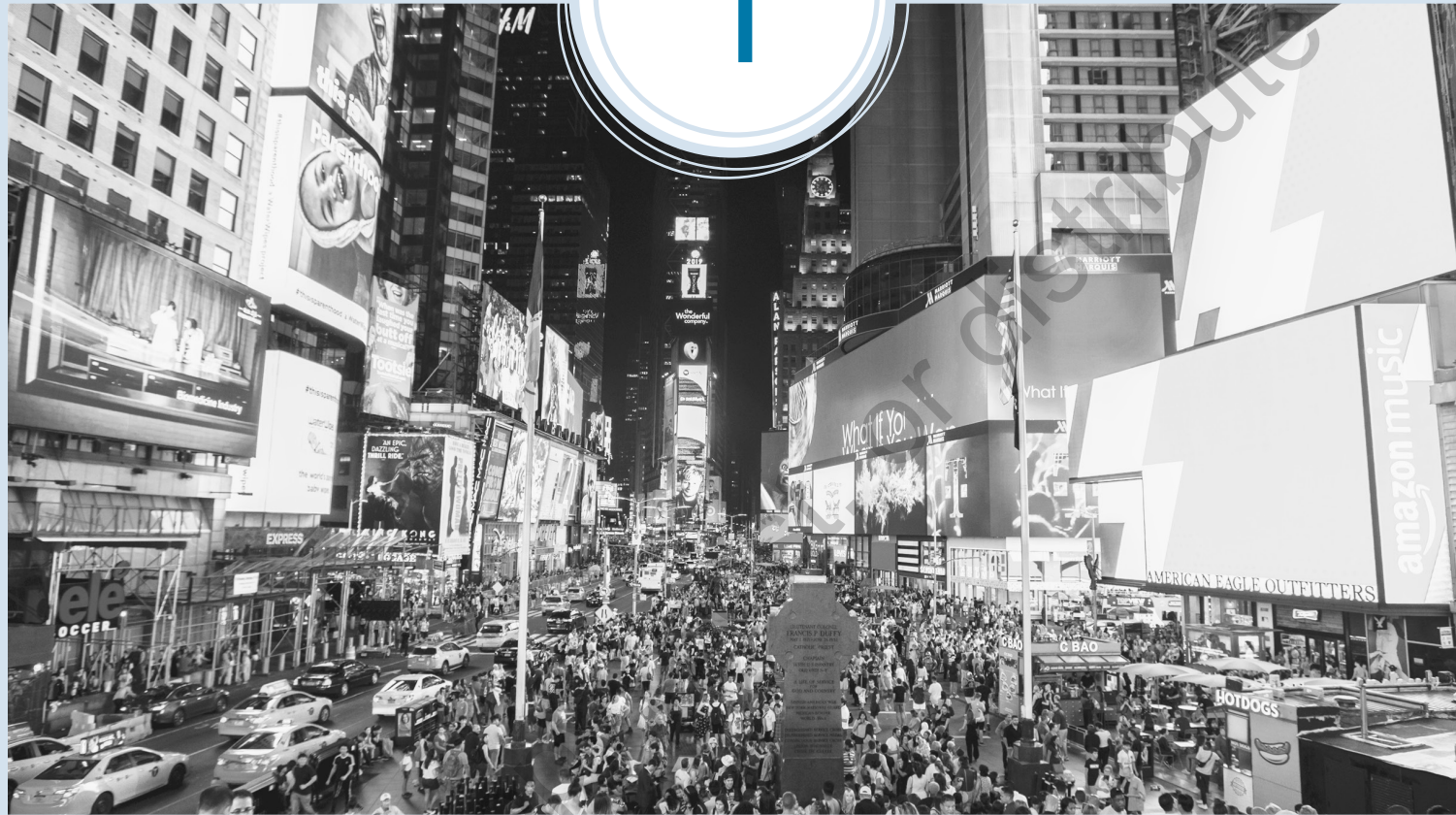


Introduction

PART I

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Media literacy increases your ability to exercise control over the vast array of messages you encounter through daily media exposure.

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Why Increase Media Literacy?

