

Glenn G. Sparks



MEDIA EFFECTS RESEARCH

A Basic Overview

Fifth Edition

Media Effects Research

FIFTH EDITION

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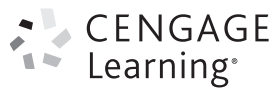
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A Basic Overview

FIFTH EDITION

GLENN G. SPARKS
Purdue University



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Dedicated to Cheri Wilcox Sparks
The love of my life

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Preface

Many would say that since the first edition of this text, the media landscape has completely transformed. Nevertheless, I still find that much of what I wrote in the preface to the first edition is true today. I never intended to write a textbook. I have always identified myself as a researcher and teacher of mass-communication effects—not a textbook writer. My intentions changed after teaching university undergraduates for more than two decades. In my course at Purdue University on mass-communication theory, I watched semester after semester as my students gradually sank into the dry-sand prose of most texts that attempt to present theories of mass media. Once the sinking started, I was almost never able to rescue them. I finally grew tired of this routine.

Since my approach to teaching media theory involves teaching the theoretical concepts in the context of research findings, I decided to try my hand at writing a text that reflected this perspective. Theory is fully realized when it meets the soil of observation. I have found that students can digest incredible doses of theory in the context of discovering what research says about media impact. So, this book attempts to introduce an array of theoretical ideas—but in the context of asking about the effects of media. If you teach a more conventional media theories course, I am betting that you will find plenty of theory to keep your students occupied. You'll find an updated list of theories and theoretical concepts that are covered in this edition on page 326. If you check out the list, you'll see that the book provides a good deal of contact with the major theoretical ideas in media effects research.

I became convinced that I should write a book for undergraduate students when I realized that it *was* possible to write a text that was not dry and boring. My two primary exemplars are Robert Cialdini's classic text on persuasion, *Influence*, and Em Griffin's best-selling introduction to communication theory, *A First Look at Communication Theory*—a book that I've now signed on to as a coauthor. Years ago, when Em asked me to advise him about the mass-communication section of his book, I began thinking more seriously of trying to write a text of my own. Reactions to the prior editions indicate that I've succeeded beyond my hopes. Those who have used the book seem to be genuinely excited about how it connects with undergraduate students. Before you dive in, let me outline just a bit the guiding philosophy of the book and how I think the text can be used.

Above all else, I have tried to write plainly and in a style that will engage the typical undergraduate student. This means that I often share personal anecdotes and refer to myself in the first person. I am committed to this style. I think students respond better if they can sense that there is a living, breathing human being behind the words. The reactions of my own students have helped to convince me that this is truly the case. Recently, I've also published a personal memoir that was designed, in part, to give students a chance to *really* know that their textbook's author is a real person. The memoir (*Rolling in Dough: Lessons I Learned in a Doughnut Shop*, White River Press) is a collection of stories from my adolescence, when my parents owned a franchise doughnut shop. I believe that learning to write in the style of the personal memoir makes it much easier to connect to today's students when writing a more conventional textbook.

As you evaluate the text, keep in mind that I have attempted to only *introduce* the topic of media effects—not to write everything known by the research community. I believe that textbook writers make a tragic mistake when they try to cover the whole terrain of their topic. This might satisfy textbook reviewers and serve as a valuable reference for scholars, but I don't think it does much good at generating genuine interest among the students who ultimately have to pay for and read the text. Because of my commitment to limiting this textbook to an introduction to media effects, I know that some professors will examine this text and spot crucial omissions that simply *must* be included. I am well aware that the book fails to cover everything. I planned it that way. One of my goals is to keep the material manageable so that students will actually read the chapters. I also want students to finish the book and still be interested in finding out more about media effects. I have decided to sacrifice a little breadth on the altar of student interest. I think it is a sacrifice well worth making. Of course, I realize that this places an additional burden upon me to make difficult choices about what to include and exclude. I'm grateful to those who have reviewed the material and given me expert advice. I know I won't please everyone with the choices I've made, but I've tried to respond as best I can to various suggestions.

