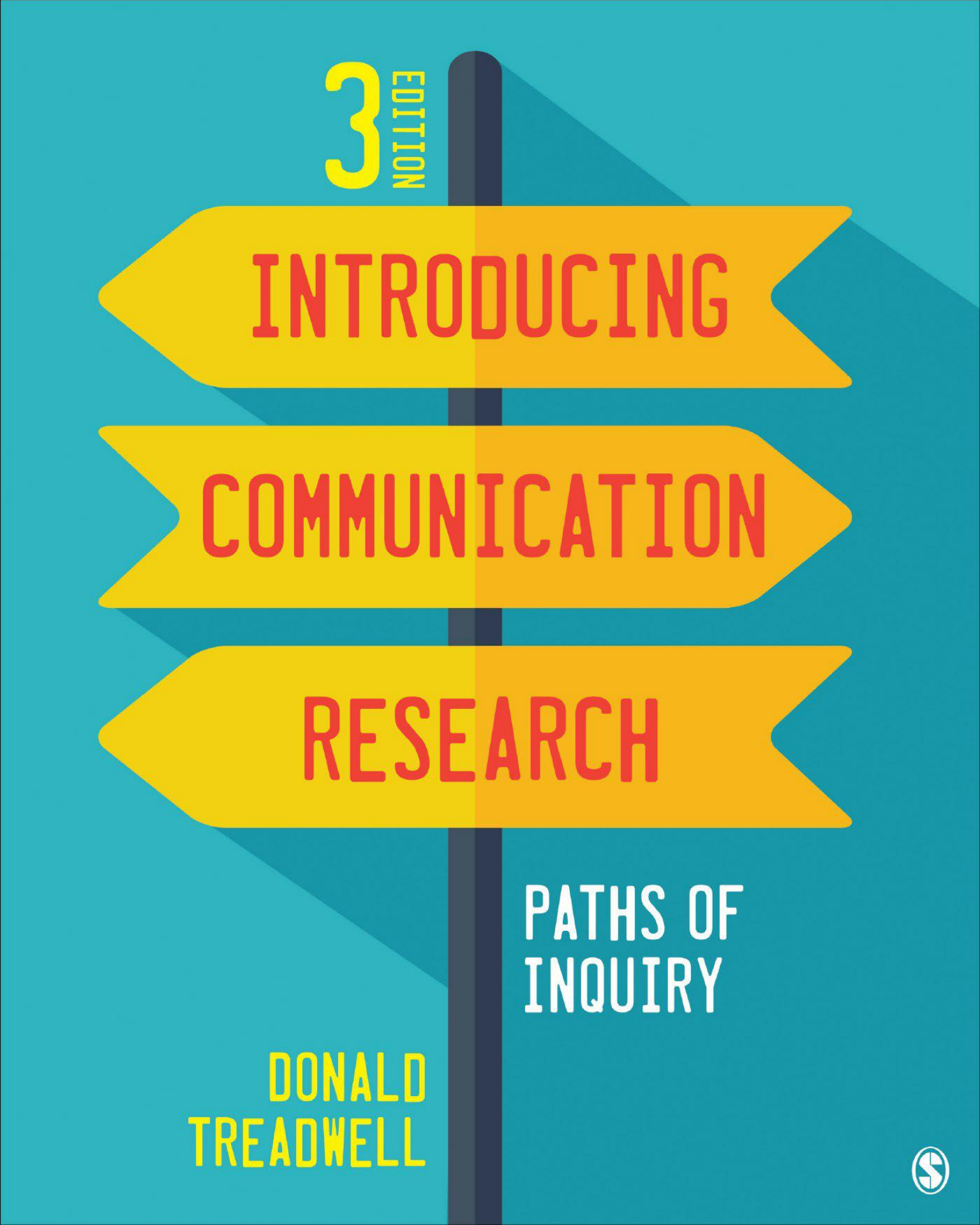
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INTRODUCING
COMMUNICATION
RESEARCH
PATHS OF INQUIRY
DONALD TREADWELL

Introducing Communication Research

Third Edition

For Joseph, Luke, Owen, and James—now on their own paths of inquiry.

Introducing Communication Research

Paths of Inquiry

Third Edition

Donald Treadwell

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Preface

For Students

Let's imagine that you are just finishing a tough semester or you are looking forward to a well-deserved midsemester break. Imagine it is now time for that trip you have been dreaming about. Two inescapable questions come to mind immediately. Where will you go, and how will you get there?

Generally, you will have some goal in mind. Perhaps, as a music lover, you will be thinking about a great concert experience somewhere. Perhaps you have always been intrigued by the cultures of Asia and think of Asia as a destination. Or perhaps you really want to visit Great-Aunt Minerva, who was an endless source of funny stories when you were young and whom you have not seen in years. Your trip is triggered by some basic interest, but interest alone is not enough to make it happen. To get to your destination, you must have a specific address, and you must decide how you will get there.

Two further questions will shape the nature of your trip: What is my budget, and how much time do I have? Then there's the question of how you will experience your destination when you get there. Some of us like to "put down roots" and stay in one area to experience it as fully as possible. Others are movers—every day a new attraction. The first approach gives you an in-depth experience; the second gives you a broad experience.

Of course, you will want to record your trip and share your experiences with others, so questions of recording and communication arise. What will you record at your destination—local music, architecture, interesting people, food, and/or landscapes? How will you record this content—video, audio, photography, drawings, and/or written notes? How will you share this content with others—blog, social media postings, e-mail, postcards, and/or Internet chat?

Most journeys are fun, interesting, and intellectually and emotionally satisfying, but you had better know where and how you are going or you won't get there.

Researching human communication is very similar. At heart, it is simply a journey from not knowing something to knowing something or to knowing something more about human communication. Certainly it is interesting and intellectually rewarding. Virtual realities, love affairs, employee morale, social networking, web chat, soap operas, family dynamics, podcasts, advertising, tweets, and group decision making are just a few manifestations of the complex interactions that we call human communication and that we can research.

Other travel analogies apply. Because it is difficult to take two journeys simultaneously, most researchers opt to study one area at a time. They also have a specific "travel plan" in the form of decisions about the phenomena they will study, the method(s) they will use, and the people they will invite to be in their study. They will undoubtedly seek advice from those who have been

there before to help them avoid the pitfalls and to maximize the return on the time, effort, and intellectual energy that good research demands. Their research reports may well be the only insight that others will have on the phenomena being studied. This means that their reports must be carefully written to provide accurate information and to identify any possible shortcomings and biases in the research.

Much of the above introduction is clearly a metaphor for the research process. Other metaphors, perhaps more accurate ones, are possible. We might, for instance, recast research as a fight against ignorance, as a contest between what we intuit and what we can demonstrate, or between fact and sentiment. You will find other such tensions as you read through the text; for example, should the researcher be a dispassionate observer of communication phenomena or an individual with biases and preferences for viewing the world in a particular way?

Becoming comfortable with research is therefore not just a matter of mastering method; it is also a matter of identifying and understanding the assumptions and uncertainties that underpin the methods.

Just as maps, websites, and guidebooks can help optimize your travel experiences, this book will guide you through the basics of communication research design while pointing out many of the "fork in the road" decisions that will need to be made en route.

Chapters 1 through 3 begin the journey by examining some of the basic assumptions and disagreements about human communication, how best to understand it, and the ethical implications of becoming involved in people's lives as you study them. These chapters give you the language and customs of the territory you will be visiting—scholarly research in communication.

Chapter 4 will help you identify your areas of interest and how to find out more about them. It will help you identify the detailed reading and recording you will need to do in order to get a good working knowledge of the specific area you will be researching.

Chapters 5 through 13 discuss statistics and sampling and the qualitative and quantitative research methods you will most likely encounter in a career in communication. Metaphorically, these chapters will help you with your mode-of-travel decision. Automobiles can stop anytime you need them to; trucks consume more fuel but carry more weight. Planes are fast and can provide a wonderful overview of the territory but may not take you exactly where you want to go. So it is with research methods. There is no such thing as one best method, only a most appropriate method.

We finish with a chapter on writing and presenting your research results in traditional and web media so that others can get a good picture of where and how you went, what you discovered, and how you have chosen to interpret it.

Throughout this edition, you will find an emphasis on the Internet and the problems and challenges the Internet presents as both topic of and tool for research.

Each chapter has learning objectives to highlight the skills and knowledge you should get from the chapter, a summary of key ideas, and an ethics panel to help you think about the ethical implications of your research. The application exercises in each chapter will help you think about research design in practice or have you explore a relevant resource. Terminology that may be new to you is shown in boldface **like this**. The glossary at the end of the book defines each highlighted term.

Communication research is almost inescapable in a communication career. If you are not involved in initiating research at some level, you will almost certainly be in the position of having to interpret the research of others. Therefore, I suggest that you keep this book and find a place for it on your office bookshelf. The ideas and questions that you run into in your research courses will almost certainly come back to visit you in your professional career.

Welcome to that most fascinating of journeys—research in human communication.

For Faculty

This text aims to provide a reader-friendly, inexpensive introduction to the basics of communication research and to some of the assumptions and questions behind research practice.

My experiences in teaching communication research have led me to believe that an introductory text should give students looking at either academic or professional careers

- a basic mastery of communication research methods,
- an understanding of the assumptions and questions behind research methods,
- an enthusiasm for research that will continue on into advanced research,
- an appreciation of the relevance of communication research to communication practice, and
- a sense of why we find human communication so fascinating as a research field.

