed in Germany
1600	First newspapers appear in Germany, France, and Belgium
1700	1702 London's <i>Daily Courant</i> becomes the first English-language daily newspaper
1800	1833 First low-cost "penny press" newspaper, the <i>New York Sun</i> , appears 1837 Electric telegraph is patented 1839 Early photographic camera for commercial sale is introduced
1850	1876 Telephone is patented 1878 First practical sound recorder and player is patented 1879 Electric light is patented 1894 Motion pictures are invented and the first short films are shown to the public 1895 Radio messages are first transmitted
1900	1920 Regularly scheduled radio broadcasting begins in Pittsburgh 1927 <i>The Jazz Singer</i> is the first feature-length film with synchronized speech 1928 Electronic television is first demonstrated 1937 First digital computer is created from telephone parts 1941 First commercial television is broadcast 1946 Mainframe computer is invented 1948 Early cable television captures and retransmits via wires local broadcast programs in areas with weak signals 1949 Network television broadcasting begins in the United States
1950	1957 First communications satellite, <i>Sputnik</i> , is launched by USSR 1961 Modern cable TV begins when a San Diego cable operator imports television broadcast signals from Los Angeles for distribution to subscribers

	1969 First nodes of the internet created as part of a Pentagon program
	1970 Videocassette recorder (VCR) appears; cheaper and popular by mid-decade
	1971 Microprocessor, essential for computer advancement, is invented
	1972 First video game console that connects to a TV is introduced
	1975 First microcomputer is marketed
	Fiber-optics transmission begins
	HBO is first to transmit programming to cable TV systems via satellite
	1982 Audio compact disk (CD) is introduced
	1990 World Wide Web (WWW) is released as simple user interface for a variety of data types
	1994 Commercial short message service (SMS), or “texting,” begins in Finland
	Cyber stations (radio stations on the internet) first appear
	BellSouth introduces first multipurpose “smartphone”
	1997 Digital video disks (DVD) are introduced
	1997 First consumer WiFi service released
	1998 Digital TV broadcasting begins; in 2009 FCC makes digital signal mandatory
	Rio becomes the first popular MP3 player
	1999 Netflix launches DVD-by-mail subscription service; adds streaming in 2007
	Digital video recorders (DVR) are introduced
2000	2001 Satellite-based digital radio services grow with the launch of XM radio
	2002 Friendster social networking site launched; Facebook (2004) follows
	2003 Skype “over-the-top” internet telephone network is introduced
	2004 Flickr photo sharing site is launched
	Podcasts become more popular when made easier to find and download
	2005 YouTube video site is founded
	2006 First e-book reader is introduced
	Twitter microblogging service is founded
	2007 Hulu launched to stream commercial television programs and movies on demand
	2008 Roku, digital media player set-top box, simplifies internet streaming television
2010	2010 Apple’s iPad helps spark revival in the dormant tablet computer market
	Instagram appears, helping make photo sharing wildly popular
	2011 Snapchat introduced, offering increased privacy via self-destructing messaging
	2015 Sling popularizes live TV streaming; others follow
	2016 Virtual reality enters the mainstream with Oculus Rift gear
	2018 Smart speakers—voice-activated digital assistants that serve as hubs for home automation—gain in popularity with Amazon’s Echo (2015), Google’s Home (2016), and Apple’s Homepod (2018)

*Sources:* Crowley and Heyer (1991); Jost (1994); MIT Technology Review (2002–2017); Rogers (1986); Shedden (2010); and media accounts.