How can this book be used? I think the text can fit into two different kinds of courses. First, it can obviously be used in a mass-communication theory course or a mass media research course. Second, the book can be used as a secondary text in a basic introduction to mass communication course. Most of the texts for the basic course have little or no coverage of media effects research. For professors who want their students to develop a deeper understanding of the effects literature, this book should not be too overwhelming as an accompanying volume in the basic introductory course. I have deliberately held the presentation of material to 12 chapters in order for the book to fit comfortably into different course formats. In the fifteen-week semester, I have found that students would rather ease in and ease out. For years, I attempted to fight that attitude; now I find myself subscribing to it. Once again, my philosophy here is to meet the needs of the audience. If I don't assign a chapter of reading in either the first or last week, I can still assign a chapter per week for the rest of the semester and have one week for some additional reading that I might select. If there is a topic that a professor believes must be in the course that I don't cover, the flexible week fills the need. The chapters are also short enough and easy enough to read that more than one chapter *could* be assigned in a single week for

schools that are on a shorter semester. In the end, my primary goal is to have students understand more about media research and still be interested in the topic when they finish reading. I am eager to discover if you think the goal has been achieved.

If you used any of the other editions, I hope you'll discover that this edition looks familiar. I haven't made changes just for the sake of making changes. Instead, I've tried to take the main comments from the reviewers on each chapter and attempt to respond in a reasonable way to their suggestions. Essentially, I've tried to update examples and, wherever appropriate, include some of the latest research in a given area. While every chapter has updated examples and other material, below is a summary of the most major changes you'll find. In total, there are nearly 90 new research citations, 19 new Study Boxes, and 36 new questions to focus attention.

Chapter 1

- Integration of new examples into the same discussions of the fourth edition (e.g., the shootings in Newtown, CT)
- More nuanced discussion of the goals of science—particularly “prediction” and “control”
- New Study Box on evaluating the claims of a consumer product about improving your brain
- New “Questions to Focus Your Attention”
- Five new research citations

Chapter 2

- New example to illustrate content analysis—a study of popular novel content
- New example to illustrate the experimental method—a study on whether playing a video game can repair a bad mood
- New “Questions to Focus Your Attention”
- New Study Box on evaluating the validity of any experiment
- Three new research citations

Chapter 3

- New Study Box on media use and sleep
- New Study Box on the colorful personalities involved in the Decatur Study
- New “Questions to Focus Your Attention”
- Five new research citations

Chapter 4

- New discussion of uses and gratifications and new media
- New section on electronic media and sleep displacement
- Updated research on TV viewing and obesity
- New Study Box on binge viewing
- New Study Box on the nature of the parasocial relationship
- New “Questions to Focus Your Attention”
- Seven new research citations

Chapter 5

- New material on media cultivation theory that pertains to media violence
- New discussion of violence in YouTube videos
- New discussion on research about an anti-drug campaign in the context of making assumptions about media effects
- New discussion of the “law of emotional desensitization”
- New discussion on research on effects of violent video games
- New section on why people doubt the effects of media violence on aggression
- New Study Box on prolonged exposure to media violence
- New Study Box on why violent crime is decreasing
- New Study Box on reasons why people doubt the effects of media violence on aggression
- New “Questions to Focus Your Attention”
- Eleven new research citations

Chapter 6

- New research on effects of rape pornography
- New discussion of the Annenberg Sex and Media Study
- New Study Box on the effects of MTV’s program, “16 and Pregnant”
- New “Questions to Focus Your Attention”
- Nine new research citations

Chapter 7

- New discussion of research on emotions in cooperative video game play
- New Study Box on symptoms of lingering fright reactions to media
- New “Questions to Focus Your Attention”
- Three new research citations

