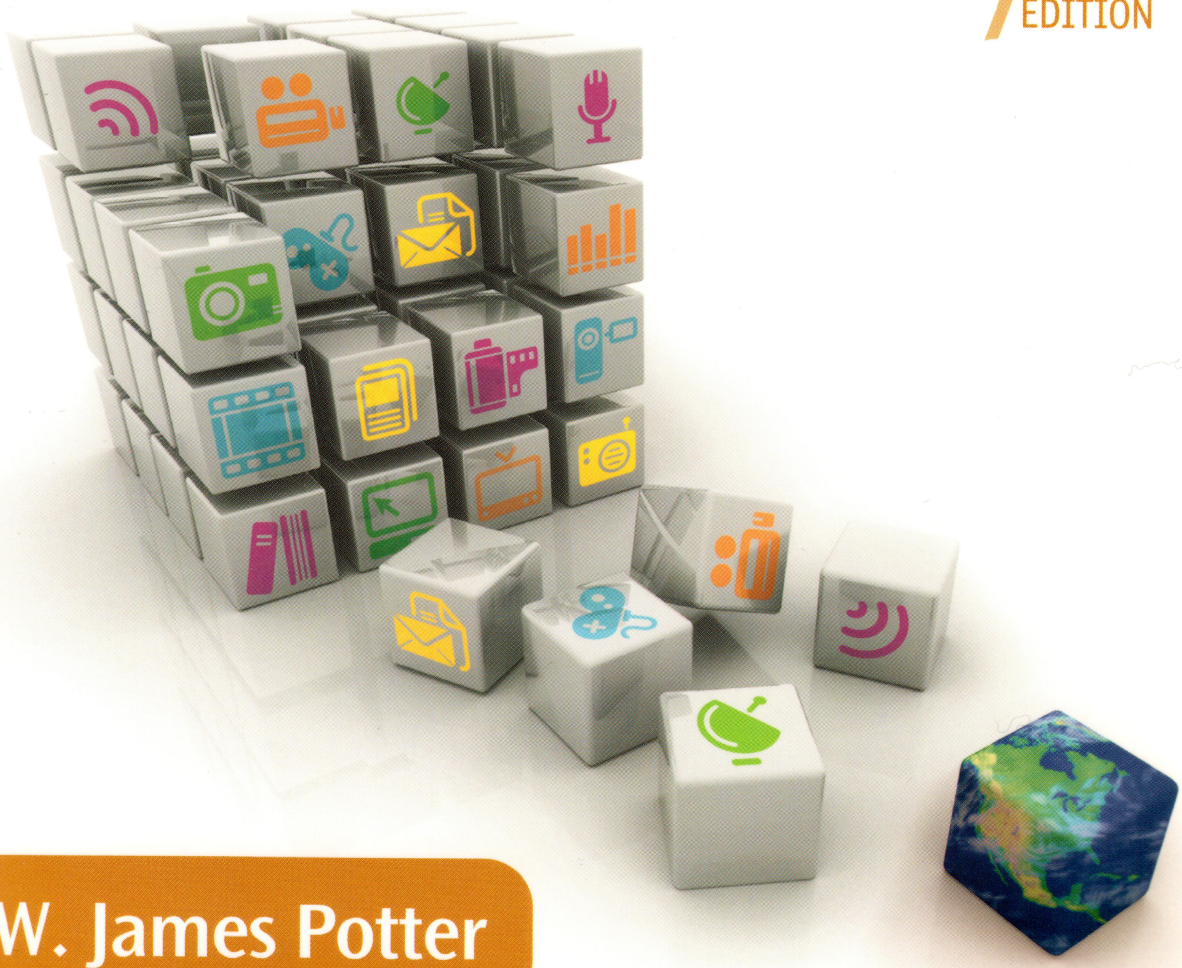
Media Literacy

4th EDITION



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SAGE

CHAPTER 1

Living in the Message-Saturated World

Key Idea: In order to survive in our information-saturated culture, we put our minds on "automatic pilot" 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 media to condition our thought processes.

MESSAGE SATURATION

Our culture is saturated with information. The flood of messages comes to us through the mass media (see Table 1.1). For example, this year in the United States alone, there will be almost 175,000 book titles published, and each of these is available in public libraries or through online bookstores for a relatively modest price. Furthermore, books are only one channel of information. Throughout the world, radio stations send out 65.5 million hours of original programming each year, and television adds another 48 million hours. In this country alone, the seven major film studios have an additional 169,500 television programs in their archives.

TABLE 1.1 Number of Mass Media Vehicles

Medium	*United States*	*World*
Books (titles per year)	175,000	968,735
Radio stations	13,261	47,776
TV broadcast stations	1,884	33,071
Newspapers	2,386	22,643
Mass market periodicals	20,000	80,000
Scholarly journals	10,500	40,000
Newsletters	10,000	40,000
Archived office pages	3×10^9	7.5×10^9

SOURCE: Information is from Lyman and Varian (2003).

With personal computers, we have access to even more information than ever when we connect to the Internet. The Internet gives us access to about 3,000 newspapers (Kawamoto, 2003). Also, the World Wide Web offers access to about 2.5 billion documents. These are the publicly available pages, referred to as the surface Web. There is also what is called the deep Web, which consists of pages that require memberships, fees, or are otherwise private. This deep Web has been estimated to be 400 to 550 times the size of the surface Web (Lyman & Varian, 2003).

Not only is information easily available to almost anyone today, but information also keeps getting produced at an ever increasing rate. 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. 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 artists increased from 737,000 in 1970 to 2.2 million in 2000, the number of musicians grew from 100,000 in 1970 to 187,000 in 2001, and the number of authors quadrupled to 128,000 (Kiger, 2004). These artists, musicians, and authors are pumping even more messages through our media channels everyday.

How much information is produced each year? Before I tell you, I need to make sure you understand a few technical terms. A byte is a unit of information storage. A kilobyte is 1,000 bytes or the information contained in two typed pages or a low-resolution photograph. A megabyte is a million bytes, which is the information in a small novel or 6 seconds of a high-fi recording. A gigabyte is 1 billion bytes. A terabyte is 1,000 gigabytes, a petabyte is 1,000 terabytes, and an exabyte is 1,000 petabytes. To put these large numbers in perspective, the 19 million books and other materials in the U.S. Library of Congress, if digitized, would take up about 10 terabytes of information.

Okay, now you are ready for the answer to the question: How much information is produced in a given year? In 2002, researchers at the University of California at Berkeley conducted a huge project that resulted in the estimate that in that single year of 2002, there were 5 exabytes of information produced worldwide (Lyman & Varian, 2003). This means that the amount of information produced in 2002 was 500,000 times the amount of all the

holdings in the Library of Congress. As if that is not scary enough, Lyman and Varian (2003) estimated that the rate of growth of information increases at 30% each year. This means that in 2008, there will be 24 exabytes produced in that one year—or for each and every byte of information stored in the Library of Congress, there will be produced 2.4 million bytes of new information in that one year!