Key Idea: To survive in our information-saturated culture, we put our minds on “automatic pilot” in order to protect ourselves from the flood of media messages we constantly encounter. The danger with this automatic processing of messages is that it allows the mass media to condition our thought processes.

The Information Problem	Automatic Routines
Growth Is Accelerating	Advantages and
High Degree of Exposure	Disadvantages
Keeping Up	The Big Question
Dealing with the Information	Summary
Problem	Further Reading
Our Mental Hardware	Keeping Up to Date
Our Mental Software	

The first challenge we all face when confronting a new body of information is motivation. We ask ourselves: Why should I expend all the effort to learn this? How will learning this help me enough to make all that effort worthwhile?

With media literacy, our initial answers to the above questions are likely to make us feel that learning about media literacy is not worth the effort because we feel that we already know a lot about the media. We are familiar with a large number of websites, apps, recording artists, and celebrities. We are already able to access a wide range of entertainment and information, so why would we need to learn a lot more about the media? This book will show you the answer to that question by presenting you with some key insights about the media. This information will expand your perspective into new areas and increase your power to exercise control over your media exposures so that you can get more value from those messages. Let's get started!

In this chapter, I will show you the big picture of our media environment so that you can see how enormous the information problem is. The strategy we use to deal with this problem typically works well on a day-to-day basis because it is efficient; however, over the long term, it is not very effective. That is, the advantages we achieve in the short term when we focus only on efficiency grow into disadvantages over the long term. To show you why this is the case, let's first analyze the information problem.

The Information Problem

Our culture is saturated with media messages—far more than you may realize. Hollywood film studios release more than 700 hours of feature films each year, which adds to its base of more than 100,000 hours of films they have already released in previous years. Commercial television stations generate about 48 million hours of video messages every year worldwide, and radio stations send out 65.5 million hours of original programming each year. We now have more than 140 million book titles in existence, and another 5,000 new book titles are published throughout the world each day.

Then there is the World Wide Web, which has been estimated to have almost two billion websites (Internet Live Stats, 2018) but is so huge that no one knows how big

it really is. Each of these websites has the potential to deliver an unlimited amount of information. For example, a video platform such as YouTube has more than five billion videos available for viewing (YouTube, 2018), and users are uploading more than 500 new hours of video *every minute of every day* (Clement, 2019).

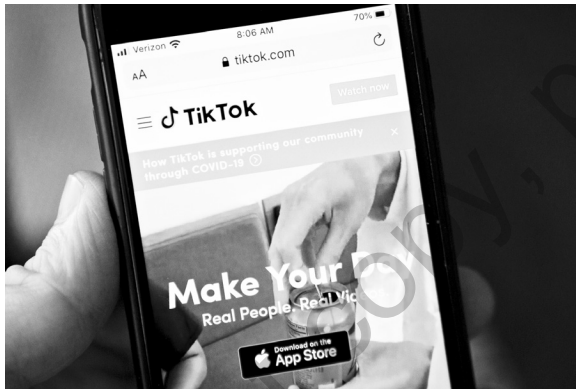
Growth Is Accelerating

Not only are we already saturated with media messages, the number of messages available from the media continues to grow. More information has been generated since you were born than the sum total of all information throughout all recorded history up until the time of your birth. In 2012, Silver estimated that the amount of information was doubling every year. And the rate continues to accelerate! This means that today, over half of all the information that is available to you (in all the libraries, websites, recordings, etc.) did not exist one year ago.

Why is so much information being produced? One reason is that people are producing more information than ever before. Half of all the scientists who have ever lived are alive today and producing information. Also, the number of people in this country who identify themselves as musicians has more than doubled in the last four decades, the number of artists have tripled, and the number of authors has increased fivefold (U. S. Bureau of the Census, 2017).

Another reason is that the technology now exists to provide easy-to-use platforms to share information. Thus, everyone can generate and share information with large numbers of people every day. You no longer need to be a musician to create songs; you can use Garage Band or other computer synthesizers. You don't need to be signed to a recording contract by a record company to distribute your songs. You can also be a journalist, a fiction writer, a photographer, a filmmaker, or even a video game designer as a hobby and make your messages easily available to millions of people, just like professional artists. Or you could generate and share

smaller forms of information such as emails and tweets. There are now 4.5 billion regular users of the internet worldwide, and they send and receive 300 billion email messages each day (Clement, 2020a). Each minute, 188 million emails are sent, 18.1 million texts are sent, 4.5 million searches are conducted on Google, and 1.4 million swipes are made on Tinder. Furthermore, during any given minute of the day, users of Netflix stream 694,444 hours of video; users of Instagram post 277,777 stories; and 231,840 users of Skype are making calls (Fancycrave1, 2019).