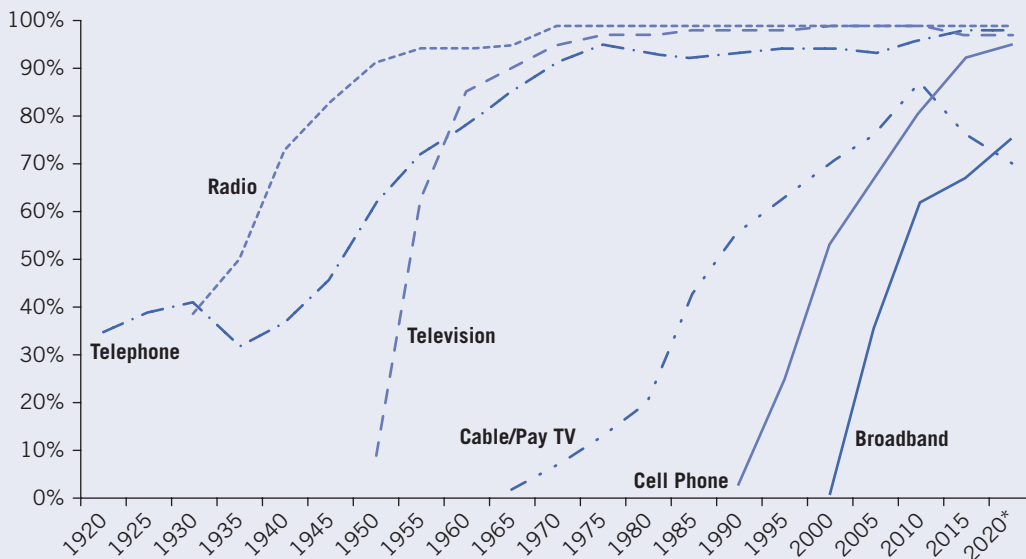
Given the inescapability of media and their significance in our lives, it's easy to forget that most forms of media technology simply didn't exist or were not widely available 100 years ago. Figure 2.2 shows adoption rates for select media technologies in the United States over the last century. Clearly, our media/society is a relatively recent development.

Figure 2.2 highlights another interesting fact about media: New technologies usually don't displace older technologies. Radio didn't destroy print; television didn't kill radio; and the internet has not put an end to television. Instead, media technologies tend to accumulate, contributing to the pervasiveness of media in our lives today.

How can we best understand this growing array of technology? How might it be affecting us? And why might this be important? Scholars have long debated such questions. There have been two general approaches to understanding the role of technology in society. The first, often referred to as “technological determinism,” suggests that *technology* itself causes change, and often in unintended ways. The

**Figure 2.2 U.S. Adoption Rates for Select Media Technology, 1920–2020**

Much of the media technology we use today didn't exist a century ago. For the most part, older media have survived the introduction of newer media, resulting in a diverse and complex media environment.



\*2020 numbers are estimates. “Telephone” includes landlines and cell phones. “Cell Phone” and “Broadband” refer to percentage of adults with access; other categories are household adoption rates. “Cable/Pay TV” includes cable, satellite, and fiber-optic access.

**Sources:** Adapted from the National Center for Health Statistics (2017); Pew Research Center (2017a, 2017b); U.S. Census Bureau (1999, 2012); U.S. Energy Information Administration (2017).

second, often referred to as “social constructionism” (or “social determinism” or “social constructivism”) emphasizes that technology is made up of inanimate objects, and ultimately *people* decide how to use (or not use) technology. But even though debates about technology are often presented as a stark contrast between these two approaches, things are never quite so simple. In reality, nearly all scholars fall somewhere in between the extremes of pure technological determinism and social constructionism. We retain these well-known and usefully descriptive labels to identify general approaches to understanding technology. However, we consider them to be the opposite poles of a continuum rather than two mutually exclusive approaches. Technological determinists put more emphasis on the role of technology; social constructionists emphasize human agency. But nearly all scholars acknowledge a relationship between the social dimension of technology and their material components. The real debates are about the nature of this relationship and the degree to which technology or human action should be seen as the driving focus of change.

## Technological Determinism

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Technological determinism is an approach that identifies technology, or technological developments, as the central causal element in processes of social change. In other words, scholars who lean toward technological determinism emphasize the “overwhelming and inevitable” effects of technologies on users, organizations, and societies (Lievrouw and Livingstone 2006:21). This applies to all forms of technology, most of which have nothing to do with media. From this perspective, technology produces change, albeit often through a series of intermediary steps. For example, the invention of the automobile might be said to lead to a reduction in food prices because the automobile “reduced the demand for horses, which reduced the demand for feed grain, which increased the land available for planting edible grains,” making food less expensive (Fischer 1992:8).