Chapter 8

- New material on first- vs. second-order cultivation
- Discussion of research on an anti-smoking campaign
- New Study Box featuring an experiment about children’s advertising
- New Study Box on impact of removing cigarette ads from radio and TV
- New “Questions to Focus Your Attention”
- Six new research citations

Chapter 9

- New introductory material including discussion of the Malaysian jumbo jet that went missing
- New research integrated on agenda-setting theory
- New section on whether attractive news anchors increase memory for news
- New section on whether news on Twitter is more emotional than in other media

- New research on new media and imitative suicides
- New Study Box on the measurement of “Need for Cognition”
- New Study Box on the move to online news consumption
- Eleven new research citations
- New “Questions to Focus Your Attention”

Chapter 10

- New discussion of George Gerbner’s comments on sex stereotypes
- New discussion of research from Annenberg Public Policy Center on racial stereotypes in advertising
- New Study Box on Females and Careers in Computer Science
- New “Questions to Focus Your Attention”
- Twelve new research citations

Chapter 11

- Updated statistics on Internet use
- New section on screen time and face-to-face interaction
- New section on new technology, cognitive and physical health
- New discussion of multitasking
- New Study Box on the role of eye-contact in virtual interactions
- New Study Box on using Facebook to connect with old friends
- New “Questions to Focus Your Attention”
- Fifteen new research citations

Chapter 12

- New Study Box on provocative ideas in McLuhan’s thinking
- New “Questions to Focus Your Attention”
- One new research citation

RESOURCES FOR STUDENTS

This text is accompanied by a student companion Web site, which includes web links that provide students with additional online resources relevant to the concepts in each chapter. The Web site can be accessed by going to www.cengagebrain.com.

RESOURCES FOR INSTRUCTORS

This text is also accompanied by an instructor companion Web site, which includes web links, video links, and test banks for every chapter. The Web site can be accessed with an instructor account at www.login.cengage.com.

ACKNOWLEDGMENTS

Writing a book of this type is not easy. Very simply, I could never have done it without help from lots of people. My students over the years helped to shape my thinking about a book of this type. To the extent that the book is successful at communicating well about media effects, I am indebted to my students' willingness to share their reactions and insights. Before I ever started my work at Purdue, I was fortunate enough to be mentored in graduate school by Joanne Cantor. Her integrity and dedication to my training as a scholar were unparalleled. I could never have written this text without the kind of education that Joanne provided.

The book would never have been completed if I hadn't been blessed with a working environment that was conducive to productive labor. I have been in what is now the Brian Lamb School of Communication at Purdue University for 28 years. It is a fabulous place to teach, conduct research, write, and generally enjoy life. Until last year, I had served for 12 years as the Associate Head of Communication—11 of those under Howard Sypher, who served as the Head during that time. Without Howard's complete support in helping to set up a climate conducive for this project, I could never have completed the task. For all of these things, I am thankful.

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1

A Scientific Approach to the Study of Media Effects

On December 14, 2012, less than five years after the worst school shooting in America’s history at Virginia Tech University, another horrible assault gripped the nation. At Virginia Tech, 33 were killed. This time, the victims were 20 young elementary school children and six of their teachers who were shot at Sandy Hook Elementary School in Newtown, Connecticut. This sort of event has become all too regular in American culture. In prior editions of this text, I referred to the shocking shootings at Columbine High School in 1999. Since the last edition was published, not only has the nation endured the Newtown tragedy, it was also traumatized by a shooting in Aurora, Colorado in which 12 people died and 70 were injured as theater patrons watched a special midnight showing of *The Dark Knight Rises*—the last film in a trilogy about the superhero Batman.