HIGH DEGREE OF EXPOSURE

We love our media, as evidenced by how much time we spend with them. A recent comprehensive study of media use found that about 30% of the waking day was spent with media as the sole activity, and another 39% was media use coupled with another activity. That sums to almost 70% of the average person's day that includes some form of media use. In contrast, less than 21% of the time was found to be devoted to work (Ransford, 2005).

Television is still by far the dominant medium at 275 minutes per day. Furthermore, the time people spend with television keeps increasing according to the A. C. Nielsen Company (Nielsen Media Research, 2006). Over the past decade alone, the average American household has increased the time the TV is on from 7 hours 15 minutes in 1995–1996 to 8 hours and 14 minutes in 2005–2006; during the same decade, the average time a person spends watching TV per day has increased from 3:59 to 4:35. More than half of all American households have three or more television sets (Bauder, 2006). There are now more TV sets than people in America.

Other mass media are also consuming a great deal of audience time. In second place—behind TV—is the computer. Worldwide, there are more than a (U.S.) billion Internet users, which is 17% of the world's population (Miniwatts Maketing Group, 2006). In the United States, four out of every five people age 12 and older are Internet users (Project for Excellence in Journalism, 2006), and the average person now spends more than 2 hours per day with the computer. Computer use is especially high among college students. In the United States, there are now 17.4 million college students, and 50% of them arrive on campus as freshmen with a laptop computer. The typical college student now spends 3.5 hours a day on the computer e-mailing, instant messaging, and Web surfing. They also spend an additional 7.5 hours every day engaged with other media, such as books, magazines, recordings, radio, film, and television (Siebert, 2006).

It is clear that the media are an extremely important part of people's everyday lives. The media organizations themselves realize this and continue to provide more and more messages in a wider range of channels every year.

THE INFORMATION PROBLEM

Individual people and societies have always had a problem with information. For millennia, the information problem was one of generating enough information about important aspects of life, then providing people with access to that information. But with the rise of the mass media, especially over the past half century, the information problem has shifted from one of gaining access to one of protecting ourselves from too much information.

To illustrate this point, let's focus on just one medium—books. Until about two centuries ago, the majority of the population could not read, and even if it could, there were few books available. In the early 1300s, the Sorbonne Library in Paris contained only 1,338 books and yet was thought to be the largest library in Europe. Only elites had access to those books. Today, there are many libraries with more than 8 million books, and they lend out their books to millions of people every year. With literacy rates high, the ease of buying books from Web sites, and the availability of free public libraries in every town, *access* to books is no problem.

Time, however, is a big problem. If you were to try to read only the new books published this year, you would have to read a book every 3 minutes for 24 hours each day with no breaks over the entire year—that is 20 books per hour and 480 books each and every day. All that effort would be needed just to keep up with the new titles published in only the United States! You would have no time left to read any of the other 66 million book titles in existence worldwide. This example is limited to only books. The world produces about 31 million hours of original TV programming each year (Lyman & Varian, 2003). If you wanted to watch all the television programming broadcast in this year alone, it would take you about 35 centuries—if you took no breaks!

We live in an environment that is far different from any environment humans have ever experienced before. And the environment changes at an ever increasing pace. This is due to the accelerating generation of information and the sharing of that information through the increasing number of media channels and the heavy traffic of media vehicles traversing those channels. Messages are being delivered to everyone, everywhere, constantly. We are all saturated with information, and each year the media are more aggressive in seeking our attention. It is a hopeless expectation to keep up with all the information available. The most important challenge now lies in making good selections when the media are constantly offering us thousands of messages on any given topic.

The Challenge of Selection

How do we meet the challenge of making selections from among the overwhelming number of messages in the constant and increasing flood of information? The answer to this question is this: We put our minds on "automatic pilot," where our minds automatically filter out almost all message options. I realize that this might sound strange, but think about it. We cannot possibly consider every possible message and consciously decide whether to pay attention to it or not. There are too many messages to consider. So our minds have developed 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, and 15 minutes later, you walk out of the store with your 25 items. In this scenario, how many decisions have you made? The temptation is to say 25 decisions, because you needed to have made a decision to buy each of your 25 items. But what about all the items you *decided not to buy?* The average supermarket today has about 40,000 items on its shelves. So you actually made 40,000 decisions in the relatively short

time you were in the supermarket—25 decisions to buy a product and 39,975 decisions not to buy a product.

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 messages in our culture than there are products in any supermarket.

Automatic Routines

The human mind is wondrously complex. It can perform all kinds of creative tasks such as imagining the future, constructing fantasies, making up lies, and contemplating an infinitely wide range of if-then speculations. It also performs many mundane tasks routinely with remarkable efficiency. Once you have leaned 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 like a computer code in our minds. Once that code is written, it can later be loaded into our minds and run automatically to guide use through the task with very little thought.

To navigate our way efficiently day-to-day through our information-saturated culture, we rely on automatic processing. Psychologists refer to this automatic processing of information as *automaticity.* Automaticity is a state where our minds operate without any conscious effort from us. Thus, we can perform even complicated tasks routinely without even thinking about them. For example, typing is a relatively complicated task, but after we learn to type, we do it automatically. Think about 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 a word. But with practice, you are able to type out paragraphs without thinking much about which finger needs to strike which key in which order. Now when you type, you enter the state of automaticity where well-developed habits guide your actions without requiring you to think about them.

In our everyday lives—like when we enter a supermarket—we load an automatic program into our mind that tells it what to look for and ignore the rest. 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 much attention to them; thus we have the feeling that we are filtering them out because we are not paying conscious 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 yourself driving in your car with the radio playing while you are talking to your friend. Your attention is on the conversation with your friend, instead of on the music coming from the car radio. 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 radio 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 radio without paying conscious attention to them, but then something happens to trigger your conscious attention to the music from the radio.

Advantages and Disadvantages of Automatic Processing

The huge advantage of automatic processing of information in our environment is that it helps us get through a great many decisions with almost no effort. However, there are some serious disadvantages. 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 useful 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. When we are *too* concerned with efficiency, we lose opportunities to expand our experience and to put ourselves in a position to make better decisions that can make us healthier, wealthier, and happier.

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 becomes, Who has programmed the computer code that governs these automatic routines?