I hope you will find that this text achieves these aims in your research courses.

Chapters 1 through 3 examine some of the basic assumptions and disagreements about human communication. Chapter 4 centers on bibliographic research and the literature review. Chapters 5 through 13 discuss research methods, statistics, and sampling. Chapter 14 covers the basics of research writing as well as the challenges and potential of writing for multimedia and hypermedia.

This edition has

- an expanded section on the art of the literature review in Chapter 4;
- a new section on online surveys in Chapter 9;
- a new section on online ethnography in Chapter 11;
- a new section on online focus groups in Chapter 11;
- a new section on writing and presenting for the web in Chapter 14;
- an emphasis throughout on social media and the Internet as subjects of, and tools for, communication research; and
- new learning objectives at the beginning of each chapter to help identify key competencies students should get from the chapter.

Support for student learning in each chapter includes

- learning objectives to highlight the skills and knowledge students should get from the chapter;
- a chapter summary that provides an overview of chapter content;
- an ethics panel with questions to facilitate discussion of research ethics in practice;
- highlighted vocabulary words, which are defined and explained in the glossary at the end of the text; and
- application exercises to help students learn to make decisions about research practice.

Each method chapter has a practice-based organizing example that guides students through the practical and theoretical decisions a researcher faces when designing and implanting research.

The instructor website has a new section on APA style as well as the updated ancillary material listed below.

I hope that this text will make a useful contribution to your research courses, and I welcome your thoughts on it. Thank you for adopting it.

Ancillaries

SAGE edge™

The password-protected Instructor Teaching Site at **edge.sagepub.com/treadwell3e** gives instructors access to a full complement of resources to support and enhance their courses. The following assets are available on the site:

- **Test Bank:** This Word test bank offers a diverse set of test questions and answers for each chapter of the book. Multiple-choice, true/false, short-answer, and essay questions for every chapter help instructors assess students' progress and understanding.
- **PowerPoint® Slides:** Chapter-specific slide presentations offer assistance with lecture and review preparation by highlighting essential content, features, and artwork from the book.
- **Lecture Notes:** Carefully crafted chapter summaries, outlines, and learning objectives help with preparation for lectures and class discussions.
- **Sample Syllabi:** A sample quarter and semester syllabus covering both regular and online classes is provided to help professors structure their courses.
- **Discussion Questions:** Chapter-specific questions help launch discussion by prompting students to engage with the material and by reinforcing important content.
- Carefully selected chapter-by-chapter **video and multimedia content** which enhance classroom-based explorations of key topics
- **Chapter Activities:** These lively and stimulating exercises and assignments for group or individual activities help structure class time and enhance student learning.
- **Recommended Readings:** Suggested readings are provided for additional resources in key subject areas.
- **Case Studies:** The industry case studies from previous editions have been added to the ancillaries website and can be used as a basis for "research in practice" discussions.
- **Tables and Figures:** All exhibits from the book are available in an easily downloadable format for use in papers, handouts, and presentations.

The open-access Student Study Site available at **edge.sagepub.com/treadwell3e** is designed to maximize student comprehension of the material and to promote critical thinking and application. The following resources and study tools are available on the student portion of the book's website:

- A customized online **action plan** includes tips and feedback on progress through the course and materials, which allows students to individualize their learning experience.
- **E-flashcards:** These study tools reinforce students' understanding of key terms and concepts that have been outlined in the chapters.
- **Web Quizzes:** Flexible self-quizzes allow students to independently assess their progress in learning course material.
- Carefully selected chapter-by-chapter **video and multimedia** content enhance classroom-based explorations of key topics.
- **SAGE Journal Articles:** Access to full-text SAGE journal articles exposes students to important research and scholarship tied to chapter concepts.

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Donald Treadwell

CHAPTER 1

Getting Started

Possibilities and Decisions

Basic research is what I am doing when I don't know what I am doing.

—Wernher von Braun (1912–1977)

Chapter Overview

Welcome to communication research. This chapter introduces some of the many ways scholars of human communication think about research, their main interest areas, and some of their research methods. It will help you with the often-difficult process of getting started and getting focused on a research project, and introduce you to some of the assumptions and decisions that every researcher makes, consciously or unconsciously.

Chapter Objectives

This chapter will help you

- Identify several basic assumptions behind human communication research.
- Identify several research questions that might be asked about advertising content.
- Describe some of the initial, unavoidable decisions required when planning communication research.
- Identify basic steps in the process of communication research.

Getting Started in Research

Any day or any journey requires that you first wake up and then make a series of decisions to get started. Stay in bed or get up? Gym first and then breakfast? Or breakfast first and hang out with friends? Bike, bus, or walk to work, or work online from home? Each day requires that you get oriented in some direction and decide on the priorities for that day.

Similarly, any research project requires that you start by getting yourself oriented toward an area of interest. Then you will need to decide what questions, assumptions, and methods will best get you the answers to your interest questions.

A glance at the communication research literature will show you that communication researchers have interests ranging from interpersonal communication on up to web media reaching millions of people worldwide. Researchers often may specialize in areas defined by the numbers of people they are studying, as in interpersonal communication, groups, organizations, or social media. But many research interests transcend such categories. For example, rhetoricians, those who study the use of language and argumentation, may do so in all of these areas.

Potential topics for research in human communication are all around us. Why do people prefer some music genres over others? What is the best way to deliver instructional content—the web, readings, seminars, lectures, or hands-on experience? What websites are seen as the most credible sources of advice for students downloading new "apps"? Do student behaviors in class influence instructor behavior? Do blockbuster movies shape public opinion or follow it? What can we say about the effects of violent or sexually explicit media content on people exposed to such content? What predicts whether an online video will "go viral"?

The next step after finding questions of interest is deciding how best to get an answer to these questions. You will find from the scholarly literature that this can be a hotly contested issue. Choosing a research method or methods unavoidably requires making assumptions and decisions about the nature of human behavior, such as whether people are basically all alike or are unique individuals. These assumptions and decisions will help you prefer some methods over others, but you may well find that for every researcher going down your road, there is another researcher opting for a different route to answering essentially the same question.

Every research question has assumptions behind it that reflect the researcher's view of communication and how to study it. These assumptions about human communication, how best to study it, and why we study it are discussed more in Chapter 2.

For example, let's take a look at three examples of communication interactions with which you will likely be familiar. The interactions are quite innocuous, but as we shall demonstrate, each one could lead to many interesting research projects.

The Situation

It is a Friday afternoon at a campus coffee bar. As a casual observer, you notice the ambience—carpet, comfortable chairs, cable news running silently on television, indie fusion rock on the sound system, a continuing traffic of people lined up for coffee and snacks, the hiss of espresso machines, and the overall buzz of conversation.

You decide to listen in on one couple more specifically. (Of course, in itself that has ethical implications that we will explore more in Chapter 3.) A casual listener might be interested just to hear the conversation, but a communication scholar interested in interpersonal communication would take a keen interest in the interaction and think about specific questions that might be raised, research methods that might best get answers to those questions, and some of the assumptions behind the questions and methods.

The dialogue below records part of the interaction. This is followed by a very brief summary that a researcher might write down to remind herself of the interaction and some questions that she might ask based on the observations. In Chapter 2, we shall explore turning these casual questions into formal research questions and hypotheses.

INTERACTION I—The Couple: Romance, "Just Friends," or Doing Business?

Caroline: Wow, am I happy this week's over! I've got three courses I don't like, this project in a group that's just about nonfunctional, and more assignments than I can handle. I'll be working all weekend.

Brian: Same here. I'll be chained to the keyboard for the weekend, what with online courses and all. But what are you doing outside of that? Party time somewhere? Driving home to do the laundry?

Caroline: None of the above. It'll be work, work, work!

Brian: Ooh, Babe! Not good for body or soul. Gotta look after the old mental health, you know. How about we take a break Saturday night? You could come around for a movie, maybe a "golden oldie." I volunteer to make that cheese popcorn you like.

Caroline: OK. Well, yeah, maybe. I'll text you Saturday afternoon.

Brian: Great! Hey, it's nearly 3 o'clock. I thought the rest of the group promised to be here by now.

Following is a brief summary that the researcher might write about the above conversation:

> Looks like two study buddies, meeting casually, perhaps accidentally. It turns out to be a planned encounter that is supposed to include others in a group. Is it the group Caroline described as nonfunctional? Are these two more than friends? It appears that Brian thinks so, or wants it to be so. Not sure about Caroline. Why are they meeting face-to-face instead of just texting each other?

The above summary should bring to mind many general questions about communication and communication behaviors. For example:

- Questions about relationships: How do we identify relationships? How do people express their relationships? What do language and behavior tell us about relationships? Do romantic couples develop vocabulary unique to themselves?
- Questions about decision making: Are decisions by a romantic couple made using different criteria than decisions made by friends? Are individuals in a romantic relationship more likely to compromise on a decision than individuals in a work relationship?
- Questions about technology and relationships: How does intimacy in a relationship affect the nature and frequency of contacts using communication technologies? Why does Caroline propose "texting" rather than a phone call?

Now let's move on to what is about to become a more complex set of interactions as three more students join the conversation. There are only five students, but the possibilities for different interactions and subgroups forming obviously increase significantly.

INTERACTION II—The Group: Collaboration or Conflict? Business or Pleasure?

Brian: Hey, Tshinta. Wassup?

Caroline: About time you showed up. We've got to get this media effects project under way.

Tshinta: I couldn't help it; I had to talk with Prof. Thomas about the midterm.

Caroline: I hope you convinced him to cancel it.