The national discussion that followed each of the incidents at Columbine, Virginia Tech, Aurora, and Newtown had some striking similarities. After Columbine, a persistent theme was sounded over and over again: The mass media must share a significant part of the blame for this incident and others like it. President Clinton called on the producers of mass media messages to reduce gratuitous violence. The clear implication of Clinton’s rhetoric was that exposure to violent entertainment images increased the probability of this type of violent behavior. Similarly, after Virginia Tech, it took only hours before the media devoted intense coverage to the possibility that the perpetrator of the shootings had been influenced by playing a violent video game. The prominent TV psychologist Dr. Phil McGraw appeared on CNN’s *Larry King Live* and said: “We’re going to have to start ... recognizing that the mass murderers of tomorrow are the children of today that are being programmed with this massive [media] violence overdose.”¹

The concern that media violence was somehow responsible for the Aurora movie theater shootings was fueled by photographs of the man arrested in the

aftermath. He was shown with his hair dyed orange—suggesting that he may have been attempting to imitate the Joker character in the *Batman* series. After the Newtown shootings, CNN carried a story that quoted someone who knew the shooter and described him as a person who “... stayed at home mostly ... playing video games such as ‘Call of Duty’.”² Following those shootings, members of one town in Connecticut organized an event at which citizens could turn in their violent video games to be burned. To encourage people to donate their games for incineration, gift certificates were distributed to all donors. Clearly, those who organized this event believed that there was a solid connection between exposure to violent video games and the horrible crime committed.³ The startling prevalence of school shootings in American life has certainly fueled concerns that consumption of media violence might be playing some role in the shooting epidemic. In February 2014, *The Washington Post* reported that since the Newtown shootings, “... there have been at least 44 school shootings in K-12 or college campuses in 24 states—an average of more than three a month ... 28 people have died and 37 have been injured.”⁴ If past behavior predicts future behavior, by the time you read this chapter those numbers will almost certainly be higher.

Related to the concern about exposure to media violence is the potential effect of the massive amounts of news coverage that events like those at Columbine, Virginia Tech, Aurora, and Newtown inevitably spawn. After U.S. congresswoman Gabrielle Giffords was shot on January 8, 2011, in Tucson, Arizona while meeting publicly with her constituents, commentators wondered aloud whether the intense news coverage of the shooting, which killed six people and injured 13 others, might trigger “copycat” crimes. Vern Ehlers, a retired congressman, was quoted as saying, “When an event like this happens and it hits the news, very frequently it gives others the idea they should do that too.”⁵ In contrast to the congressman’s view, others preferred to dismiss the Tucson shootings as the acts of a deranged person that would do little to inspire similar acts of violence.

In the days and weeks that followed all of these violent episodes, the media discussions mirrored similar themes. Some thought that media violence in the form of movies, video games, or news coverage may have played a direct role in causing the violent attacks. Others thought that the media were being used as scapegoats in an effort to identify a simple cause instead of recognizing a much more complex set of circumstances. If you listened carefully to any of these national discussions, you may have heard viewpoints that seemed consistent with your own values or political positions. It may have seemed tempting to embrace one or more of the ideas that you heard about how to prevent similar events in the future.

In the end, *opinions* about the events at Columbine, Virginia Tech, Aurora, Newtown, and Tucson were easy to come by. But if you were thinking carefully about the variety of opinions that were expressed about the causes of these shootings, you probably realized that opinions had limited ability to bring you to an understanding of the truth. Despite the fact that President Clinton, Dr. Phil, and Congressman Ehlers were nationally recognized by many as credible leaders, their opinions about the role of the mass media in these shootings were still only

opinions. To see whether their views have any scientific merit, you can read more about the actual effects of media violence in Chapter 5. In this chapter, you will learn about how science is different from casual opinion.

WAYS OF KNOWING

Experience

There are many ways that we try to know things about the world around us. One way is through direct **experience**. This approach is sometimes called **empiricism**. Experience is often a reliable path to knowledge. One morning many years ago when I was just a youngster, I left my home in the Chicago area without a map and found myself a few hours later in Milwaukee, Wisconsin. The only problem was that I was trying to get to Muskegon, Michigan. If you consult a map, you will discover that I had gone up the wrong side of a rather large lake (Lake Michigan). I have now learned from my experience to consult a map before I travel long distances. My family eventually complied with my request for a GPS navigation unit, and I'm confident that it has saved me from additional navigating disasters. But learning by experience can also be filled with many trials and errors. Progress can be painfully slow and can lead down blind alleys. For nearly 300 years, the people of Europe were afraid to eat tomatoes, which had been introduced from Central America in the 1500s. Personal experience told them that any fruit from the nightshade family was unsafe.⁶ Legend has it that someone may have eaten a tomato and died shortly thereafter. In this case, experience proved to be very misleading.