For some of us, the answer to this question is that *we* have programmed the code that governs our automatic routines. When we are aware of our needs for certain kinds of messages, it is easy to program our triggers. Also, if we have an intensely enjoyable reaction to a media message, we consciously decide to look for that kind of message again and again. And if we have a strong negative reaction to a media message, we consciously decide to avoid that type of message every time in the future. When we consciously think through our decisions, we program our code that automatically tells us what to pay attention to and what to ignore.

For many of us, our automatic code has been programmed by the mass media and advertisers. 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. For many of us, we turn on the radio every time we get in our cars, turn on the television as soon as we get home, and turn on our computers when we get up in the morning. Advertisers constantly program the way we think about ourselves. Advertisers 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 programmed many of us into a shopping habit. People in America spend more time shopping than people in any other country. Americans go to shopping centers about once a week, more often than they go to houses of worship, and Americans now have more shopping centers than high schools. In a recent survey, 93% of teenage girls surveyed said that shopping was their

favorite activity (B. Schwartz, 2004). Advertising works by programming our automatic routines so that we shop even when it would be in our best interest to do other things.

For most of us, our minds have been programmed by a combination of us, our friends, our parents, the mass media, and advertisers. Some of these agents of programming truly know you and have your best interests in mind as they reinforce your special strengths and help you overcome your troublesome weaknesses; they are trying to make you happier and make your life better. Other agents of programming are trying to use you as a tool to achieve their goals, which are often very different from your own goals. When this occurs, the programming makes you less and less happy as they "help" you solve problems you don't have and move you toward goals that are not in your own best interests.

Therefore, it is important that you periodically examine the code that has been programmed into your mind. This is why media literacy is so important.

MEDIA LITERACY

Taking control is what media literacy is all about. Becoming more media literate gives you a much clearer perspective to see the border between your real world and the world manufactured by the media. When you are media literate, you have clear maps to help you navigate better in the media world so that you can get to those experiences and information you want without becoming distracted by those things that are harmful to you. You are able to build the life that *you* want rather than letting the media build the life *they* want for you.

Those who fail to develop their literacy of the media will get swept along in a tide of messages. They will have a false sense that they know what is going on in the world simply because they are exposed to so much information. Everette Dennis, who is the executive director of The Freedom Forum Media Studies Center at Columbia University in New York and vice president of The Freedom in Arlington, Virginia, referred to media illiteracy as "potentially as damaging and poisonous to the human spirit as contaminated water and food is to our physical well-being" (Dennis, 1993, p. 4). The metaphor of pollution is an apt one. The media industries provide us with many products that we desire—products that are good for us—but these same media industries are also producing harmful by-products and dumping them into our culture. If we are not literate, we don't know the difference, and we consume the bad with the good.

This book will show you how you can become more media literate. It will present you with many things to think about, and the more sensitive you are to these issues on a day-to-day basis, the more you will be able to increase the amount of code you are programming into your automatic routines and the less the media will be programming your code without your awareness or permission.

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. We allow the media to condition us while we are in this automatic state. The media condition us to habitual exposure patterns. They want to attract us to the messages they have planned for us, not necessarily the messages that are most useful for us. This increases the risk that we will miss many of the messages that might have higher value for us. The media also condition us to accept unchallenged the meaning they present in their messages. This increases the risk we will accept faulty meaning.

FURTHER READING

Lyman, P., & Varian, H. R. (2003, October 27). *How much information? 2003.* Retrieved May 14, 2004, from http://www.sims.berkeley.edu/research/projects/how-much-info-2003/

A research team at the UC Berkeley School of Information Managements and Systems has analyzed the world's media and constructed estimates for how much information is produced each year. This is a very ambitious project that presents startling results about the amount of information available.

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 everyday. He argues that increasing choice up to a point is a good thing but that beyond that point, increasing choice overwhelms people, and they cease to make good decisions.

Wurman, R. S. (1989). *Information anxiety.* New York: Doubleday. (356 pages)

This book is now fairly old. But his arguments about how much information has invaded our culture and how that flood was affecting us are still shocking. And those arguments are even more shocking when we realize that our culture is *much more* saturated with information now than it was in the 1980s.

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CHAPTER 2

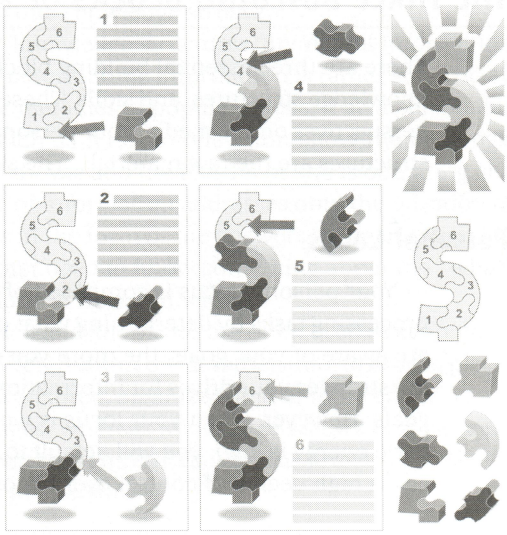
Media Literacy Approach

Key Idea: Media literacy is a perspective from which we expose ourselves to the media and interpret the meaning of the messages we encounter. We build our perspective from knowledge structures.

As we learned in the first chapter, we are flooded with messages from the media. We cannot possibly pay attention to all of them or even to a majority of them; we must screen out all but a tiny percentage. To help us do this screening with the least amount of mental effort, we put our minds on automatic pilot, where our minds automatically screen out messages without thinking about the process until a particular message triggers our attention. This filtering out and triggering attention is governed by a kind of mental computer code.

WHAT IS MEDIA LITERACY?

Many people have written about media literacy (for an assortment of these ideas, see the Further Reading at the end of this chapter). These writings share two characteristics. First, they criticize the mass media and emphasize their harmful nature. Second, they suggest that people need to be more mindful during their media exposures so



they can argue against faulty messages and thereby protect themselves from harm. In these writings, the purpose of media literacy is to remind people to be mindful and take an oppositional stance to the practices of media companies and media messages.

In this book, I break with that perspective and present an alternative perspective that is more balanced. It takes a more personal approach to media literacy. And it provides strategies for developing media literacy that are more realistic and attainable.

As for the first characteristic of criticizing the media, this book's perspective is that the mass media are not all bad; they also offer many, many positive effects. Think about all the information you have learned from the media that have helped you live a better life. Think about all the pleasure the mass media have given you through music, movies, television shows, and so on. I am not arguing that all media effects are good or that the mass media do not deserve criticism at times. Instead, I am arguing that we need to take a more balanced approach if we are to become media literate. We need to appreciate the good as well as criticize the bad.