Tshinta: No such luck.

Elizabeth: Sorry I was late, but practice ran overtime.

Mike: Yeah. Me too. Sorry . . . I was waiting for Elizabeth. By the way, I have class in 15 minutes.

Brian: Geez! Our group can't even get together, much less get a project organized.

Elizabeth: Why do we even have to meet? Can't someone just divide up the work and e-mail me what I have to do?

Mike: OK by me as long as I don't have to do the oral presentation . . .

Tshinta: . . . or be responsible for the paper.

Brian: Caroline's pretty good at deciding who does what best. Let's appoint her the group leader and take it from there.

Caroline: Leader? Who me? I don't think so. I don't want responsibility for this. Besides, part of the purpose is that we're supposed to work together.

Tshinta: Caroline's right. Looks like we'll be here awhile. In that case, I need a coffee . . .

Following the format we used for Interaction I, below is a brief summary that the researcher might write about the above interaction:

> Five students . . . a small group. Participants arrive late making excuses and showing little enthusiasm for the project or the group. The dynamics look grim. It appears that no one wants to lead or to follow. No evidence that they have a procedure for making decisions. Who will emerge as leader? Will the group hold together? What will happen as they get closer and closer to the project deadline? How should I interpret Tshinta's comment about Mike not being responsible for the paper—sarcasm, sympathy, or an objective assessment of his abilities? Ends with a move toward consensus building. Need to get involved with this group if I'm going to understand them better.

As with the previous example, this summary might lead to many questions about group behavior and communication. Following are some broad areas under which these questions might be grouped. Some are the same as in the previous example; others are new.

- Questions about relationships: What are the relationships among these people? How do we identify relationships among group participants? How does group size affect communication content? How does group size affect interactions among individuals?
- Questions about decision making: How will this group make a decision? How do groups make decisions? How do personal relationships influence decision making?
- Questions about leadership: What makes a leader? How can you identify a group leader? How are leaders chosen? Are effective leaders always respected?
- Questions about technology and group interactions: What effects might communication technologies such as social media have on group processes? Do social media support or hinder group interactions? How might the participants' performance change if they used web conferencing instead of meeting face-to-face?

Adding more students to this conversation has opened up many questions related to group size, status, decision making, leadership, and communication technologies. From a researcher's viewpoint, this is good news because there is so much more to discover but perhaps bad news in that a focus on one topic of interest may be at the cost of other equally interesting topics.

We will now move on to a final "burst" of conversation. The group remains the same, but the topic shifts to mediated communication such as social media, broadcast media, and newspapers—the channels or media by which people communicate other than face-to-face. This time, the research questions will focus on the content of the conversation rather than on personal interactions or group dynamics.

INTERACTION III—The Topic Turns to the Media

Brian: . . . Speaking of coffee, did anyone see that great new animated coffee ad? With the cartoon cat drinking coffee?

Caroline: Brian's a foodie. Remembers every food ad but can't remember anything else . . . like today's news.

Brian: Maybe. But I'm in good company. Ask them over there at the next table. No two people will agree on what they remember as today's news, but all six of them will tell you about that rip-off cats-drinking-coffee video that went viral. And who watches newscasts anymore anyway? If I want news, I'll go online and find it somewhere when I feel like it.

Caroline: I've watched you, and I don't think the websites you use for news are very credible.

Brian: So television or radio or newspapers are better? Why should I trust them? Any news source is just someone's version of the news. That's why I watch all over the place. I get balance—multiple perspectives. You can't get well informed from just one source.

Tshinta: But good news sources have trained journalists, more journalists, dedicated newsrooms, professional standards—all that stuff.

Brian: Doesn't matter. They're all corporate spin. You know they all accept advertising, and they're not going to say anything that will turn an advertiser off. They might not be politically biased, but they're corporately biased. They're all pushing consumerism. You can't trust them.

Elizabeth: So who *do* you trust?

Brian: You—to buy me another mocha latte!

Elizabeth: Generic or brand name?

Brian: Brand name, of course.

(laughter)

Tshinta: Behold—the power of advertising!

Brian: No! It's the other way around. Manufacturers know they need to reach people like me to keep me buying their product. I influence their advertising!

Mike: Yeah right!

The group is still together. Discussion is casual, but the topic seems to have shifted from group process to the media effects topic of their class project. Brian is the catalyst for the discussion. He sneers at traditional news media and claims to be immune to media influence. The others refute his statements on both issues. Seems to be a tension here between what's popular and what's credible; also a question of causality—does advertising influence consumers, or vice versa?

It looks as if we have some serious media-related questions here . . . and this time it is your turn to identify them. Go to the "Application Exercises" section at the end of this chapter for guidance on this task and how to approach it.

Basic Assumptions Behind Communication Research

So far, we have looked at specific situations that might lead to specific research questions that point to specific research methods. There are, however, several basic assumptions that underpin all communication research. Consciously or implicitly, researchers bring these assumptions to their research. Several major assumptions—each of which can be contested—are outlined below.

Observations Capture/Do Not Capture an Underlying Reality

One such assumption is that what we choose to look at—dress or language, for example—tells us something about an underlying reality we cannot see but assume to exist. For example, "power" is not something we can actually see. When you think about it, what we see is not power as such but rather someone behaving or dressing in a particular way and other people responding. Nonetheless, "power" seems like a useful concept in our efforts to understand human communication, and generally we elect to study it by looking at behaviors that we assume represent power.

Similarly, no one has ever actually "seen" an attitude. What people have actually seen is someone behaving in a particular way or responding to a set of survey questions designed to capture this thing called "attitude." Once again, "attitude" seems too useful a concept to discard from our thoughts about human behavior, and so we research attitudes on the assumption that they exist or at least that the concept of attitude provides a useful tool for thinking about communication processes.

Theories About Human Behavior Can/Cannot Be Generalized

A second assumption is that theories about human behavior can be generalized. It may be insightful to discover that your grandfather has a LinkedIn account and that your little sister has a Twitter account. But your research would be much more useful and rewarding if you were able to make a general statement such as "Young people are more likely than older people to have a Twitter account." If true, this statement would be of interest to advertisers, educators, and disaster management agencies, the last of which might need to reach large numbers of people rapidly in an emergency. However, to make this statement, you basically have to assume that your grandfather is like other grandfathers and your little sister is like other little sisters, at least with respect to social media use.

Probably, though—and correctly—your grandfather and sister regard themselves as unique individuals, so to what extent can we assume people are basically like other people? It is an important question because if our world is full of unique individuals, we are not entitled to make any generalizations about them (except, of course, that each of them is unique!). Nonetheless, researchers using survey or experimental methods typically will want to assume that the results of their research will apply to people who are similar to the study participants but not in the study. That is to say, there is an assumption that people are similar in the way they behave.

Researchers Should/Should Not Distance Themselves From Their Research Participants

A third assumption relates to the researchers' level of engagement with their research participants. In the researcher's notes above, you will notice a thought about getting more involved with the students in the conversation—perhaps by sitting in on the conversation or interviewing some of them. This brings up a fundamental choice in research design. The more distant the observer becomes, the more neutral or dispassionate she can be in reporting a group's behavior, but she will be unable to get the insights she would get if she were closer to the group. In fact, her observations might actually be wrong, such as deciding that Elizabeth and Mike have a social relationship. On the other hand, moving closer to the group will provide her with insight, but she then becomes open to influencing the group dynamics or to seeing only the group's view of the world and becoming biased in her reporting as a result.

Research Should/Should Not Be Done for a Specific Purpose

A fourth assumption is about the purpose or reason that should underlie research. Most scholarly researchers probably began their careers with a simple curiosity about some aspects of human behavior, and it is that curiosity and the pleasure of discovery for its own sake that continues to drive them. Scratch the surface of that interest, though, and we will find other purposes or motivations that come into play. At a personal level, it may be need for fame or funding. At another level, researchers may see the purpose of their research as helping to solve society's problems or refining a highly theoretical model of human interaction. As we will see in Chapter 2, researchers may be content if their studies lead to accurate descriptions or an understanding of human behavior, but they are more likely to see their research as worthwhile if it explains or predicts that behavior.

Researchers whose work is funded by a corporation or foundation looking for specific answers to a question as quickly as possible may find that their personal motivations for research and their preferred direction for the research take second place relative to the needs and motivations of the funding agency.

There Is/Is Not One Best Position From Which to Observe Human Behavior

A fifth assumption is simply that some aspects of a question are more important to look at than others and, related, that there is one best standpoint from which to observe human communication. A simple way to understand this is to consider an early telecommunications-based model of human communication (Shannon & Weaver, 1949). Given the complexities of human communication, it is an overly simplistic model, but it does identify major components in any human interaction as follows:

- Source—the provider or initiator of content
- Message or messages—the content of communication
- Channel or medium—the vehicle for communication content; for example, social media
- Receiver or receivers—the recipients or consumers of information
- Noise—extraneous information or distractions that can disrupt an interaction

In human interaction, communication gets more complicated. Source and receiver may swap roles as a discussion proceeds. What is noise to one party may be useful information to another and so on. Nevertheless, this basic source–message–channel–receiver–noise model does indicate some possible major entry points into the study of human interaction.