When it comes to our knowledge of media effects, many of us tend to rely on our own personal experience to reach a conclusion. In class discussions about the media violence controversy, it is not uncommon for me to hear students expressing the following viewpoint:

Well, I don't really think that media violence makes us more violent. After all, look at me. On Saturday mornings, I watched every violent cartoon that the networks put on. Today, I love violent movies—the more blood and guts, the better. My parents love violent movies, too. I grew up on them. I also enjoy playing a good violent video game like *Call of Duty*. But am I a violent person? Of course not! I have never even gotten into a fight. I don't own a gun. I've never been arrested for anything. I'm a peaceful and law-abiding citizen. In fact, my whole life is a personal testimony to the fact that media violence has no negative effect at all. Kids can tell the difference between real violence and fantasy violence. So, I'm sorry, I just don't buy it. Media violence is just fun entertainment. I don't see the harmful effects.

It shouldn't be difficult to recognize that this viewpoint is a great example of knowledge gained through personal experience. It might be more difficult to recognize

that a person's individual experience may be a poor guide to the best *general* knowledge on a given topic. Just as people thought that tomatoes were poisonous for everyone, people might also think that media violence poses no risks for anyone. In both cases, personal experience might seem to point to a solid conclusion. But a more careful look might show such a conclusion to be solidly wrong. One possibility is that the conclusion from personal experience is valid for oneself but not for others. The fact that violent media might not trigger aggressive behavior for one individual does not necessarily imply that media violence functions the same way for everyone. Another possibility is that one's impression about being invulnerable to media impact is simply incorrect. Perhaps the effects of media violence are difficult for people to detect in themselves—even though the effects are definitely present.

Authority

Another way of knowing is to rely on **authority**. Obviously, we can't know everything there is to know. When we get sick, we usually consult a doctor and follow whatever advice he or she gives. We recognize that long years of study and practice tend to have qualified the doctor as an authority on medical diagnosis. Often the trust we place in medical authorities is rewarded with a cure. But, as some have learned, medical authorities are only human. They make mistakes. Some doctors are better than others. Medical horror stories of incompetent physicians who ruin the lives of their patients are not difficult to find. Blind allegiance to authority can often have debilitating effects on our search for reliable knowledge. Our awareness that doctors generally know more than we do about medical cures can lead to a shortcut in our thinking that results in the conclusion that *any* doctor can be trusted as an authority. That kind of mental shortcut can lead to an undesirable and even dangerous result. Another risky mental shortcut that often occurs with authority figures is to transfer their authority to an area that is unrelated to their area of expertise. My doctor might be an authority in prescribing medication, but there may be little reason to trust the doctor's advice when it comes to finding a good auto mechanic or trying to figure out the best way to motivate my children to do well in school.

Hundreds of years ago, religious authority figures were adamant that the earth was the center of the universe and that every celestial body revolved around it. However, astronomical discoveries by Copernicus indicated that the earth actually revolved around the sun. Copernicus feared the actions of the church leaders so much that he kept his discoveries secret for over a decade before publishing them. Nearly 100 years later, Galileo was still confronting resistance from the Roman Catholic Church with regard to the Copernican model of the solar system.⁷ Many people continued to reject the truth about the movement of the celestial bodies, because they relied on religious authorities for all knowledge. In this case, reliance on authority resulted in incorrect beliefs.

Over the years, television network executives have made various statements about the effects of media violence that tend to minimize the possibility of negative impact. Shouldn't these network executives be regarded as authorities on the topic?