As for the characteristics of protecting ourselves from harmful media effects through mindful exposures, it is unrealistic to believe that we will be able to do much of this. As you saw in the previous chapter, we encounter almost all media messages in an automatic state and pay attention to perhaps only 1%. It is not possible for people to encounter all media messages in a state of concentrated awareness—there are just are too many messages to be able to do this. Also, it is a foolhardy task to encourage people to pay attention to, say, 2% of all messages rather than 1% and expect this to make a difference in media literacy. People who try to follow this advice will inevitably fail and feel that media literacy is an impossible goal. Instead, my perspective is that if we learn how to see things differently in that 1% of media messages we really attend to, we will learn how to reprogram our mental code. By making changes in our mental code, we will end up processing the other 99% differently when our minds are running on automatic pilot. To get ourselves in a position to do this, we need to acquire some building blocks.

THE THREE BUILDING BLOCKS OF MEDIA LITERACY

There are three essential building blocks of media literacy. These are your personal locus, knowledge structures, and skills. These three are necessary to build a person's wider set of perspectives on the media. Your personal locus is the energy and your plan. The knowledge structures are the raw materials. The skills are the tools.

Personal Locus

Your personal locus is composed of goals and drives. The goals shape the information-processing tasks by determining what gets filtered in and what gets ignored. The more you are aware of your goals, the more you can direct the process of information seeking. And the stronger your drives for information are, the more effort you will expend to attain your goals. However, when your locus is weak (you are not aware of particular goals and your drive energy is low), you will default to media control; that is, you allow the media to exercise a high degree of control over exposures and information processing.

The more you know about this locus and the more you make conscious decisions to shape it, the more you can control the process. The more you pay conscious attention to your locus, the more you control the process of information acquisition and usage. The more you engage your locus, the more you will be increasing your media literacy. Being media literate, however, does not mean that the locus is always fully engaged. This is an impossible task because no one can maintain that high a degree of concentration continuously. Media literacy is a process, not a product. Therefore, becoming more media literate means that a person uses the locus more (thus less time with mindless exposures) and uses it more actively.

The locus operates in two modes: conscious and unconscious. When the locus operates in the conscious mode, you are aware of options and can exercise your will in making decisions. In contrast, when the locus operates in the unconscious mode, the decisions are made outside of your awareness and control. In both modes, knowledge structures can get formed and elaborated. However, when you are consciously using your locus, you are in control of the information processing and meaning making, but when your locus is operating in the unconscious mode, the media exert their most powerful effect. The locus is in the unconscious mode when we follow the default model and are in a state of automaticity.

Knowledge Structures

Knowledge structures are sets of organized information in a person's memory. Knowledge structures do not occur spontaneously; they must be built with care and precision. They are not just a pile of facts; they are made by carefully crafting pieces of information into an overall design. To perform such a task, we rely on a set of skills. These skills are the tools. We use these tools to mine through the large piles of facts, so that we can uncover the particular facts we need and brush away the rest. Once we have selected the facts we need, we shape those facts into information and carefully fit those pieces of information into their proper places in a structure. The structure helps us see the patterns. We use these patterns as maps to tell us where to get more information and also where to go to retrieve information we have previously crafted into our knowledge structure.

Information is the essential ingredient in knowledge structures. But not all information is equally useful to building a knowledge structure. Some information is rather superficial, such as the names of television shows or the melodies of popular music. If all a person has is the recognition of surface information such as lyrics to television show theme songs, names of characters and actors, settings for shows, and the like, he or she is operating at a low level of media literacy because this type of information addresses only the question of "what." The more useful information comes in the form of the answers to the questions of "how" and "why." But remember that you first need to know something about the "what" before you can delve deeper into the questions of how and why.

In everyday language, the terms *information* and *knowledge* are often used as synonyms, but in this book, they have meanings very different from one another. Information is piecemeal and transitory, whereas knowledge is structured, organized, and of more enduring significance. Information resides in the messages, whereas knowledge resides in a person's mind. Information gives something to the person to interpret, whereas knowledge reflects that which has already been interpreted by the person.

Information is composed of facts. Facts by themselves are not knowledge any more than a pile of lumber is a house. Knowledge requires structure to provide context and thereby exhibit meaning. Think of messages as the raw materials and skills as the tools you use to do something with the raw materials. That "something" is in the service of attaining the goal of pulling the information out of the messages and turning that information into knowledge, that is, to reconstruct the information so that it will contribute to our knowledge structures. A characteristic of higher media literacy is the ability and habit of transforming information into knowledge structures.

While I'm on the topic of distinguishing information from knowledge, I also need to define a few terms related to the idea of information: *message, factual information,* and *social information.* Messages are those instruments that deliver information to us. Information is the content of those messages. Messages can be delivered in many different media—television, radio, CDs, video games, books, newspapers, magazines, Web sites, conversations, lectures, concerts, signs along the streets, labels on the products we buy, and so on. They can be large (an entire Hollywood movie) or small (one utterance by one character in a movie).

Messages are composed of two kinds of information: factual and social. A fact is something raw, unprocessed, and context free. For example, when you watch the news and hear messages about terrorism, those messages are composed of facts, such as the following: *The World Trade Center in New York City was destroyed on September 11, 2001. On that day, the United States declared war on terrorism. The person suspected of planning the attack on the World Trade Center was Osama bin Laden.* These statements are facts. Facts are discrete bits of information, such as names (of people, places, characters, etc.), definitions of terms, formulas, lists, and the like.

Social information is composed of accepted beliefs that cannot be verified by authorities in the same way factual information can be. This is not to say that social information is less valuable or less real to people. Social information is composed of techniques that people learn from observing social interactions. Examples of social information are rules about how to dress, talk, and act to be considered attractive, smart, athletic, hip, and so forth.

With media literacy, we need strong knowledge structures in five areas: media effects, media content, media industries, the real world, and the self. With knowledge in these five areas, people are much more aware during the information-processing tasks and are therefore more able to make better decisions about seeking out information, working with that information, and constructing meaning from it that will be useful to serve their own goals. The information that makes these awarenesses possible resides in knowledge structures.

People who have had a wider range of experiences in the real world have a broader base from which to appreciate and analyze media messages. For example, those who have helped someone run for political office can understand and analyze press coverage of political campaigns to a greater depth than those who have not had any real-world experience with political campaigns. People who have played sports will be able to appreciate the athletic accomplishments they see on television to a greater depth than those who have not physically tested themselves on those challenges. People who have had a wide range of relationships and family experiences will have a higher degree of understanding and more in-depth emotional reactions to those portrayals in the media.