For example, a major area of research on the first component of the model is source credibility. For example, why do some online news consumers find *The Huffington Post* more credible than, say, *The New York Times*, or *The New York Times* more credible than *Al Jazeera* or vice versa? The "message" component raises any number of questions about communication content—how best to present complex scientific information to a lay public, for example. The "channel" component raises questions about the impact of process on human behavior. For example, what are the circumstances in which personal, face-to-face instruction should be preferred to online learning for students? Or what happens to a recipient's understanding when complex message content is reduced to 140-character tweets? The "receiver" component often raises questions about how the demographic, cultural, and psychological characteristics of people influence their comprehension of messages, willingness to engage with others, and receptiveness to persuasive messages.

You will likely have already decided that none of these components can be studied in isolation. Receiver and sender interact and swap roles in many interactions. In the case of advertising research, receiver characteristics affect message content and channel selection. But researchers will typically find one of these components of the communication process more interesting than others and will give that component priority in their investigations.

By way of example, let's look at how researchers might approach a specific piece of communication content—an advertisement. We shall see that there are many possible approaches to studying such advertising.

Some Research Possibilities: What Can We Do With an Ad?

Let's explore how a single situation can lend itself to many research questions, using public service advertisements (PSAs) as the basis for our discussion. PSAs are targeted communications designed specifically to promote positive attitudes and behaviors. They focus on public interest topics such as health, education, safety, environment, and other social causes. Many of them are

likely to be familiar to you. Most PSAs are produced under the auspices of the Ad Council, a body that links nonprofit organizations with professional agencies that produce advertisements as a public service. For this discussion, we will focus on recent PSAs that tackle the problem of impaired or distracted driving. You can find the ads mentioned in this section, as well as many others, at AdCouncil.org.

PSAs are typically based on a strong, often alarming, fact or statistic, such as "In 2012, 10,322 people were killed in alcohol-impaired-driving crashes—that's one person every 51 minutes" or "A texting driver is 23 times more likely to get into a crash than a non-texting driver." The creative challenge is to relate these often "remote" statistics to individual audience members. This relevance is usually achieved by a tagline that makes the message personal and/or encourages a behavior or attitude change. This tagline usually becomes the overall campaign theme.

For example, the first statistic mentioned above resulted in the following anti–drunk-driving campaign themes, which you will likely find familiar:

"Friends don't let friends drive drunk."

"Drinking and driving can kill a friendship."

"It's easy to tell if you've had way too many. But what if you've had just one too many? Buzzed driving is drunk driving."

The second statistic inspired the themes of two anti–texting-while-driving messages.

The Ad Council's anti-texting print PSA features the image of an ambulance with the message "You don't want them responding to your text." The organization's television PSA puts the viewer in the car with a teen driver while she checks a text message . . . and subsequently crashes. You can view this ad at www.adcouncil.org/Our-Campaigns/Safety/Texting-and-Driving-Prevention.

These are hard-hitting, "pull-no-punches" messages that have the potential to grab attention and, perhaps, shock the target audience into a behavior change.

Communication researchers may be interested in answering a number of questions about any of these PSAs. Does it work or doesn't it? How or why does it work? Whose interests are being advanced by the ad? Does the medium itself (radio, magazine, television, newspaper, Internet) have an effect on how the content is understood? The following sections introduce several approaches to evaluating advertising using these PSAs as examples.

Does the Ad Work?

This is a question that, essentially, focuses on the receivers of the message. We want to know what they did or how they felt as a result of exposure to the message. Applied communication researchers, and certainly advertising executives and their clients, want to know how many people adopted the recommended behavior or at least changed their attitudes as a result of exposure to this ad. The question is not that readily answered.

Clearly, the police have statistics on driving infractions, and if accidents associated with texting, for example, decreased, we could assume that the anti-texting advertisement was effective. Correct? Not necessarily. There could be many other explanations for such a decrease, and these would need to be ruled out before we could conclude that the ad had a significant effect.

One way to assess the effectiveness of these advertisements is to take a scientific approach. Two characteristics of scientific method are observation or empiricism and the attempt to rule out alternative explanations. From a scientific point of view, we might measure how much advertising time or space the campaign received and the number of texting citations issued and then look for a relationship between the two. We would hope to discover that as the amount of advertising increased, the number of citations decreased. But we would also need to be sure that any observed

decrease was related to our advertising and not to an increase in the number of police on the highways or to a new ad that was launched before assessing whether the old one was working effectively. All possible causes would need to be identified and ruled out before we could assume that the anti-texting advertisement and *only* the advertisement caused the decrease.

What Can Readers and Viewers Tell Us?

This question also focuses on the receivers of the message, but with a shift in emphasis toward understanding the "whys" of human behavior. Establishing that the advertisement did influence behavior or attitudes provides no insight on why it did so. One way to answer this question would be to conduct a survey, asking questions based on what you suspect made the advertisement effective—the celebrity spokesperson, the animation showing how distractions affect reaction time, or the real-life story of an "innocent victim" of a texting-related crash, for example.

It is likely that an advertising agency would ask such questions before the advertisement was released in order to know in advance that the ad was going to be as effective as possible. Of course, the audience may have totally different perceptions of what is important about the ad; for example, viewers may decide that the catchy soundtrack is really what grabbed their attention. It is important, therefore, to capture what people have to say in their own words as well as to ask the questions that you think are important.

For such public opinion research, surveys are typically used to ask questions the researcher thinks are important, and focus groups are used to capture opinions that the audience thinks are important. Historically, surveys have used mail, phone, or personal interviews (such as in a shopping mall) to present a series of specific, predetermined questions to a predetermined group of respondents, but today the Internet and social media are equally likely vehicles, depending on the target audience. Focus groups involve bringing together maybe 6 to 12 people and asking them to discuss their reactions to an advertisement, issue, or product. The essential focus group strategy is listening to people in order to capture their responses in their own words.

Surveys generally produce quantitative results (48% did not like the spokesperson); focus groups generally produce qualitative results in that they capture people talking ("I really did not like the spokesperson because . . ."). Surveys and focus groups both have their advantages and limitations, as we will see in later chapters.

What Can the Content Tell Us?

This question clearly focuses on message content. So far we have analyzed the texting campaign largely in terms of audience response, but what could we learn from the ad content itself? There are many angles from which to study media content, including rhetoric, content analysis, and critical theory. These angles share an interest in media content, but take different approaches for different reasons.

Rhetoricians are essentially interested in the **appeals** or persuasive tactics the advertisement uses to persuade an audience to adopt the behavior. For example, if you look at the Ad Council's anti-texting campaign, two appeals are apparent: the appeal of the ambulance EMTs as authority figures (in the print ad) and the real-life experience of being in the car with a driver who cannot resist just a quick look at the text that has just come in (in the TV ad). As with many commercial ads, this shows a "typical" teenager in a "typical" texting situation, leading to a further appeal that "people just like us" are guilty of dangerous texting behavior.

Rhetoricians using theory developed by Aristotle (384–322 BCE) might search for appeals based on *logos* (logic), in this case the logic of "texting + driving = crash"; *ethos*, (character), in this case the use of a typical teenager with typical reactions to a text; or *pathos* (emotion), in this case the tragic consequences of a crash.

Kenneth Burke, a 20th-century theorist who analyzed human communication in terms of drama, offered a set of analytical questions that ask, essentially, "What is the act, the scene, the people, and the purpose of the act?" We could analyze our ad using Burke's questions. Looking at the ad content, we could describe the setting, the teenager, and the mini-drama of a person becoming absorbed in a text, losing control, and crashing.

Rhetorical approaches to researching advertising content are essentially qualitative; they analyze the use of language.

Content analysis, by contrast, is primarily a quantitative method for assessing media content. For example, looking at ads for distracted driving, including drunk driving, buzzed driving, and texting and driving, a content analyst might set up categories of content based on her interest in representations of gender in advertising. The analyst counts the number of appearances in the ads of men and women and compares them. She could also compare her results to a known distribution of these categories in accident records. She might then be able to conclude that the advertisements overrepresent women as buzzed drivers and underrepresent them as texting drivers, for example. She would be comparing advertising's world with what we know of the real world.

Critical analysis works from a basic assumption that communication maintains and promotes power structures in society. Essentially, the focus is on the relationship, explicit or implied, between message source and recipient rather than just one component of the communication process. With that as a basis, the critical researcher asks "Whose interests are being served by advertising, and more specifically, how exactly do language and representations maintain the interests of such entities as corporations, colleges, or governments?" Unlike the content analyst, who looks for what is explicit and observable, the researcher may look as much for what is implicit or unsaid.

For example, the researcher may discover that anti-texting advertising more frequently portrays young women as more likely to text while driving than young men. This is a conclusion that our content analyst might also have arrived at. But the researcher's question becomes "Whose interests are advanced by such portrayals?"

What Can the Creators of the Ad Tell Us?

This question focuses on the source of the message rather than the recipient, message, or communication medium. Our understanding of the advertisement would, of course, be enhanced if we could talk with the client, and with the producers, directors, and writers in the agencies that produced the ads. In this case, we would probably be interested in finding out how and why decisions about content and production were made.

Researchers interested in organizational dynamics and decision making might want to know whether the basic creative approach was worked out over the course of extended meetings involving large numbers of people or if it came about as a directive from a client or creative director. Researchers interested in decision making would want to interview members of the creative team individually so that each person feels free to talk. They might also want to interview the team as a group and probably would want to get permission to videotape the creative meetings as they take place. Such research could give us insight on how communication facilitates or discourages creativity, decision making, and client-agency relationships, or how professional communicators build an image of the consumers they are trying to reach.

Some Research Possibilities: Beyond the Ad

The above discussion centers on advertising by way of example, but analogous questions can also be asked of interpersonal, group, or organizational communication. For example, suppose your academic

department has a Facebook page and/or tweets its student community to keep it apprised of relevant news such as new course offerings, faculty changes, scholarship opportunities, and the like.