After all, they are in the day-to-day programming business. They sell advertising time on the basis of their understanding of the effects of commercials. If network executives say that media violence isn't a problem, shouldn't we listen? As we shall see later, one of the problems with arriving at knowledge by appeal to authority is that the supposed authority figures often have interests to protect. Just as religious authorities rejected new views of the solar system to protect what they believed to be their religious interests, so the TV networks can probably be blamed for issuing statements downplaying the importance of media violence out of their concern for maintaining economic profits.⁸

Science

In the chapters that follow, I have attempted to summarize the key scientific theories and scientific evidence on the question of media effects. **Science** is a particular way of knowing. One of the hallmarks of the scientific method is **systematic observation**, as opposed to casual observation. Science combines empiricism with logical thought and is always pressing onward toward greater precision of observation.⁹ One of the best arguments in favor of the power of the scientific way of knowing is the observation that *science works*. A commitment to science has brought us powerful antibiotics to cure our diseases. It has also put human beings on the moon and enables you to browse the Internet and send text messages to your friends. Although science is a human activity that suffers from the multitude of human shortcomings, it is still the most powerful way of knowing that humans have at their disposal. One of the best ways to understand the scientific method of arriving at new knowledge is to understand the **goals of science**.¹⁰ Whether one is doing natural science or social science, the goals are the same. Natural scientists attempt to achieve the goals of science in their study of biology, chemistry, physics, astronomy, and the like. Social scientists attempt to achieve the goals of science in their study of social and psychological phenomena that involve human beings.

GOALS OF SCIENCE

Prediction

Accurate prediction is one of the coveted goals of science. If you turn on the weather forecast tonight on your local TV news, you will discover that the meteorologist has employed a wide array of instruments, maps, and satellite photos in an attempt to provide an accurate prediction of tomorrow's weather. **Prediction** can be defined simply as **foretelling the future**. Over the years, the science of meteorology has produced increasingly accurate forecasts. Forecasts for a day in advance are usually reliable enough that people can trust them in planning their picnics. That doesn't mean people always exercise that trust. When meteorologists predicted a

rare three-inch snowfall for Atlanta, Georgia in late January 2014, few people heeded the prediction. In the storm's aftermath that left at least 13 people dead and thousands of motorists stranded in their cars for hours, many blamed the meteorologists. But the record showed clearly that the public had been warned about the storm. Weather forecasters believe that making accurate predictions can save lives—if their predictions are heeded. Nevertheless, *perfect* prediction is rarely attainable. The state of meteorology is not advanced enough yet to make accurate, long-range forecasts. Science is in continual pursuit of better prediction.

In the area of media effects, accurate prediction is also one of the chief goals. For example, if researchers can predict ahead of time which children are most likely to imitate violent behavior seen in films, parents might be able to intervene to prevent exposure to films. Likewise, if scholars can predict that certain types of characters will facilitate learning on programs like *Sesame Street* or *Sid the Science Kid*, then young children might have a better start upon entering elementary school.

Explanation

Science certainly has no monopoly on prediction. Insurance companies are also in the prediction business. When each of my children, David, Erin, and Jordan, celebrated their 21st birthdays, I received notice that my auto insurance rates would be going down. Data collected by the insurance industry led to the prediction that unmarried drivers who have reached their 21st birthdays will be much less likely to have accidents than those who are younger. The next price break based on accident rates for females comes at the 25th birthday. For males, it comes when they reach 30. The data also indicate that females who marry after their 17th birthdays enjoy the same reduced risk as an unmarried 25-year-old. These statistics are so dramatic that the insurance companies can pass on premium savings to the customer. The insurance companies don't really care much about *why* accidents drop off after female drivers turn 21 or male drivers turn 30. You can probably identify several possible reasons without thinking too long (more years of driving experience, increased social maturity, and so on). The insurance companies care mainly about the fact that they can predict that the decrease will happen. It is on this point that the scientist and the insurance company may begin to part ways. They are both interested in prediction. But the scientist is also interested in **explanation**—knowing *why* something occurs the way it does.