Knowledge structures provide the context we use when trying to make sense of new media messages. The more knowledge structures we have, the more confident we can be

in making sense of a wide range of messages. For example, you may have a very large, well-developed knowledge structure about a particular television series. You may know the names of all the characters in that TV show. You may know everything that has happened to those characters in all the episodes. You may even know the names and histories of the actors who play the characters. If you have all of this information well organized so that you can recall any of it at a moment's notice, you have a well-developed knowledge structure about that television series. Are you media literate? Within the small corner of the media world where that one TV show resides, you are. But if this were the only knowledge structure you had developed, you would have little understanding of the content produced by the other media. You would have difficulty understanding trends about who owns and controls the media, how the media have developed over time, why certain kinds of content are never seen while other types are continually repeated, and what effects that content may be having on you. With many highly developed knowledge structures, you could understand the entire span of media issues and therefore be able to "see the big picture" about why the media are the way they are.

Skills

Skills are tools that people develop through practice. They are like muscles; the more you exercise them, the stronger they get. Without practice, skills become weaker.

The skills most relevant to media literacy are analysis, evaluation, grouping, induction, deduction, synthesis, and abstraction (see Figure 2.1). These skills are not exclusive to media literacy tasks; instead, we use these skills in all sorts of ways in our everyday lives. We all have some ability with each of these skills, so the media literacy challenge is not to acquire these skills; rather, our challenge is to get better at using each of these skills as we encounter media messages. In the remainder of this section, I will define each of these skills and show how they are applied in a media literacy context.

FIGURE 2.1 The Seven Skills of Media Literacy

1. Analysis—breaking down a message into meaningful elements
2. Evaluation—judging the value of an element; the judgment is made by comparing a message element to some standard
3. Grouping—determining which elements are alike in some way; determining how a group of elements is different from other groups of elements
4. Induction—inferring a pattern across a small set of elements, then generalizing the pattern to all elements in the set
5. Deduction—using general principles to explain particulars
6. Synthesis—assembling elements into a new structure
7. Abstracting—creating a brief, clear, and accurate description capturing the essence of a message in a smaller number of words than the message itself

Analysis is the breaking down of a message into meaningful elements. As we encounter media messages, we can simply accept these messages on the surface or we can dig deeper into the message itself by breaking them down into their components and examining the composition of the elements that make up the message. For example, with a news story, we can accept what a journalist tells us or we can analyze the story for completeness. That is, we can break the story down into its who, what, when, where, why, and how to determine if the story is complete or not.

Evaluation is making a judgment about the value of an element. This judgment is made by comparing a message element to some standard. When we encounter opinions expressed by experts in media messages, we could simply memorize those opinions and make them our own. Or we could take the information elements in the message and compare them to our standards. If those elements meet or exceed our standards, we conclude that the message—and the opinion expressed there—is good, but if the elements fall short of our standard, it is unacceptable.

There is a lot of evidence that people simply accept the opinions they hear in media messages without making their own evaluations. One example of this is the now widespread opinion that in the United States, the educational system is not very good, and a big reason for this is that children now spend too much time with the media, especially TV. There are many media stories that present this opinion. One example is the Third International Mathematics and Science Study; the test, which is administered to eighth graders in 41 countries, revealed that American students rank 28th in math and 17th in science in the world ("The Learning Lag," 1996). The 1998 National Assessment of Educational Progress, administered nationally by a group established by Congress, reported that one third of high school seniors lack even a basic understanding of how the American government is run, and only 26% of seniors were considered well versed enough in civics to make reasonable, well-informed choices during elections (McQueen, 1999). The National Assessment of Educational Progress (NAEP) reports that only about one quarter of American schoolchildren have achieved the proficiency standard in writing (Wildavsky, 1999). Reports such as this have led many conscientious parents to accept the opinion that it is bad for their young children to watch television. They believe that TV somehow will make their children's minds lazy, reduce their creativity, and turn them into lethargic entertainment junkies. If this happens, children will not value achievement and will not do well in school.

This belief is faulty because it blames the media, not the child or the parent, for poor academic performance. It also focuses only on the negative effect and gives the media no credit for potentially positive effects. However, when we look carefully at the research evidence, we can see that the typically reported finding is wrong, and when we look more carefully, there are several effects happening simultaneously (see W. J. Potter, 1987a). For example, the typically reported finding is that television viewing is negatively related to academic achievement. And a fair amount of research reports this conclusion. What makes this faulty is that this relationship is explained better by something else—IQ. School achievement is overwhelmingly related to IQ. Also, children with lower IQs watch more television. So it is IQ that accounts for lower achievement and higher television viewing. Research analyses that take a child's IQ into account find that there is no overall negative relationship; instead, there is a much more interesting pattern. The negative relationship does not show up until the child's viewing has passed the threshold of 30 hours per week. Beyond that

30-hour point, the more television children watch, the lower their academic achievement, and that effect gets stronger with the more hours they watch beyond that threshold. This means that academic achievement goes down only after television viewing starts to cut into study time and sleep. But there is no negative effect for less than 30 hours of viewing per week. In fact, at the lowest levels of television viewing, there is actually a positive effect; that is, a child who watches none or only a few hours a week is likely to do less well academically than a child who watches a moderate amount (around 12 to 15 hours per week). Thus, the pattern is as follows: Children who are deprived of the source of information that television provides do less well in school than children who watch a moderate amount of television; however, when a child gets to the point where the amount of television viewing cuts into needed study time, academic performance goes down.

When we pose the question, "What effect does viewing television have on a child's academic performance?" we could give the simple, popular answer: There is a negative effect. But now you can see that this answer is too simple—it is simpleminded. It is also misleading because it reinforces the limited belief that media effects are negative and polarized and that the media are to blame. This conclusion is not so simple as to lend itself easily to a short sound bite or flashy image, so it is not likely to be presented in the mass media.

The reason faulty beliefs are such a dangerous trap is because they are self-reinforcing. By this, I mean that as people are continually exposed to faulty information, they feel even more secure that their faulty beliefs are accurate. They feel less and less motivation to challenge them. When someone points out that the information on which their beliefs are based is faulty, they do not accept this criticism because they are so sure that they are correct. Thus, over time, they are not only less likely to examine their beliefs but also less tolerant of other beliefs having the possibility of being correct.

Grouping is determining which elements are alike in some way—determining how a group of elements is different from other groups of elements. The key to doing this well is determining a classification rule. The media tell us what classification rules are, so if we accept their classification rules, we will end up with the groups they want us to use. But if we make the effort to determine which classification rules are the best ways for us to organize our perceptions of the world, we will end up with groups that have more meaning and more value for us.