As we will see, critics argue that there is no human agency in this type of analysis. Pure technological determinism suggests that technological properties demand certain results and that actual people do not use technologies so much as people are used by them. In this view, society is transformed according to a technical, rather than a human, agenda. Critics contend this cannot be true. Technology is composed of inanimate objects; it is humans who cause things to happen by the choices they make and the actions they take.

However, this crude form of technological determinism is often an accusation leveled by critics more than a position advocated by scholars. In recent years, some scholars have adopted the language of “materiality” in arguing that the physical aspects of media technology matter in complicated ways (Gillespie, Boczkowski, and Foot 2014). In using this language, they hope to distinguish their approach from the simplistic caricature of technological determinism as well as social constructionism.

Lievrouw (2014:25) cautions that “[m]ateriality itself is a complex, multidimensional idea, and open to a variety of interpretations, emphases, and disciplinary

assumptions.” There are many different meanings and uses of the term *materiality*, often making it difficult to pinpoint a single definition that would be acceptable to everyone using the term (Sterne 2014). Still, whether you call it a form of technological determinism or an emphasis on materiality, there is no doubt that the physical aspects of technology are of interest to contemporary scholars and to anyone who wants to understand the media.

## Media’s Materiality

It may seem odd to suggest that the inanimate objects making up technology can *cause* anything. But scholars who focus on the material influence of technology usually mean something more nuanced.

The obvious forms of materiality are the tangible objects and “things” that are involved in media communication—keyboards, screens, phones, paper, and the like. But materiality also includes things that we often forget have a physical foundation (Allen-Robertson 2015; Pinch 2008). Data are not objects, but they exist on hard drives and servers. If there was no material component to data, there would be no limit to the amount of data you could store on a computer hard drive. A change in materiality—the storage capacity of computers—has contributed to a change in how computers can be used. The internet is another example. Despite the popular metaphor, the internet is not an amorphous “cloud.” Instead, data packets are transmitted along copper or fiber-optic cables to be displayed on our screens. As Blum (2012:9–10) reminds us, the internet is made of pulses of light “produced by powerful lasers contained in steel boxes housed (predominantly) in unmarked buildings. The lasers exist. The boxes exist. The buildings exist. The Internet exists—it has a physical reality, an essential infrastructure.” All of these material elements are necessary and help shape how we experience the internet.

More directly, all media technology has “material” elements that help determine how it can be used. Each medium has its own technological capabilities and limitations that affect the delivery of words, sound, pictures, and video (see Figure 2.3). For instance, while many assumed that e-book technology would mostly be adopted by younger Americans, it was quite popular among older Americans. This reason for this was because of how this new technology could be used. While older Americans who struggled with their eyesight had for decades been limited to those few most popular books that were also printed in large type, for the first time e-book technology allowed readers to read nearly any book they want in nearly any size font that suited them, which reopened up a whole new world of books for some passionate older readers.

In this example, different technologies do not “cause” books to contain different content. However, because of their capacities and limitations, these different reading technologies enable different people to engage with them. In the same vein one could add that e-book technology allows someone to easily bring more books while traveling, while at the same time, print books can be displayed in a home as a conversation starter in a way that e-books cannot. So this is one way technology matters; it offers opportunities and places limitations on what a

Figure 2.3 Select Characteristics of Different Media

The technological capacities and limitations of each medium set the parameters for their use. However, the internet is, in effect, a generic platform that enables the delivery of all forms of media while adding unique, interactive capabilities.