Bloomberg/Getty Images

Social media is one of the fastest growing areas for media exposure, being consumed mostly on smartphones and other mobile devices and increasing in popularity among all age groups.

Each of us is adding to this flood of information like never before. Tucker (2014) explains,

Between checking your phone, using GPS, sending e-mail, tweets, and Facebook posts, and especially streaming movies and music, you create 1.8 million megabytes [of data] a year. It's enough to fill nine CD-ROMs every day. The device-ification of modern life in the developed world is the reason why more than 90 percent of all the data that exists was created in just the last three years. (p. xv)

Tucker continues, "And it's growing exponentially, with 44 times as much digital information in 2020 as there was in 2009" (p. xvi).

High Degree of Exposure

The media are highly attractive, so we increase the time we spend with media messages each year. Over the last three decades, every new survey of media use has shown that people, on average, have been increasing their exposure time every year. For example, in 2010, people spent an average of 10 hours and 46 minutes with all forms of the media each day; this increased to 12 hours and 14 minutes by 2017 (eMarketer, 2017). The media become increasingly important to us as we absorb information from others and contribute our own information by connecting with friends and sharing our ideas, pictures, and opinions with others every day.



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Keeping Up

How do we keep up with all this information? One thing we try to do is multitask. For example, a person can listen to recorded music, text friends, and watch a video on a pop-up window all at the same time—thus experiencing three hours of media exposure for each hour of clock time.

Multitasking, however, is not a good strategy for helping us keep up with the flood of information. For example, if you wanted to view all the videos uploaded to YouTube today, it would take you an entire year of viewing and you would have to multitask by watching 20 screens every second of every day! While multitasking helps increase our exposure, it is not a good strategy to help us keep up with even a tiny fraction of media messages in the flood of information every day.

Multitasking, like messaging someone on your smartphone while watching online videos, increases your media exposure. But are you truly multitasking, or are you still missing bits and pieces of information?

Dealing with the Information Problem

Although we are all saturated with information and each year the media are more aggressive in seeking our attention, we are able to deal with it. How is this possible? The answer lies in the way the human brain is wired and programmed: its hardware and software.

Our Mental Hardware

The most remarkable piece of hardware on Earth is the human brain. Although the human brain is relatively small (weighing less than four pounds), it has a remarkable capacity to take in information from the five senses (sight, hearing, touch, taste, and smell); process all that information by either filtering it out or attending to it; process its meaning; store it and later retrieve it; and make decisions that often stimulate action. The human brain is composed of 100 billion neuron cells—which is the number of stars in the Milky Way (Storr, 2019). Each cell is linked by synapses to as many as 100,000 others. That means your brain has created over 500 trillion stringlike fibers (called *axons*) and dendrites that connect with other neurons at junctions (called *synapses*). “These synapses constantly form and dissolve, weakening and strengthening in response to new experiences” (Haven, 2007, p. 22).

As the human brain is constantly monitoring the environment, thousands of neurons are receiving stimulation from thousands of other neurons and must decide whether to ignore the input or respond in some way by sending a signal to another specific neuron. “Somehow, through this freeway maze of links, loops, and electric traffic jams, we each manage to think, perceive, consider, imagine, remember, react, and respond” (Haven, 2007, p. 22).

Our Mental Software

How does this complex piece of hardware know what to do? The answer to this question is that the brain has been programmed to perform certain functions. This programming or software, which is sometimes referred to collectively as *the mind*, tells the brain how to function, much like the software on your computers tell them which functions to perform and how to perform those functions.