Induction is inferring a pattern across a small number of elements, then generalizing the pattern to all elements in the larger set. When we examine the result of public opinion polls, we can see that many people are using elements in media stories to infer patterns about real life, and this creates faulty beliefs about real life. For example, when people are asked about health care in this country, 90% of adults say that the health care system is in crisis; this is what many news stories and pundits tell the public. But when people are asked about their own health care, almost 90% feel that their health care is of good quality. About 63% of people think other people's doctors are too interested in making money, but only 20% think their own doctor is too interested in making money. People are using elements they have learned in media messages to dominate their perception of a pattern in real life. They accept a faulty belief because they do not take their own real-life experience into account when inferring a pattern; that is, they do not use induction well, instead preferring to use elements from mass media stories and not the elements from their own lives when inferring a pattern.

This faulty use of induction also shows up in other beliefs. For example, in public opinion polls about crime, only 17% of people think crime is a big problem in their own community, whereas 83% of Americans think crime is a big problem in society (Whitman & Loftus, 1996). People think this way because most do not experience crime in their own lives and therefore do not think it is a big problem where they live. However, they are convinced that it is a big problem in society. Where could the public get such an idea? From the media's fixation on deviance in the news. Also the news media prefer to present *sensationalized* events rather than *typical* events. So when a crime is reported, it is usually a violent crime, following the news ethic of "if it bleeds, it leads." Watching evening newscasts with their highlighting of crime and violence leads us to infer that there must be a high rate of crime and that most of it is violent assaults. But in reality, less than 20% of all crime is violent. More than 80% of all crime is property crime, with the victim not even present (U.S. Bureau of the Census, 2000). Furthermore, the rate for violent crime has been declining in this country since the mid-1980s, yet very few people are aware of this decline (Whitman & Loftus, 1996). Instead, most people believe that violent crime is increasing because they continually see crime stories and gory images in the media. They have fashioned their opinions on sensationalized events, and this type of information provides no useful basis to infer an accurate picture about crime. As for education, 64% give the nation's schools a grade of C or D, but at the same time, 66% give their public school a grade of A or B. As for religion, 65% say that religion is losing its influence on American life, whereas 62% say religion is becoming a stronger influence in their own lives. As for responsibility, almost 90% believe that a major problem with society is that people don't live up to their commitments, but more than 75% say they meet their commitments to families, kids, and employers. Nearly half of the population believes it is impossible for most families to achieve the American Dream, whereas 63% believe they have achieved or are close to the American Dream. And 40% to 50% think the nation is currently moving in the wrong direction, but 88% of Americans think their own lives and families are moving in the right direction (Whitman, 1996).

Deduction is using general principles to explain particulars. When we have faulty general principles, we will explain particular occurrences in a faulty manner. One general principle that most people hold to be true is that the media, especially television, have a very strong negative effect on other people. They have an unrealistic opinion that the media cause other people to behave violently. Some believe that if you allow PSAs (public service announcements) on TV about using condoms, children will learn that it is permissible and even a good thing to have sex. This is clearly an overestimation. At the same time, people *under*estimate the influence the media have on them. When they are asked if they think the media have any effect on them personally, 88% say no. These people argue that the media are primarily channels of entertainment and diversion, so they have no negative effect on them. The people who believe this say that they have watched thousands of hours of crime shows and have never shot anyone or robbed a bank. Although this may be true, this argument does not fully support the claim that the media have no effect on them; this argument is based on the false premise that the media only trigger high-profile, negative, behavioral effects that are easy to recognize. But there are many more types of effects, such as giving people the false impression that crime is a more serious problem than it really is or that most crime is violent.

Synthesis is assembling elements into a new structure. This is the primary skill we use when building our knowledge structures. As we take in new information, we must analyze it or break it down into useful elements. Then we evaluate the elements to determine which are useful, credible, and interesting. The elements that are evaluated positively need to be grouped along with the elements already in our existing knowledge structures; this will often require us to create new groups and look for new patterns. Thus, the process of synthesis is using our new media messages to keep reformulating, refining, and updating our existing knowledge structures.

Abstracting is creating a brief, clear, and accurate description capturing the essence of a message in a smaller number of words than the message itself. Thus, when we are describing a media message to someone else or reviewing the message in our own minds, we use the skill of abstracting. The key to using this skill well is to be able to capture the "big picture" or central idea of the media message in as few words as possible.

THE DEFINITION OF MEDIA LITERACY

Now that I have laid the foundation for media literacy by setting out its three major building blocks, it is time to present its formal definition. *Media literacy is a set of perspectives that we actively use to expose ourselves to the media to interpret the meaning of the messages we encounter.* We build our perspectives from knowledge structures. To build our knowledge structures, we need tools and raw material. These tools are our skills. The raw material is information from the media and from the real world. Active use means that we are aware of the messages and are consciously interacting with them.

What is a perspective? Let's illustrate this with an analogy. Let's say you wanted to learn about Earth. You could build a 100-foot-tall tower, climb up to the top, and use that as your perspective to study Earth. That would give you a good perspective that would not be blocked by trees so that you could see for perhaps several miles in any direction. If your tower were in a forest, you would conclude that Earth is covered with trees. But if your tower were in a suburban neighborhood, you would conclude that Earth is covered with houses, roads, and shopping centers. If your tower were inside the New Orleans Superdome stadium, you would conclude something quite different. Each of these perspectives on Earth would give you a very different set of perceptions. None of these perspectives is better than any other. The key to understanding Earth is to build lots of these towers so you have many different perspectives to enlarge your understanding about what Earth is. And not all of these towers need to be 100 feet tall. Some should be very short so that you can better see what is happening between the blades of grass in a lawn. And others should be hundreds of miles away from the surface so that you can tell that Earth is a sphere and that there are large weather formations constantly churning around the globe.

To illuminate this idea of media literacy further, I need to describe two of its most important characteristics. First, media literacy is a multidimensional concept with many interesting facets. Therefore, we need to view it from many different perspectives to appreciate all it has to offer. Second, media literacy is a continuum, not a category.

Media Literacy Is Multidimensional. When we think of information, we typically think of sets of facts such as from a textbook, a newspaper, or a magazine article. But this is only one type of information—cognitive. Media literacy requires that we acquire information and build knowledge in more than just the cognitive dimension but also to consider information from emotional, aesthetic, and moral dimensions. Each of these four dimensions focuses on a different domain of understanding. The cognitive domain refers to factual information—dates, names, definitions, and the like. Think of cognitive information as that which resides in the brain.

The emotional domain contains information about feelings, such as love, hate, anger, happiness, and frustration. Think of emotional information as that which lives in the heart—feelings of happy times, moments of fear, instances of embarrassment. Some people have very little ability to experience an emotion during exposure to the media, whereas others are very sensitive to cues that generate all sorts of feelings in them. For example, we all have the ability to perceive rage, fear, lust, hate, and other strong emotions. Producers use easy-to-recognize symbols to trigger these, so they do not require a high degree of literacy to perceive and understand. But some of us are much better than others at perceiving the more subtle emotions such as ambivalence, confusion, wariness, and so on. Crafting messages about these emotions requires more production skill from writers, directors, and actors. Perceiving these subtle emotions accurately requires a higher degree of literacy from the audience.