We might, again, ask the "Did it work?" question. For example, can we observe that the tweets triggered additional numbers of students to register for the new course offerings or apply for scholarship(s)? We might, by using surveys, interviews, or focus groups, determine how students feel about this use of social media to provide them with departmental information. We could analyze this social media content to see what appeals are used to promote new courses and scholarships. We might even take the perspective of a critical organizational theorist and examine how such social media content encourages student compliance with the departmental "way of doing things."

With interpersonal communication, we might be interested in tracking how communication changes as two people move from acquaintances to friends to romantic partners. Again, similar questions apply. The "Did it work?" question might be reframed in terms of trying to observe what vocabulary or behaviors work to strengthen or weaken the relationship, or we could interview the two individuals themselves to see what they have to say about their communication and why it works, or doesn't. Similarly, we could examine the content of their text messages or transcripts of their phone calls to relate the content to key events in the relationship.

A Series of Unavoidable Decisions

Communication researchers have different agendas, methods, and assumptions behind what they do. One reason for this is the complexity of human communication. Because it is almost impossible to examine and explain a communication event in its totality, researchers focus on a part of that totality and choose a method for investigating it with which they have a comfort level, be it methodological or ideological.

For example, even though the research approaches outlined above share a common focus on understanding public service advertising, researchers clearly differ in what exactly they choose to research and the reasons for doing their research.

In addition to their theoretical priorities, all researchers have to face the reality of limited time, limited resources, and an inability to be in more than one place at a time (web conferencing excepted). Following are some of the choices that are almost inevitable for all types of researchers, based on their theoretical predispositions and resources.

The Field of Study—Wide or Narrow?

Time is short, the topic vast, and, realistically, we must research the available and the achievable. Methodological preferences aside, communication scholars typically divide communication studies into a number of specific interest areas such as those shown in Exhibit 1.1. This list is compiled from listings of divisions and interest groups of the National Communication Association and the International Communication Association.

The Researcher—Dispassionate or Involved?

To what extent should researchers get involved with their human "subjects"? The scientific tradition values objectivity and dispassionate observation. The "reward" to the researcher is the satisfaction of a new finding, the development of a new theory, or the confirmation or disconfirmation of an existing theory.

By contrast, **action research** engages in research specifically to improve people's lives. Whereas the scientific tradition is to remain detached from one's subjects, the action tradition

Exhibit 1.1 Communication Research Interest Areas

Applied Communication	Instructional/Developmental Communication
Argumentation and Forensics	Intergroup Communication
Children, Adolescents, and the Media	International and Intercultural Communication
Communication and Technology	Interpersonal Communication
Communication and the Future	Journalism Studies
Communication Apprehension and Avoidance	Language and Social Interaction
Communication Ethics	Mass Communication
Communication History	Nonverbal Communication
Communication Law and Policy	Organizational Communication
Critical and Cultural Studies	Peace and Conflict Communication
Environmental Communication	Performance Studies
Ethnicity and Race	Philosophy of Communication
Family Communication	Political Communication
Feminist Scholarship	Popular Communication
Freedom of Expression	Public Address
Game Studies	Public Relations
Gay, Lesbian, Bisexual, and Transgender Studies	Rhetoric
Global Communication and Social Change	Semiotics
Group Communication	Spiritual Communication
Health Communication	Theatre
Information Systems	Training and Development
	Visual Communication Studies

is to be closely involved with them in order to better people's lives. One school sees research as a quest for knowledge, and the other sees research as an engaged contribution to engineering a better society. In both cases, the researcher's behavior has ethical implications, as we shall see in Chapter 3.

The Approach—Objective or Subjective?

Can research be objective? **Social scientists** often bring the assumption of an external "real" world that can be observed, understood, and agreed on to the study of human interaction. For example, they assume that concepts such as intelligence or loyalty can be found across all people and measured objectively with an "instrument" that will apply universally and perhaps predict human behavior.

By contrast, phenomenologists and ethnographers try to understand people's subjective worlds. They have an interpretive perspective in that they seek to understand how humans interpret or make sense of events in their lives. They assume that concepts such as intelligence or loyalty are indeed just concepts, and that such concepts are defined subjectively by the people they are researching, not to mention the researchers themselves. Such concepts vary from culture to culture, and from individual to individual. For example, simple interpersonal behaviors such as holding hands, kissing, or embracing may have widely different interpretations from culture to culture. The phenomenologist may observe a behavior such as kissing but really want to know what that action means for the individuals involved. There is no assumption that such behavior has a universal meaning.

The Priority—Your Questions or Their Answers?

All researchers have a basic question that frames their research, for example "Do men and women view social media differently?" To get an answer to such a question, researchers have two basic options. The first is to ask men and women a series of specific questions that together will provide an answer to the researcher's question. Often, these might be survey-type questions such as "On a scale of 1 through 10, where 1 is not at all important and 10 is extremely important, how would you rate the importance of social media in your life?" Typically, this would be one of many such questions aimed at assessing how or why social media is used, how many hours a day participants spend on social media, and so on.

This approach may well answer the researcher's question but completely fail to capture how users feel about social media. For example, if users see social media primarily as entertainment, it may never occur to them to describe social media as "important." A basic research decision, then, is whether to get answers to specific questions you have or whether to elicit people's views in their own language—not quite knowing what you might get.

The Sample—Large or Small?

How many people do you need to talk to in order to know that you have "an accurate picture" of a communication phenomenon? Public opinion researchers can answer that question: For an accurate view of adult public opinion in the United States, you need about 1,200 randomly selected people—as long as you can live with something like plus or minus 3% error.

"True enough," the small-sample people might reply, "but counting gives you only numbers and knowledge, not understanding. Will a survey of the thousands of people affected by weather, hunger, or a down-sliding economy give us any more understanding of how people communicate about such events than an in-depth interview with one family? You know what's going on, but you don't know why or how people feel about it or explain it. That is why one solid series of interviews with a few people can give a better grasp on a situation than all of the thousand-people surveys that the big-sample people can conduct."

The Data—Quantitative or Qualitative?

Are humans storytelling animals, counting animals, or both?

Numbers are important; they are how democracies and committees make decisions. Count the vote; majority wins. While the ultimate truth may never be known, many researchers accept that the current "best" truth of a phenomenon may be what a majority of researchers currently believe it to be. Numbers and counting are important to scientific methods. Not only are counting and statistics an important part of such methods, but the number of researchers in agreement on a particular finding also helps to suggest the "truth" of a finding.

Researchers with interests in human subjectivity, motivation, and aesthetics respond that the complexities and subtleties of interpersonal attraction, responses to modern art, or the critical approaches to understanding media cannot be captured in mere numbers. The "truth" can best be understood by listening to the stories that research participants and researchers themselves have to tell us.

Few of the above "either-or" distinctions are clear cut. For example, a passionately involved action researcher may use objective social science methods to study a problem. Or the survey questions that a numbers-oriented methodologist asks may be based on extensive initial qualitative interviewing. The above ideas have been presented as "either-or" to help you think about where you stand on such issues. In practice, many of the seeming opposites blend together. The most obvious blending is in the approach called **triangulation** in which researchers use multiple methods providing multiple perspectives to ensure that they have a good "fix" on a problem.

For example, in trying to understand how family life interacts with television viewing, a researcher might survey several families on their use of and attitudes toward television, interview a few family members in depth, live with one family as they watch television, and conduct a content analysis of television content to determine how content shapes the family's interactions and vice versa. Advertising executives will frequently pretest or pilot a commercial with a focus group before running the advertisement and then assessing results with a large-scale survey.

Approaches such as **Q-Methodology** assume that it is respondents' subjective views of the world that are of interest but combine that research focus with quantitative, computational approaches to recording and assessing these views.

The Report—Subjective or Objective?

Just as there are different ways of doing research, there are different ways of writing research. Researchers interested in interpreting the subjective world of their informants may use the primarily qualitative languages of ethnomethodology and phenomenology. In most cases, they report what their informants have to tell them in their informants' own words. By contrast, social science researchers typically use statistics to report and interpret the data they have collected.

The involved researcher may unabashedly use "I" writing as in "I lived with Thomas and his two children for three months, and we formed a warm social bond that had us eating together, watching movies together, and exchanging seasonal gifts." Dispassionate researchers will report in a language that strives for neutrality and that removes them from the narrative altogether—thus, "Subjects were recorded on video and their facial expressions subsequently analyzed for changes as visual stimuli were presented to them." And the critics of this style will point out that such a dispassionate style is in itself a persuasive strategy aimed at convincing the reader of the author's credibility as a researcher!

The subjectively involved researcher believes that credibility and reporting are enhanced by including personal experiences and reactions. We are getting "the truth, the whole truth, and nothing but the truth." The dispassionate researcher believes credibility is maximized by objective reporting "uncontaminated" by sentiment and value judgments (ignoring perhaps the idea that to adopt this style of writing is in itself a value judgment).

Research and research reporting both are communication activities framed by disciplinary standards and expectations, ethical decisions, and personal motivations. As critical theorists would point out, published and topical research carries a "meta-message" about what research topics are "hot," what approaches are in vogue, and who the current "stars" are.

The fact that research has an argumentative component does not necessarily mean it is adversarial. The academic journals in which research is published reflect ongoing discussions about research. A research study may be followed by responses, critiques, and other studies that change our thinking about it. You can think of articles in the scholarly communication journals (some listed at the end of this chapter) as a considered, continuing worldwide conversation among researchers on how best to understand human communication.