If prediction means foretelling the future, then what does it mean to say that something has been explained? Think about something simple, like flicking a light switch. If someone asked you to explain why the lights go on and off each time you flick the switch, what would you say? You would probably say something about the electric circuitry behind the switch, including wires, light-bulb filaments, and the flow of electricity. All of these ingredients provide a broader framework or pattern that you invoke to help uncover the “why” behind the phenomenon of flicking the light switch to affect whether a room is dark or illuminated. And this is usually what it means to explain something. **Explanations place the phenomenon to be**

explained into a broader framework or pattern that doesn't really require much additional elaboration.

Scientists are always searching for the best explanation of why something happens the way it does. You can probably appreciate the fact that arguments will often erupt about the adequacy of specific explanations. A parent might answer a three-year-old child's question about why the leaves turn colors in autumn by saying something like "That's the way God made trees." In this case, "God" becomes the broader framework or pattern that requires no additional elaboration. Such an answer might satisfy the three-year-old but will seem increasingly inadequate as the child gets older. On occasion, you've probably witnessed a child responding to an adult's explanations by repeatedly asking, "Why?" While the adult who has to endure this steady line of questioning may not appreciate it, the child has actually discovered something very important about explanations. Explanations can continually be scrutinized and pressed until more detail emerges that seems more satisfying.

It isn't necessarily the case that an explanation with less detail is wrong. It just might not provide the desired level of intellectual satisfaction. The esteemed geneticist Francis Collins, former director of the National Human Genome Institute and current director of the National Institutes of Health, has made landmark discoveries about the genetic contributions to certain diseases and also led the stunningly successful Human Genome Project. In his book, *The Language of God*, Collins readily acknowledges his own personal belief that God is the master designer behind the complexity of life.¹¹ But in his explanations for why a given individual inherits a particular disease, Collins finds a simple appeal to God to be an unsatisfactory *scientific* explanation. Instead, he wants to delve into the particular complexities of human DNA. One of the characteristics of science is that it always encourages additional scrutiny. Sometimes, deeper levels of explanation are perfectly compatible with simpler levels. In other cases, the push for deeper explanations might completely challenge the simpler explanations that seek to account for a given phenomenon.

In media effects research, as in other sciences, scholars argue about how adequate certain explanations are for given research findings. For example, some researchers have located the primary explanation for people's increased tendency toward aggression after seeing media violence in the aggressive images shown in programs or films.¹² Other researchers have argued that these images are not the most important factor. Instead, they have identified the increased physiological arousal caused by exposure to violent images as the critical explanatory ingredient in the increase in aggressive behavior.¹³ You will read more about these explanations in Chapter 5 on media violence.

Understanding

Good explanations provide a sense of **understanding**. What does it mean to say that we understand how something works? Usually, **understanding relates to knowing the particular sequence of causal events** that unfold in a given phenomenon of

interest. An explanation that yields a high level of understanding of how the light switch turns on the light would be one that ordered the causal chain of events beginning with the flick of the switch and ending with the illumination of the bulb. Because good explanations provide understanding, these two goals of science are closely related and tend to go hand in hand.

In the case of explanations of how watching media violence might increase aggressive behavior, our understanding would not be very deep if the explanation simply amounted to the statement that children watch the shows and then copy what they see. If this were the extent of the explanation, we might ask what really happens between the viewing and the copying. In other words, what is the exact causal sequence of events? Another hallmark of science is the constant quest for deeper levels of understanding.