The aesthetic domain contains information about how to produce messages. This information gives us the basis for making judgments about who are great writers, photographers, actors, dancers, choreographers, singers, musicians, composers, directors, and other kinds of artists. It also helps us make judgments about other products of creative craftsmanship, such as editing, lighting, set designing, costuming, sound recording, layout, and so forth. This appreciation skill is very important to some scholars (Messaris, 1994; Silverblatt, 1995; Wulff, 1997). For example, Messaris (1994) argues that viewers who are visually literate should have an awareness of artistry and visual manipulation. By this, he means an awareness about the processes by which meaning is created through the visual media. What is expected of sophisticated viewers is some degree of self-consciousness about their role as interpreters. This includes the ability to detect artifice (in staged behavior and editing) and to spot authorial presence (style of the producer/director).

Think of aesthetic information as that which resides in our eyes and ears. Some of us have a good ear for dialogue or musical composition. Some of us have a good eye for lighting, photographic composition, or movement. The more information we have from this aesthetic domain, the finer discriminations we can make between a great actress and a very good one, between a great song that will endure and a currently popular "flash in the pan," between a film director's best and very best work, between art and artificiality.

The moral domain contains information about values. Think of moral information as that which resides in your conscience or your soul. This type of information provides us with the basis for making judgments about right and wrong. When we see characters make decisions in a story, we judge them on a moral dimension, that is, the characters' goodness or evilness. The more detailed and refined our moral information is, the more deeply we can perceive the values underlying messages in the media and the more sophisticated and reasoned are our judgments about those values. It takes a highly media-literate person to perceive moral themes well. You must be able to think past individual characters to focus your meaning making at the overall narrative level. You are able to separate characters from

their actions—you might not like a particular character, but you like his or her actions in terms of fitting in with (or reinforcing) your values. You do not focus your viewing on only one character's point of view but try to empathize with many characters so you can vicariously experience the consequences of their actions throughout the course of the narrative.

Your media literacy perspective needs to include information from all four of these domains. For example, you may be able to be highly analytical when you watch a movie and quote lots of facts about the history of the genre, the director's point of view, and the underlying theme. But if you cannot evoke an emotional reaction, you are simply going through a dry, academic exercise.

Media Literacy Is a Continuum, Not a Category. Media literacy is not a category—like a box—where either you are in the category or you are not. For example, either you are a high school graduate or you are not; either you are an American citizen or you are not. In contrast, media literacy is best regarded as a continuum—like a thermometer—where there are degrees.

We all occupy some position on the media literacy continuum. There is no point below which we could say that someone has no literacy, and there is no point at the high end where we can say that someone is fully literate—there is always room for improvement. People are positioned along that continuum based on the strength of their overall perspective on the media. The strength of a person's perspective is based on the number and quality of knowledge structures. And the quality of knowledge structures is based on the level of a person's skills and experiences. Because people vary substantially on skills and experiences, they will vary on the number and quality of their knowledge structures. Hence, there will be a great variation of media literacy across people.

People operating at lower levels of media literacy have weak and limited perspectives on the media. They have smaller, more superficial, and less organized knowledge structures, which provide an inadequate perspective to use in interpreting the meaning of a media message. These people are also habitually reluctant or unwilling to use their skills, which remain underdeveloped and therefore more difficult to employ successfully.

THE TYPOLOGY OF MEDIA LITERACY

Remember that media literacy is a continuum. People are positioned along that continuum based on the skills and knowledge they bring to bear (cognitively, emotionally, aesthetically, and morally) for the purpose of gaining control over the meaning process. Along that continuum, we can identify some key positions (see Figure 2.2).

The lowest three levels are stages we go through as young children. Acquiring Fundamentals happens during the first year of life. Language Acquisition occurs during years 2 and 3, and then Narrative Acquisition happens during years 3 to 5. These are stages that are left behind by children as they age into adolescence and adulthood.

The Developing Skepticism stage occurs from about ages 5 to 9, and the Intensive Development stage is shortly after. Many people stay in this stage the rest of their lives because this stage is fully functional; that is, people in this stage feel they are getting exposure to the messages they want and getting the meaning out of those messages they want. They feel they are fully media literate and that there is nothing more they need to learn.

FIGURE 2.2 Typology of Media Literacy

Stage	*Characteristics*
Acquiring Fundamentals	Learning that there are human beings and other physical things apart from one's self; these things look different and serve different functions
	Learn the meaning of facial expressions and natural sounds
	Recognize shapes, form, size, color, movement, and spatial relations
	Rudimentary concept of time—regular patterns
Language Acquisition	Recognize speech sounds and attach meaning to them
	Be able to reproduce speech sounds
	Orient to visual and audio media
	Make emotional and behavior responses to music and sounds
	Recognize certain characters in visual media and follow their movement
Narrative Acquisition	Develop understanding of differences:
	Fiction vs. nonfiction
	Ads vs. entertainment
	Real vs. make-believe
	Understand how to connect plot elements:
	By time sequencing
	By motive-action-consequence
Developing Skepticism	Discount claims made in ads
	Sharpen differences between likes and dislikes for shows, characters, and actions
	Make fun of certain characters even through those characters are not presented as foils in their shows
Intensive Development	Strong motivation to seek out information on certain topics
	Developing a detailed set of information on particular topics (sports, politics, etc.)
	High awareness of utility of information and quick facility in processing information judged to be useful
Experiential Exploring	Seeking out different forms of content and narratives
	Focus on searching for surprises and new emotional, moral, and aesthetic reactions
Critical Appreciation	Accepting messages on their own terms then evaluating them within that sphere
	Developing very broad and detailed understanding of the historical, economic, political, and artistic contexts of message systems
	Ability to make subtle comparisons and contrasts among many different message elements simultaneously
	Ability to construct a summary judgment about the overall strengths and weaknesses of a message
Social Responsibility	Taking a moral stand that certain messages are more constructive for society than others; this is a multidimensional perspective based on thorough analyses of the media landscape
	Recognizing that one's own individual decisions affect society—no matter how minutely
	Recognizing that there are some actions an individual can take to make a constructive impact on society

The next three stages can be regarded as advanced because they require the continual use of higher level skills and the active development of elaborate knowledge structures. People in the Experiential Exploring stage feel that their media exposure has been very narrow, and they seek exposure to a much wider range of messages. For example, people who have watched only prime-time action/adventure and situation comedy programs will begin to watch news, PBS documentaries, travelogues, MTV, science fiction, offbeat sports, and so on. They will pick up niche magazines and books about unusual topics. The thrill for these people is to see something they have never seen before. This makes them think about the variety of human experience.