Problem Posing, Problem Solving, Peer Persuasion

Borrowing a model from the biological sciences, communication research can be regarded as having three main components—problem posing, problem solving, peer persuasion ("A 3P's Approach to Science Education," n.d.).

Problem Posing

Research questions do not arrive "pre-posed." You have to decide what the question is. This can be the hardest part of the research process. Once you have clearly defined the question, the rest of your research often seems to fall into place. Defining "the question" is a very human process involving personal interest in the topic, the feasibility of doing a study, and the rewards, tangible and intangible, of completing it. The three interactions we looked at earlier in this chapter illustrate the first, general steps in posing the question. In Chapter 2, we shall look at the important process of getting general questions and observations written as specific research questions and hypotheses.

Problem Solving

Having posed a question, we face the problem of how best to answer it. In many respects, this is what this book is primarily about. But problem solving is more than selecting a research method and using it. It can involve amending your methods as they prove to be inappropriate, discovering other questions that must be answered before your "real" question can be answered, finding new questions opening up, or changing your research altogether when someone publishes a "breakthrough" study that gives you a whole set of new ideas about your research.

Peer Persuasion

Research has no value to the world unless the world knows about it. Research must be published (literally, be made public) if others are to benefit from it. Academic publication is a process of persuasion. Journal and book editors and reviewers must be persuaded that yours is a worthwhile project with worthwhile results, and readers must be similarly convinced if your research is to gain recognition. Publication is a process of persuasion and argumentation even though it is couched in the language of scholarship and conducted via the printed or electronic page.

For most scholarly journals, your research report will go through a process of peer review in which scholars in your field assess your work and suggest ways you could improve your report before it is accepted for publication. This process can be time-consuming and painful to the ego, but research progresses on challenges and rigorous examination of ideas, and these challenges are simply another part of "research as conversation." Assertions about communication must be defensible if they are to be accepted. Publication in particular gets you into the cut and thrust of debate about communication and how best to study it.

As the news from time to time reminds us, researchers can be prone to error and to ethical lapses. Publication and peer review are also ways of monitoring the ethics of research, a topic addressed in Chapter 3.

Increasingly, researchers recognize that communicating the results of any research goes far beyond the peer persuasion of other researchers. For example, where research is funded by a government agency, a corporation, or a foundation, there will be a need to adapt research findings and for an explanation of the research processes to politicians, department managers, boards of directors, news media, and interest groups. This means that research reports in practice can range from a multivolume set of documents detailing the processes and outcomes of a 10-year study on social media to a one-line tweet summarizing the study's results. You will find some of the writing conventions for reporting research discussed in Chapter 14.

One proposition raised at the beginning of this book was that communication research inescapably involves ethical decisions. This ethics panel, and the ones in following chapters, will give you a sense of the ethical decisions you may face as a researcher. You should try to reason through to a decision for each of the ethics problems as they are typical of the decisions you may face when doing your own research. For help with these ethics panels, read Chapter 3, "Ethics: What Are My Responsibilities as a Researcher?"

Ethics Panel: A Health Communication Dilemma

Suppose that a public health agency wants to determine the best way to help people identify the symptoms of diabetes so they can take preventive measures and better deal with the condition if they are diagnosed as diabetic.

To do this, the agency hires your research firm to find out how best to get messages about diabetes to the public. You decide to run a three-group experiment in which people in county A will receive messages about diabetes by traditional mass media (newspapers, television, and radio). People in county B will receive intensive interpersonal communication about diabetes through neighborhood meetings, counseling, and their workplaces. People in county C will receive no messages because you need a "baseline" against which to measure whether your interventions in counties A and B have any effect. As a result of this study, you will be able to develop effective communication programs for your region.

What are the ethical implications, if any, of not providing people in county C with information that might save a life?

CHAPTER SUMMARY

This chapter introduced the ways scholars think about communication research, their main areas of research, and the methods they use. In summary:

- Communication research is a systematic process of posing questions about human communication, designing and implementing research that will answer those questions, and then persuading other researchers that your results are valid.
- Communication researchers typically specialize in one aspect of communication.
- Researchers may use qualitative methods, quantitative methods, or both.
- Researchers have empirical, interpretive, or critical perspectives on communication.

KEY TERMS

action research
appeals
Q-Methodology
social scientists
triangulation

APPLICATION EXERCISES

The application exercises you will find at the end of each chapter are warm-up exercises or mental experiments you can do to help you translate the chapter principles into research practice. For example, the following application exercises will help you identify and refine your thinking about your own research interests.

There is much more to research than simply finding a topic area and questions that interest you. You must also, for example, choose a research method or methods that will give you the data you need to answer your research questions.

For example, observing people, interviewing them, and analyzing message content are all valid research methods, but we must also consider the positives and negatives of each method in order to choose the one most likely to provide credible, complete data. For example, in relation to the student conversations earlier in this chapter, you might consider such issues as these:

- If you interview a couple, won't each partner tell you only what he or she wants the other partner to hear? Would you be better off interviewing them separately?
- Would individual questionnaires give you more "honest" answers because you are not interviewing face-to-face? Or could the time required to complete a questionnaire mean that you would get less than full answers?
- Does listening in on a private conversation raise ethical issues? If so, shouldn't you introduce yourself and ask permission to listen in? Might your presence then change the nature of the conversation?

Exercise 1. Finding Research Questions

Earlier in this chapter, we presented three interactions among students in a campus coffee bar. In the first two cases, we presented a dialogue followed by a researcher's summary and some questions the interaction raised. In the third case, Interaction III—The Topic Turns to the Media, we left it up to you to identify research questions that the example brought to mind. Identify as many media-related questions as possible. Think freely and broadly. No question is irrelevant at this stage of your thinking, and one may well be the spark that ignites a long-term research interest for you.

Exercise 2. Exploring Communication Interest Areas

One way to develop your own interests is to go to two of the major communication research interest groups—the National Communication Association (NCA) and the International Communication Association (ICA), listed in this chapter's recommended web resources. At the NCA site, on the About menu, look for "What is Communication?" At the ICA site, look for "Divisions & Interest Groups." In both cases, you will find a list of the specific interest groups for each association. The interest areas that overlap will give you a sense of the "mainstream" interest areas, and either list may spark your interest in an area that perhaps you were not previously aware of.

Exercise 3. Researching Internet Communication

Access the website for the Pew Research Center Internet, Science & Tech Project, listed below. (This site was previously known as the Pew Research Center Internet & American Life Project.) Locate a February 27, 2014, survey report titled "The Web at 25 in the U.S." At the report site, you will find the full report, the questionnaire, and the data from which the report was compiled. From the questionnaire, select three questions that interest you, ask the same questions of 10 people you know, convert your answers into percentages, and compare your results with the Pew Research Center results. For example, the first question, with response options, is as follows:

> Do you use a computer at your workplace, at school, at home, or anywhere else on at least an occasional basis?
> Yes / No / Don't Know / Refused

Do your results differ from those reported by the Pew Research Center? If so, how? Why do you think your results differ? What might you do to improve the credibility of your results?

RECOMMENDED READING

There are many books and journals available on communication research, as a visit to your campus library will indicate. Many journals, ranging from administrative theory to women's studies, may also focus on human communication. A few key journal titles are listed below. Chapter 4, "You Could Look It Up: Reading, Recording, and Reviewing Research," will move us on to developing more relevant, targeted lists of readings.

General

Communication Monographs

Communication Research

Human Communication Research

Journal of Applied Communication Research

Quarterly Journal of Speech

Mass Communication

Critical Studies in Media Communication

Journal of Public Relations Research

Journalism and Mass Communication Quarterly

Quarterly Review of Film and Video

Television and New Media

Organizational Communication

Academy of Management Review

Administrative Science Quarterly

Business and Professional Communication Quarterly

Journal of Organizational Culture, Communications and Conflict

Management Communication Quarterly

Group Communication

Conflict Studies

Group and Organization Management

Group Dynamics: Theory, Research, and Practice

Group Processes and Intergroup Relations

Small Group Research

Interpersonal Communication

Human Relations

Journal of Applied Psychology

Journal of Family Communication

Journal of Research in Personality

Journal of Social and Personal Relationships

Social Media

Convergence: The International Journal of Research Into New Media Technologies

Cyberpsychology, Behavior, and Social Networking

Journal of Computer-Mediated Communication

Journal of Magazine and New Media Research

New Media and Society

RECOMMENDED WEB RESOURCES

Association for Education in Journalism and Mass Communication (AEJMC). . . . . www.aejmc.org

Canadian Communication Association. . . . . www.acc-cca.ca

Human Communication Research Centre (HCRC), University of Edinburgh . . . . . .www.hcrc.ed.ac.uk

International Communication Association (ICA) . . . . . .www.icahdq.org

National Communication Association (NCA) . . . . . .www.natcom.org

Defining the boundaries of human communication studies is difficult and a debate in its own right. The ICA, NCA, and AEJMC are three of several U.S. academic associations devoted to the study of communication. Looking at their websites (above) will give you an idea of the many areas of research specialization under the "communication umbrella." By contrast, the HCRC site shows one of many institutions where communication studies are being reconceptualized by bringing together such fields as computing, philosophy, psychology, and language studies.