Some of this software has been hardwired into the brain before birth. For example, the brain automatically oversees the body’s internal states by constantly monitoring the performance of the organs (heart, lungs, kidneys, etc.) to keep them functioning properly. The brain also has been programmed to monitor a person’s environment for threats. For example, orienting reflex directs the brain to pay attention to the environment for sudden changes, such as loud noises or flashes of light, and when a potential threat is identified, the brain creates an attentional state that forces the person to examine the thing that triggered the attention to determine whether it is an actual threat or not. Also, the brain has been hardwired with a fight-or-flight reflex so that when a potential threat is encountered, the body is automatically made ready (increased heart rate and blood pressure) to either fight off the threat or run away to safety.

In addition to the hardwiring of the brain to maintain *physical* well-being, the brain has also been hardwired to enhance its *social* well-being. For example, the ability for language has been hardwired into human brains so that people can easily communicate. Throughout history, every culture has developed a language. While the basic ability to learn a language is hardwired, the learning of any particular language must be learned after birth so that each individual can use their language facility to transmit meaning to others and receive meanings from their culture.

As we accumulate experiences in life, our minds create additional programming that tells our brains how to perform additional functions, such as math or logical reasoning; how to work through moral problems; how to control one's emotions; and how to expand and grow the skills that would lead to rewarding careers and relationships. This additional programming initially comes from one's parents and siblings. It also comes from one's contact with cultural institutions, such as education, religion, politics, and government. It comes from one's friends, acquaintances, and even one's enemies. And it comes from the mass media. All of this additional programming shapes how we make decisions in our everyday world about what to wear, what to eat, what is important, how to act, and how to spend our resources of time and money. This programming is constantly running in our unconscious minds in the form of automatic routines.

Automatic Routines

The human mind can be wondrously efficient. It can perform many everyday tasks quickly by using **automatic routines**, which are sequences of behaviors or thoughts that we learn from experience and then apply again and again with little effort. Once you have learned a sequence—such as tying your shoes, brushing your teeth, driving to school, or playing a song on the guitar—you can perform it over and over again with very little effort compared to the effort it took you to learn it in the first place. As we learn to do something, we are writing the instructions, similar to a computer code in our minds. That code then runs automatically in our unconscious minds and serves to guide us through the task with very little thought or effort. To illustrate, recall your experience in first learning to type. You had to think of the individual letters in each word, think about which key controlled which letter, and then command a finger to press the correct key. It took you a long time to type out each word. But now, after much practice, your fingers (or thumbs) move over the keyboard quickly as you type out messages in seconds. Now when you message someone, you think only about the message while not having to think at all about the mechanics of typing.



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The human brain not only oversees autonomic functions like breathing, it also manages the choices we make and how we act in social situations.

Psychologists refer to this automatic processing of information as **automaticity**. Automaticity is a mental state in which our minds operate without any conscious effort from us. We encounter almost all media messages in a state of automaticity; that is, we put our minds on “automatic pilot” and automatically filter out almost all message options. I realize that this might sound strange, but think about it. We cannot consider every possible message and consciously decide whether to pay attention to it or not. There are too many messages to consider. Over time, we have developed automatic routines that guide this filtering process very quickly and efficiently so we don’t have to spend much, if any, mental effort.

To illustrate this automatic processing, consider what you do when you go to the supermarket to buy food. Let’s say you walk into the store with a list of 25 items you need to buy; 15 minutes later, you walk out of the store with your 25 items. In this scenario, how many decisions have you made? The easy answer is to say 25 decisions, because you made a separate decision to buy each of your 25 items as you put each item into your cart. But what about all the items you decided *not* to buy? The average supermarket today has about 40,000 items on its shelves. You actually made 40,000 decisions in the relatively short time you were

in the supermarket—25 decisions to buy the 25 products and all those other decisions not to buy the remaining 39,975 products. How did you accomplish such an extensive task in such a short period of time? You relied on automatic routines.

Our culture is a grand supermarket of media messages. Those messages are everywhere whether we realize it or not, except that there are far more media messages in our culture than there are products in any supermarket. In our everyday lives—like when we enter a supermarket—a program is loaded into our mind that tells it what to look for and automatically filters out the

rest. This automatic processing guides most—but certainly not all—of our media exposures. With automatic processing, we experience a great deal of media messages without paying any attention to them. Every once in a while, something in the message or in our environment triggers our conscious attention to a media message. To illustrate this, imagine driving in your car; you have music from your smartphone playing through your car’s sound system but your attention is on the conversation you are having with your friend who is seated next to you. Then your favorite song starts playing, and your attention shifts from the conversation to the music. Or perhaps your conversation is interrupted when your friend notices that the sound system is playing her favorite song, and she starts singing along with the music. In both scenarios, you are being exposed to a stream of media messages from your car’s sound system without paying conscious attention to them, but then something happens that triggers your conscious attention to the music.