Control

When scientists can accurately predict, explain, and understand a phenomenon, they are afforded greater **control** over that phenomenon. My oldest brother, Dale, is one of over five million Americans who suffer from Alzheimer's disease. Although scientists have made progress in understanding this devastating condition, there are still more questions than answers. Ultimately, scientists would like to know if the condition could ever be cured once it developed and, if so, how that could be done. The quest to understand and explain every facet of Alzheimer's disease is done with the hope of discovering a sure-fire cure. But even if a cure remains elusive, researchers would still love to be able to predict who will get the disease. Am I more likely to get it because my brother has it? While discovering a cure would provide us with ultimate control in managing the disease, being able to determine in advance who will get it would also provide an important measure of control. If I could know today that I would get the disease, I could do some advance planning that might make things much easier for my family. According to a recent discovery announced in March 2014, there could be a simple blood test available in a few years that would predict with uncanny accuracy who will get Alzheimer's disease.¹⁴ If the test proves effective, it could dramatically increase the control we have over the ravages of this killer. Not only would people be able to plan more effectively to deal with the disease's consequences, but physicians and researchers would be able to target new drugs and therapies to the people who are most at risk. Some of those treatments could slow down the progress of the disease or reduce its impact. Even though the control implications of some scientific investigations seem unclear, there's almost always potential for some increased measure of control lurking behind any scientific quest. Advances in prediction, explanation, and understanding of Alzheimer's disease inevitably provide a greater measure of control over the disease itself.

Much like the scientific investigation of diseases, the investigation of media effects also holds ramifications for controlling events. A good example of the control implications of media effects research is easily seen in a study conducted by

researchers Brad Bushman (Ohio State University) and Joanne Cantor (University of Wisconsin-Madison) in 2003. Bushman and Cantor discovered that over the years, there had been a total of 18 research reports on how different media ratings systems affected attraction to media content. For example, if a movie is rated R, will people be more attracted to it than if it carried a rating of PG-13? The total number of people involved in these 18 studies exceeded 5,000, so there was a reasonable basis for drawing some firm conclusions. What did Bushman and Cantor discover? In fact, just as they suspected, they found that “media ratings do more to attract than to repel viewers.” The research in this area makes a distinction between “descriptive” ratings, which simply provide information about the nature of the content, and “evaluative” ratings, which make recommendations about who should be restricted from media exposure. The rating system used by the Motion Picture Association of America (MPAA) is an evaluative rating system (G, PG, PG-13, R, and NC-17). Both descriptive and evaluative ratings made programming more attractive—particularly for male viewers. The authors believe that viewers use the ratings as a general clue to how much violence, sexual content, or other themes of a mature nature might be present in a movie. Being curious about these themes, children and adolescents are more attracted to films that carry ratings suggesting the presence of this sort of content. One implication of this research is that the ratings system used by the MPAA may actually tend to attract older children to the very film material that is theoretically not intended for their consumption. As a result of their study, Bushman and Cantor have several different recommendations about how the entertainment industry ought to use rating systems (see Study Box 1-1).¹⁵ Just as in prediction about who will get Alzheimer’s disease, an increase in the ability to predict and understand a given media effect results in increased control.

Sometimes the implications for control that may arise out of scientific research are controversial. The MPAA has resisted the policy suggestions that spring from Bushman and Cantor’s research. This is not the first time that research has ultimately led to controversy about media policy. Back in 1974, researchers discovered that a short commercial message (“The Swing”) that was designed to promote sharing and turn-taking behavior in young children was effective in modifying children’s behavior. But the commercial caused great controversy among some people who were concerned about its potential to “brainwash” children. According to these critics, the message about sharing a swing on the playground might promote passive compliance among children who need to learn to stand up for their rights.¹⁶

Although lawmakers, organizations, and other policymakers might debate the pros and cons of particular strategies for controlling a phenomenon, scientists usually hesitate to become identified too closely with a particular policy. Instead, they are more comfortable pointing out the range of control strategies that are available as a result of the increased ability to predict, explain, and understand a given phenomenon. Although the goal of science is not necessarily to push any particular remedy for controlling an event, scientific progress is generally oriented toward providing greater measures of control over the things that are studied.