People in the Critical Appreciation stage see themselves as connoisseurs of the media. They seek out better (cognitively, emotionally, aesthetically, and morally) messages. They have strongly held opinions about who are the best writers, the best producers, the best news reporters, and so on, and they have lots of evidence to support their well-reasoned opinions. They can talk fluently and at length about what makes a good writer and how these elements are exhibited in a particular writer's body of work.

Social Responsibility is characterized by people having critical appreciation of all kinds of media messages, but instead of having a primarily internal perspective (as with the previous stage), the perspective here is external. The person at this stage not only asks, "What is best from my point of view and why?" but also is concerned with questions such as "What types of messages are best for others and for society?"

Be careful not to think of these positions as fixed, discrete stages. Rather, these are overlapping stages in a fluid process. They are offered more for purposes of illustration instead of being definitive, fixed positions. You have a typical position on the continuum, but that position is not static. You move up and down depending on what medium you are interacting with, depending on the message, and depending on your motive for the exposure. For example, when you are reading a book that is considered a classic novel for a college course, you may be able to reach the Critical Appreciation level. But when you flick on the television and watch MTV's *Pimp My Ride* or *Beauty and the Geek* to relax, you might sink down to the Intensive Development level. There is nothing wrong with this dropping down on the typology. There are times when we just want to "veg out" and don't want to spend the effort to stay at the highest stages. But remember there is a difference between people who stay at the lower stages because they are unable or unwilling to operate at higher stages and people who are able to operate at all stages but who choose to take it easier at lower stages occasionally.

We all have a stage at which we feel generally at home. This is where we are most comfortable interacting with the media. We are usually able to move up a stage or two from our home base. But moving up a stage requires a conscious effort where we must expend more energy to apply higher level skills. So we don't move up unless we are strongly motivated to do so.

ADVANTAGES OF DEVELOPING A HIGHER DEGREE OF MEDIA LITERACY

What are the advantages of developing a higher degree of media literacy? I will emphasize three. First, media literacy grows one's appetite for a wider variety of media messages. Second, it gives people knowledge about how to program their own mental codes. And third, it provides people with more control over the media.

Appetite for Wider Variety of Media Messages

The media offer an incredible array of choices. The Internet contains Web sites on every topic that humans can conceive. Books are published each year on an extremely wide range of topics. Magazines are a bit more narrow in focus, but the 10,000 titles published each year offer a much wider range than any one person can consume. Cable television is a bit more narrow still, but with 500-plus channels from most cable TV providers, the choice is much wider than any one person can keep up with. However, the mass media continually try to direct our choices to a smaller set. For example, with magazines, although there are about 10,000 magazines published in this country, even a large bookstore is likely to have only about 300 on its magazine shelves. You don't want to have to scan through all 300 magazines, so you rely on your automatic filtering to narrow your choice down to about a dozen magazines that you have found interesting in the past—that is, the media have conditioned you to like these magazines. Your choice is then to buy one or two from this smaller list of 12. Do you have a choice? Yes, of course. But see how the media—first through the bookstore buyer, then through media conditioning—have narrowed your choice down to 12? In other words, the decision you made was determined 99.88% by factors other than you. The media have programmed you to think that you have choices when in fact, the degree of choice is greatly limited. It is rather like a parent laying out two pairs of dress pants—one black and the other dark blue—for his or her 4-year-old son and giving him the total power to choose what he is to wear today. Whether you regard this as a real choice depends on how much you know about the real range of options. If the boy knows about jeans, cargo pants, skater shorts, bathing trunks, and football pants, then he will not think the two dress pants is much of a choice. But what if he only knows about dark dress pants? In this case, he believes he does have a big choice between black and dark blue.

The mass media continually try to constrain your choices so they can condition you into habitual exposure of a few types of media vehicles. This makes you more predictable from a marketing point of view, and this predictability increases mass media companies' ability to reduce their business risk.

However, the choices are still there for you to take advantage of, but most of us prefer our habitual patterns of exposure. Most of us do not explore much of the range in media messages.

The media literacy perspective asks you to be more adventurous and explore a wider range of messages. When you do so, you will likely find many of those messages are not interesting or useful to you. But you will also likely find a few types of messages that are highly useful, and this will expand your exposure repertoire.

More Self-Programming of Mental Codes

The purpose of media literacy is to empower individuals to control media programming. When I use the term *programming* in this sense, I do not mean television programs or media messages. An individual by himself or herself will not have much influence on altering how the mass media craft or schedule their messages. An individual will never be able to exercise much control over what gets offered to the public. However, a person can learn to exert a great deal of control over the way one's mind gets programmed. Thus, the purpose of media literacy is to show people how to shift control from the media to themselves. This

is what I mean when I say that the purpose of media literacy is to help people control media programming.

The first step in shifting control away from the media to the individual is for individuals to understand how the media program them. This programming by the media continually takes place in a two-phase cycle that repeats over and over again. One of these phases of the cycle is the constraining of choices, and the second phase is the reinforcing of experience.

More Control Over Media

The mass media are composed of businesses that are very sophisticated in knowing how to attract your attention and condition you for repeat exposures. The media are very successful in using you to achieve their business goals. Often, the media's business goals and your personal goals are the same, so it is a win-win situation. But there are also many times when your personal goals are different from the media's goals; when this occurs, you need to break away from your media-conditioned habits to follow your own goals. The media literacy perspective will help you recognize this divergence of goals and help you take alternative steps. Thus, you are more likely to treat media messages as tools to reach your own goals.

SUMMARY

The chapter presents a definition of media literacy as a perspective from which we expose ourselves to the media and interpret the meaning of the messages we encounter. It is not a category; there are degrees of media literacy. It is multidimensional, with development taking place cognitively, emotionally, aesthetically, and morally.

Media literacy is composed of three building blocks: personal locus, knowledge structures, and skills. The skills are the tools that we use to work on information in the media messages to build strong knowledge structures. The direction and drive to do this work lie in one's personal locus.

People who are highly media literate are able to see much more in a given message. They are more aware of the levels of meaning. This enhances understanding. They are more in charge of programming their own mental codes. This enhances control. They are much more likely to get what they want from the messages. This enhances appreciation. Thus, people operating at higher levels of media literacy fulfill the goals of higher understanding, control, and appreciation.

FURTHER READING

Adams, D., & Hamm, M. (2001). *Literacy in a multimedia age.* Norwood, MA: Christopher-Gordon. (199 pages, including glossary and index)

Coming from an educational technology background, the authors argue that media literacy needs to include media analysis, multimedia production, collaborative inquiry, and networking technologies. They present many practical ideas to help teachers guide their students to learn how to get the most out of messages in all forms of media.