	Text?	Sound?	Picture?	Video?	Live?	Interactive? <sup>a</sup>
Print	Yes	No	Yes	No	No	No
Radio	No <sup>b</sup>	Yes	No	No	Yes	No <sup>c</sup>
Film	No <sup>b</sup>	Yes	Yes	Yes	No	No
Television	No <sup>b</sup>	Yes	Yes	Yes	Yes	No
Sound recording	No <sup>b</sup>	Yes	No	No	No	No
Internet	Yes	Yes	Yes	Yes	Yes	Yes

*Notes:*

<sup>a</sup>We are using “interactive” here to mean a medium that enables easy, two-way communication between producer and user.

<sup>b</sup>Although digital radio, film, television (video), and sound recordings can show text on a screen, they are not primarily textual media.

<sup>c</sup>Two-way communication is possible using radio technology, but most modern radio sets do not allow for this.

medium can be used for and makes some types of media more suitable for some purposes than others. In this way, each medium can be said to influence its users.

## “Autonomous Technology” and “Technological Momentum”

Technology matters in other ways, too. Scholars in science and technology studies (STS) have long noted that technology can “take on a life of its own,” even though people create and use it. For example, Langdon Winner (1977:15) used the term *autonomous technology* as “a general label for all conceptions and observations to the effect that technology is somehow out of control by human agency.” Winner argued that political, economic, social, and cultural conditions shape the creation of technology and are embodied in technological artifacts and processes. However, Winner contended that technology is so vast and complex that it has unintended consequences that users and society as a whole often cannot control. He portrays technology as a potentially Frankenstein-like creation that can seem bewildering and unmanageable, especially in periods of rapid technological change. Today, the unknown implications of robotics equipped with increasingly sophisticated artificial intelligence and machine learning (where computers adapt without needing to be explicitly programmed by humans) is perhaps the most extreme and best-known example of

potentially autonomous technology. In the world of media, the growing dependence on algorithms that humans create but often don't fully understand (which we discuss later) might also be seen as an example of "autonomous technology."

Similarly, Thomas Hughes's (1983) idea of *technological momentum* suggests that a technology's influence changes over time. When a technology is new, Hughes argues, humans have agency over the ways in which it is developed, deployed, and used. New technologies are still in flux and full of possibilities, as creators and users negotiate how the technology will be used. As time passes, though, a technology becomes established, routinized, and institutionalized, making it more difficult to contest or change. This can be because of investment costs, habit, or inertia, but once a technology is established, a culture develops around it, and it can gain a permanency that is difficult for people to alter or change. An example would be the electrical outlets that we plug all of our devices into, which are different around the world, and for as long as we have electrical outlets they will likely always be different around the world. While different regions of the world all making the decision to adopt different (locally standardized) prongs for electrical outlets happened at a time when global travel was less frequent, we are now stuck with our current system of different outlets and various adapters, as no region of the world is going to change all of their outlets and appliances to make life for tourists just slightly more convenient.

Both concepts from Winner and Hughes are examples of ways to think about how technology can exert some autonomous influence over actors in society (a notion associated with technological determinism) while acknowledging the agency of humans in creating technology (an idea compatible with social constructionism). Understanding technology in such ways accepts the push-pull interaction between the material (nonhuman) and the social (human) as an essential dynamic of technological systems.

## Medium Theory

Media scholars and commentators have long been concerned about technology's possible negative impact on society. As early as the 1920s, there was worry that newly introduced media technologies—film and broadcasting—might have some inherent power to influence susceptible audiences. During the two world wars, for example, governments on both sides used radio and newsreel propaganda effectively, enhancing concerns about the impact to which these media technologies could be put. Later, television would be blamed for making people stupid, earning it nicknames such as the "idiot box" or the "boob tube." More recently, as we will see, the internet and smartphone technology have been criticized for possibly "ruining" an entire generation with their addictive properties. To varying degrees, all these critiques presented technology as overtaking society and diminishing human agency.

But such concern never constituted the bulk of media scholarship. "Autonomous technology" and "technological momentum," for example, are both ideas that come from science and technology studies, not media studies specifically. Historically, most media scholars have focused on media industries, the content they produce, and the users that consume it rather than on technology.