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Deciding which brand is best, trying to tune out advertisements, and determining what you want versus what you need—these are all things we encounter when we’re out shopping, and when we’re engaging with media. How else is shopping in a supermarket similar to consuming media content?

Advantages and Disadvantages

The huge advantage of automatic processing is efficiency. When the filtering software is running automatically, it is making thousands of decisions for us without requiring us to expend any effort.

There are, however, some significant disadvantages. When we rely exclusively on our automatic routines, we get into a rut and miss out on paying attention to many messages that may be highly useful to us; we never know what we are missing. When our minds are on automatic pilot, we may be missing a lot of messages that might be helpful or enjoyable to us. We might not have programmed all the triggers we need to help us get out of automatic processing when a potentially interesting message comes our way. Returning to the supermarket example from above, let's say you are very health conscious. Had you been less concerned with efficiency when you went into the supermarket, you would have considered a wider range of products and read their labels for ingredients. Not all low-fat products have the same fat content; not all products with vitamins added have the same vitamins or the same proportions. Or perhaps you are very price conscious. Had you been less concerned with efficiency, you would have considered a wider variety of competing products and looked more carefully at the unit pricing so you could get more value for your money. Thus, when we are too concerned with efficiency, we lose opportunities that expand our experience and that put ourselves in a position to make better decisions that can make us healthier, wealthier, and happier.

Another disadvantage of relying on automatic routines is that over the long run, we start to experience message fatigue. When we feel overwhelmed by too many media messages, we try to protect ourselves by narrowing down our attention and thus filtering out even more messages. Eventually, we end up exposing ourselves to the same type of message over and over, and the value of each message keeps decreasing. This process weakens our ability to concentrate. In 1971, the Nobel Prize-winning economist Herbert Simon observed that “a wealth of information crates a poverty of attention” (Angwin, 2009, p. 239). This is illustrated by a study where experimenters set up a jam-tasting table in a food store. In this experiment, the researchers either offered people samples from six jams or 24 jams. While the table with more jams attracted 50% more visitors and tasters, the table with fewer jams stimulated more sales. Among the visitors to the table with the larger number of jams, only 3% bought some jam, while among the visitors to the table with the smaller number of jams, 30% bought some jam (Anderson, 2006). The lesson here is that while choice is attractive, too much choice can paralyze us into inaction. When we feel overwhelmed, we rely more and more on automatic routines and this leads us into a deeper and deeper rut, where we find ourselves doing the same things over and over.

The Big Question

Given that we live in a culture highly saturated with information and given that we protect ourselves from this flood of information with automatic routines programmed into our minds, the big question is this: Who benefits the most from the way automaticity has been programmed in your mind?

There is no simple answer to this question because many forces have been active in influencing how your code has been programmed over the course of your life so far. Some of this influence has come from parents, siblings, and friends who typically try to help you, so their influence is likely to have been positive. Some of this influence has come from institutions and society, which are typically prosocial influences, but they have also been concerned with pushing you to conform to their ideas of what you should believe and how you should behave. Then there are the media programmers and advertisers who are most concerned about influencing you in order to satisfy their own goals while convincing you that their products are satisfying your needs.

The task of sorting through all these influences requires some considerable analyses. This book will guide you through the media part of that analysis. Each of the 15 chapters in the instructional core of this book will show you how to ask the crucial questions about what you think about the world, what you believe to be true, and your habits of spending your resources of time and money. Through these analyses, you will gradually increase your awareness about the degree to which the media have programmed your automatic codes. This increased awareness will help clarify which parts of your code are not acting in your best interest and are likely training you to waste your personal resources, which leads to frustration, anxiety, and unhappiness. These insights will put you in a position to identify the faulty bits of code and help you to reprogram your existing codes so that they better serve your needs.