Pew Research Center Internet, Science & Tech Project . . . . . .www.pewinternet.org

The Pew Research Center Internet, Science & Tech Project studies how Americans use the Internet and how their online activities affect their lives. The project uses nationwide random phone surveys, online surveys, and qualitative research, along with data from government agencies, technology firms, academia, and other expert venues. You should become familiar with this site, and the Pew Research Center more generally, as we will refer to it throughout this book.

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Shannon, C. W., & Weaver, W. (1949). *The mathematical theory of communication*. Urbana: University of Illinois Press.

CHAPTER 2

First Decisions

What, Why, How?

It seems to me what is called for is an exquisite balance between two conflicting needs: the most skeptical scrutiny of all hypotheses that are served up to us and at the same time a great openness to new ideas.

—Carl Sagan

Chapter Overview

"How do I get started?" may be the most difficult question of all for the beginning researcher. As we explored in Chapter 1, the problem is that there are so many possible starting points. Think how many questions could be generated from even the most casual overheard conversation. Of course, this is also the good news. **Research questions** are indeed all around us, and identifying some questions about topics that interest you is a good start. You might even have good ideas about how to answer those questions, especially if you have jumped ahead to some other chapters in this book.

This chapter is about moving from those general questions that interest you to thinking about more specific questions and about well-designed research that will provide credible answers and contribute to the general body

Chapter Objectives

This chapter will help you

- Define the terms *induction*, *deduction*, and *abduction*.
- Identify key reasons for doing research.
- Discuss the various ways we "know what we know."
- Describe two major worldviews in human communication research and how each shapes the nature of research.
- Identify the advantages and disadvantages of basing your work on the work of other researchers.
- Explain with examples the difference between a research question and a hypothesis and the advantages of one relative to the other.

of knowledge about human communication. It is a process of moving from casual questions to more formal research questions and hypotheses that will launch a planned, structured, and defensible set of activities that let you collect, analyze, and interpret data. Appropriate research methods are those that best match your theories about human communication and the type of data you intend to collect. Behind every research project are assumptions and first decisions that you cannot escape about the nature of human communication and of research.

This chapter discusses some of these assumptions and basic starting points that underpin communication research and finishes with a discussion of how to write the questions we hope to get answers to.

Starting With the "What" Question: Ideas and Observations

The most obvious starting question is "What shall I study?"

Listening to the Rolling Stones' "Start Me Up" probably won't help a lot unless you have a specific interest in rock lyrics. But communication phenomena in the form of song lyrics, interpersonal behavior, group dynamics, social media, news coverage, and virtual realities are all around us. So a good starting point is to observe the communication phenomena you are interested in.

"Communication" is a large umbrella under which many research interests find a home. As noted in Chapter 1, many researchers may specialize at the level of mediated, organizational, group, or interpersonal communication, but others have interests such as social media and rhetoric and argumentation that transcend these interest areas. Your career interests and academic electives likely already have you heading toward a general interest area. You may find a more specific focus by looking at the websites of the scholarly communication associations listed at the end of this chapter and of Chapter 1 and revisiting the communication research interest areas shown in Chapter 1, Exhibit 1.1.

Reading relevant scholarly articles is a "must." See Chapter 4, "You Could Look It Up: Reading, Recording, and Reviewing Research," for a discussion of one of your most important starting points—your academic library. Often, our interest may be triggered by a news item, a casual observation, or an occupational interest. For example, the following scholarly research may have been triggered by a casual question—"Why do people use online dating sites?"

Kang, T., & Hoffman, L. H. (2011). Why would you decide to use an online dating site? Factors that lead to online dating. *Communication Research Reports, 28*(3), 205–213.

The following research may have been triggered by the casual observations that more women than men appear to blog, and that physically attractive politicians seem to get more TV coverage.

Chen, G. M. (2015). Why do women bloggers use social media? Recreation and information motivations outweigh engagement motivations. *New Media & Society, 17*(1), 24–40. doi:1461444813504269

Waismel-Manor, I., & Tsfati, Y. (2011). Why do better-looking members of Congress receive more television coverage? *Political Communication, 28*(4), 440–463.

While popular news and entertainment media and events plus your own observations and experiences might trigger a research interest, your academic library will provide the best examples of research based on serious, systematic observation using research methods appropriate to the task and reviewed by other researchers before publication. As Chapter 4 explains, the scholarly articles you find in academic databases will give you ideas about appropriate research methods,

point you to other relevant articles, and help you decide whether your research could lead to new understandings or would be merely "reinventing the wheel."

A theory or generalization about communication is weak if not supported by evidence, so researchers move between theory and observation. They may start with a theory that needs testing with observations, or they may have observations that lead them to construct or reconstruct a theory. Three thought processes that link observations with theories are induction, deduction, and abduction.

Induction

Induction is reasoning from observations to a theory that might explain your observations. Let's go back to Chapter 1, in which we dropped in on students drinking coffee and socializing. As an observer, you might make a note of communication behaviors such as the following:

- Gender clustering—males are more likely to sit with males, and females to sit with females.
- Class distinction—upper-class students are more likely to be found socializing in the coffee bar than first- or second-year students.

What theories might explain these observations? You might think of several. For your gender-clustering observation, you might theorize that

- Students have a greater comfort level with same-sex than with opposite-sex conversations.
- Male students have more classes in common with each other than they do with female students, and vice versa.
- Male and female students have already formed separate social groups by virtue of being in separate campus housing units.

For your class-distinction observation, you might theorize that

- Upper-class students are more likely to have jobs, grants, and fellowships, and can afford to socialize and drink handcrafted coffees.
- Upper-class students are more likely to live off campus, and meeting on campus is the only way to get group projects done.
- Upper-class students are more stressed as graduation approaches and feel a greater need to "unwind" by socializing with friends.

Having generated several such theories, you could then design a study that would help you decide which theory offers the best explanation of the phenomenon.

Deduction

By contrast, **deduction** moves from a theory to defining the observations you will make to test the theory. For example, you might have some reason to theorize that women are more likely than men to discuss grades and academic performance. You would then design a study to capture the observations that would test this idea. In this case, your research might involve recording the conversations of both men and women and counting for each group the number of times words such as *grade*, *grade point average*, or *assignment* occur. If you could then show that the frequency of these words is greater in women's conversations than in men's, your theory would be supported—except for two big "ifs."

First, if you want to make a general statement about women discussing their academic performance more frequently than men, you will want to be confident that your statement is true for all female students, not just the small group of communication majors you have observed. Second, you will want to know that this pattern you observed is true at all times, not just for the one discussion you happened to observe, perhaps as final examinations were approaching. This is where appropriate sampling (Chapter 8) can help us.

Deduction is in a sense more efficient than induction in that it leads to a specific observation that will test your **hypothesis**—the statement about the relationships you expect to find. Having done so, you can then move on to another test. With induction, you have a further step: finding a way to decide which of the many possible theories you induced from your observations are correct. Induction requires the confidence that you have enough observations to support your conclusion and that you can rule out all the other conclusions that might also be derived from your observations.

Abduction

In the context of research, **abduction** refers not to being kidnapped by aliens from the planet Zog but rather to reasoning from an effect to possible causes. For example, a large group of young children in the campus coffee bar would be an unusual sight. That occurrence might raise some questions, but a perfectly plausible answer might be that university employees are participating in a "bring your children to work" day. With abduction, your starting point is an effect from which you reason back to possible causes. In this example, your research project would be to find out whether there is such an event on campus that explains your observation or if there are other events that offer a more plausible explanation.

Starting With the "Why" Question: Goals and Values

"Why research?" is perhaps a more philosophical starting point. Most scholars are ultimately motivated by curiosity and, more specifically, by the desire to understand human communication. The specific "whys" of research can be as varied as human motivations. Every research study starts with a purpose, be it an interest in testing a sophisticated theoretical concept or attempting to get an A in a research course. Peer pressure, ego, or financial incentives may also motivate researchers.

Generally, though, research has several purposes—exploration, description, explanation, prediction, control, interpretation, and criticism.

Exploration

Exploration is curiosity-based research. You start down a path that may lead who-knows-where, but that's OK. You have a commendable curiosity to learn more. Good starting points here will be targeted library research so you don't "reinvent the wheel," discussions with those who share your interests, and your own initial observations.

"I wonder why the residents of two dorms have such different lifestyles" or "Students don't watch broadcast television nearly as much as they used to" may be the beginning of your research career in organizational culture or media use, respectively.

Exploratory research typically results in descriptions of what you are interested in. The description may be quantitative or qualitative. For example, based on observations and surveys of a student group, we might summarize them statistically in terms of gender, major, class year, choice of drink, topic of

conversation, or campus address. But the study could also be qualitative as we interview each person and report, in the students' own words, what it means to be a student, what it means to socialize with others, or how the ambience of a preferred coffee bar helps them socialize or get work done.

Following are two broad research questions that might arise from a researcher's initial, exploratory interest in student social behavior and media use. At this beginning phase of a research program, a researcher is more likely to be writing broad questions than specific hypotheses. Specific hypotheses will come later as the researcher gathers the data that will form the basis for a specific statement about what he or she expects to find. In this text, we follow a style of *RQ* and *H* to denote research questions and hypotheses, respectively.

RQ_1: How do the patterns of social life on campus differ from dorm to dorm?

RQ_2: What factors explain students' use of social media?

Description

Description, especially rich descriptions of people's lives, can be compelling reading. Indeed, one test of a good description of human behavior is that it *is* compelling reading. But description does tend to leave us wanting more—in particular wanting an answer to the "why" question. For example, reporting that women are more likely than men to discuss their grades or to blog regularly is informative but does leave us wondering why.