People who do not periodically examine the coding that governs their automatic routines are confined to stay in the trap of continually being controlled by outside influences. When we are not consciously paying attention and carefully evaluating our media exposures, the mass media continually reinforce certain behavioral patterns of exposure until they become automatic habits. We mindlessly follow these habits, which are delivering less and less valuable information and experiences. We allow advertisers to increase their influence as they continually program an uneasy self-consciousness into our minds so that we are on the lookout for products that will make us look, feel, and smell better. Advertisers have been very successful in programming many of us into a shopping habit. People in America spend more time shopping than people in any other country. A few years ago, 93 percent of teenage girls surveyed said that shopping was their favorite activity (Schwartz, 2004). Advertising has programmed our automatic routines so that we shop even when it would be in our best interest to do other things. When you allow others to dominate the programming of your mind and when your mind runs on automatic pilot, then you end up behaving in ways that achieve the goals of those programmers rather than behaving in ways that would make you more happy.

If you are bothered that the media have been programming your automatic routines in order to satisfy their objectives rather than your personal objectives, then you likely have the motivation to learn how to take more control over this programming process. You will want to learn how to examine the code that has been programmed into your mind and sort through those programs that really do help you while eliminating those programs that make you unhappy. Increasing your personal control is what media literacy is all about.

Summary

We cannot physically avoid the glut of information that aggressively seeks our attention in our culture. Instead, we protect ourselves by psychologically avoiding almost all of the messages in the flood of information. We do this by keeping our minds on automatic pilot most of the time. This automaticity allows us to avoid almost all messages and to do so efficiently.

Automaticity, however, comes with a price. While we are in the automatic state, we allow the media to condition us to form all kinds of habits that consume our time and money. While some of these habits may be beneficial to us, others are not. Learning to tell the difference between the two requires a stronger media literacy perspective.

Further Reading

Gleick, J. (2011). *The information: A history, a theory, a flood*. New York: Pantheon Books. (526 pages, including index)

This is a rather long book that gets very technical in places with mathematical and engineering-type descriptions. But it is worthwhile if you really want to understand the nature of information and how it has changed forms over the years.

Schwartz, B. (2004). *The paradox of choice: Why more is less*. New York: HarperCollins. (265 pages including endnotes and index)

Barry Schwartz writes about how much choice the average person is now confronted with every day. He argues that increasing choice up to a point is a good thing, but beyond that point, increasing choice overwhelms people and they cease to make good decisions.

Silver, N. (2012). *The signal and the noise: Why so many predictions fail—but some don't*. New York: Penguin Press. (534 pages, including index)

The author documents the dramatic increase in information over the last several decades and argues that most of this information is noise, which makes it more difficult—rather than easier—to make good predictions and forecasts.

Wright, A. (2007). *Glut: Mastering information through the ages*. Washington, DC: Joseph Henry Press. (252 pages, including index)

The author, who characterizes himself as an information architect, takes a historical approach to showing how humans have evolved in the way they generate, organize, and use information. He argues that all information systems are either nondemocratic and top-down (a hierarchy) or peer-to-peer and open (a network). Tracing the development of human information, he uses perspectives from mythology, library science, biology, neurology, and culture. He uses this historical background to critique the nature of information on the internet.

Keeping Up to Date

For some chapters, the material I talk about is very fluid and quickly changes. Therefore, some of the facts and figures I present may be out of date by the time you read a particular chapter. To help you find more up-to-date figures, I have included some sources of information that you can check out to get the most recent figures available.

Infoniac.com (<http://www.infoniac.com/hi-tech/>)

This site presents data about the growth of information in the world and provides general information about new developments in technologies.

Pingdom (royal.pingdom.com)

This is a blog written by members of the Pingdom team on a wide variety of

topics concerning the internet and web tech issues. Begun in 2007, Pingdom is a company that provides internet services to companies around the world.

Statistical Abstract of the United States (https://www.census.gov/library/publications/time-series/statistical_abstracts.html)

Up until 2011, the United States Census Bureau of the Department of Commerce released a new statistical abstract from the data it gathered every year. Since then, this website presents links for reports based on data gathered by other organizations.