Explanation

Studies focused on **explanation** attempt to answer the "why" question. For example, your observations might indicate that women are more likely than men to socialize over coffee after class. Your interviews with them might lead you to the discoveries that more women than men live off campus and that socializing after class is the easiest way to get group projects organized. Thus what was observed to be a primarily female social behavior is explained in terms of housing status and face-to-face as a preferred way of getting work organized.

Following are a research question and a hypothesis that a researcher might use to focus her energies on an explanation of student social behavior. In both cases, the wording has become more specific than that of the questions asked above under "Exploration." Exploratory questions are of necessity rather general, but with explanatory research, the researcher may be in a position to propose possible explanations, as in the research question below, before the research begins.

RQ_1: Are patterns of student social life on campus related primarily to the residence status of the student?

H_1: Female students differ from male students in the language used to explain their use of social media.

Prediction

Generally, our explanations have greater credibility if they are capable of **prediction**. There is an intellectual satisfaction in obtaining research results that predict human behavior and confirm a theory. There is also an understandable demand from almost every sector of society for research that allows prediction of human behavior. Political communication consultants want to know what appeals will predictably move swing voters toward a particular candidate. Faculty teaching online courses want to know whether reticent students will be more or less likely to engage in online discussion. And so on.

The conclusion we arrived at about female students drinking coffee is reasoned and verifiable based on observation, but our theory would be even more impressive if it could predict this behavior. In principle, this is easily done. We could devise an experiment in which we give the same group project to equal numbers of on- and off-campus students. If our theory is correct, we should see more off-campus students in the coffee bar, discussing how to get the project done. Note, though, that this design is weak because it does not rule out other explanations. For example, we cannot rule out the possibility that the students we see meeting have bad Internet access, and it is this rather than housing status per se that explains their need to meet in person. We discuss how to strengthen such experimental designs in Chapter 10.

Sample hypotheses we might write if our research goal is prediction are

H_1: Patterns of interaction within student work groups are predicted primarily by the residence status of the students in the group.

H_2: Swing voters will vote for the political candidate who most emphasizes local issues.

H_3: Students who rate themselves as introverted will be more active in online discussions than in in-class discussions.

Notice that each of the above hypotheses could also be written as a research question. They have been formulated as hypotheses because an attempt at prediction is an attempt to relate two or more variables, which need to be specified in advance of the research.

Control

Another goal of research may be **control**. In the physical world, control means researching with a view to being able to predict and manipulate physical processes such as digital recording, combustion, or space flights. In the case of human communication, advertisers, for example, want to be able to control audience responses to advertising, broadcasting, or direct mail. Their interest is in knowing how best to motivate viewers to watch a particular program, purchase a product, or open a piece of direct mail. Industry journals such as *Advertising Age*, *Broadcasting & Cable*, and *Adweek* contain such advice on how to "control" audiences, frequently in the form of "if–then" ideas. "If you make your direct mail piece an unusual shape, then it will attract more readers" is the generic nature of this advice.

The research questions and hypotheses written with control as a primary research interest will generally be as specific as those written under the umbrella of prediction. For example:

H_1: Direct mail recipients are more likely to open mail pieces that resemble official government mail.

H_2: Students are more likely to attend early morning classes if a tuition discount is offered for those classes.

The problem with basing expensive direct mail programs or educational policy on such research is that hypotheses often may specify only one influence on human behavior (the appearance of direct mail and the cost of academic credits in the above two cases). Obviously, human behavior is a function of many influences, as your own voting behavior, social behavior, course scheduling, and responses to direct mail will tell you. The reason we use sophisticated research designs is, essentially, to help eliminate the influences that are not important in explaining a specific behavior.

Interpretation

Interpretive studies are best understood as attempts to place yourself "in the other person's shoes." In other words, the researcher attempts to understand human communication from the point of view of the people doing it. For example, what does meeting with student colleagues to get coffee really mean for those doing it? Is this an opportunity to set up dates for the weekend, to engage in intimate conversation with significant others, to clarify a difficult concept in the communication theory, to get work organized, or some combination of these? Our interest as researchers is not to impose our own interpretation but to capture the interpretations of those involved in a way that our readers will get an accurate understanding. Almost by definition, this will mean reporting the results of your research in the language of your research participants.

In the case of a student group working on a class project, the research interest thus becomes "What does the group mean by 'meeting for coffee'?" Obviously, a campus coffee bar provides a common meeting place and the coffee provides a social lubricant, but tea, fruit juice, and soda will also be on the drinks list, so "meeting for coffee" is to be understood not literally as a thirst-quenching experience, but most likely as a metaphor for something else. What is that something else?

Careful listening of the type discussed in Chapter 11 will tell us.

In the interpretive frame of mind (see, for example, Fish, 1990), the researcher's questions become more focused on language in use and its meaning and might include such research questions as these:

RQ_1: What metaphors and analogies are most commonly used by students to describe and explain classroom assignments?

RQ_2: What stories told by students about assignments have most credibility with other students?

RQ_3: How do students and instructors differ in their explanations of what assignments mean in the curriculum?

Under the interpretive umbrella, we could write specific hypotheses but are more likely to write open-ended research questions because we need to be open to whatever our research participants may want to tell us rather than seeking a simple confirmation or disconfirmation of a hypothesis generated by the researcher.

Criticism

The basic quest of critical theorists is to understand and explain the way in which communication is used to exercise and maintain power in groups, organizations, and societies. To this end, critical researchers might look, for example, at the way in which organizational structures and processes prevent or facilitate the progress of certain groups within the organization. For example, in the case of our campus coffee bar, do coffee-drinking rituals perpetuate and reinforce class or gender distinctions? Can males join a female discussion group? Are there informal rules that say first-year students cannot mix with senior students? Does an individual's language define him or her as a member of an in-group or an out-group?

The basic starting point of critical research is the assumption of power structures in society or organizations that are reinforced and perpetuated by behavior and language. This basic assumption allows the critical researcher to start with general exploratory questions or to propose specific hypotheses about communication behavior and language. For example:

RQ_1: What rhetorical strategies are used in employee magazines and newsletters to promote loyalty to the organization? (The assumption here is that the content of employee communications is controlled by management.)

H_1: Leaders perceived as democratic will use the term *we* more frequently than the term *I* in addressing employees.

The above starting points may mix to a greater or lesser degree. As Kaplan (1964) points out, it is possible to have explanation without prediction, and vice versa. For example, we may have a very good understanding of the dynamics of small groups but be unable to predict whether a new group will be a success or not. Or we may be able to predict the changes in language that a couple uses as they become more intimate, without necessarily understanding why this change is taking place.

Starting With the "How" Question: Methods and Epistemologies

Many researchers start with a method preference. For example, a political communication consultant may know that monitoring Twitter or Facebook postings is the best way to track rapid changes in voter preferences and to make some generalizations about them. Or a brand consultant consulting on what a new product should be named may know that focus groups offer the best chance of capturing all the (mis)understandings that a new product name is capable of generating.

As such, this "method start" is really not intellectually defensible. It is the equivalent of saying you will video-record human behavior because you know how to do video recording. For experienced researchers, however, a method start is grounded in a concept of what about human communication is important to know and how best to know it. It is the track record of the method and its "fit" to the researcher's interests that make the method start defensible.

Method decisions are rooted in **epistemology**—the question of how we know what we know. We might know as a result of **tenacity**—we've always done it or understood it that way; **intuition**—the hunch or the gut instinct; **authority**—because a credible source said so; **rationalism**—logical reasoning; or **empiricism**—observation.

Scientific methods typically combine empiricism, rationalism, and **positivism** (the idea that phenomena are governed by, and can be explained by, rules). Two strengths of this approach are openness and self-correction. Openness means that a researcher's methods and data are open to inspection by other researchers, most typically in peer-reviewed publications. Self-correction means that other researchers can replicate a study. If a second study supports the first, researchers can have increased confidence in the findings.

Starting With a Worldview: Basic Beliefs

What do we really believe about human behavior? Are people basically all alike or fundamentally different; predictable or unpredictable; predisposed to cooperation or to conflict; living in a shared, tangible world or their own internal, subjective worlds?

The argument for reality as an underlying, objective, concrete entity versus reality as no more than a product of our senses is almost as old as human thought. Generalizations or predictions about human behavior often can be made with some success, but it is equally true that many predictions fail—as political pollsters can find to their dismay. We tend to have more success with

larger numbers of people than we do with individuals. Faculty can be quite confident predicting that most students will attend class on a given day. Predicting that a specific student will attend a specific class on a specific day is a different matter altogether.

As evidence supports any and all such views, ultimately we are obliged to decide which basic beliefs will inform our research, and to live with them, based on our own best judgment. From a research point of view, basic assumptions about human behavior coalesce into broad **worldviews**.

Worldview I is that human behavior is predictable, objectively measurable, and generalizable. Worldview I researchers aim to make generalizations about human communication that will hold true across space and time. This emphasis on measurement and generalization is called a **nomothetic** approach.

Advertising and audience research subscribe to Worldview I. Researchers seek to find rules that will predict the success of interpersonal relationships, direct-marketing or broadcast content, or cat videos on social media, or the ability of group members to work together or how to increase sales or hold a broadcast audience. Television infomercials, for example, are presumably based on research indicating that using a particular type of spokesperson plus showing the product plus repeated exposure of the 1-800 phone number will maximize the number of consumer call-ins. In principle, such a generalization would apply to most products and most television audiences.

Worldview II, by contrast, sees human behavior as individualistic, unpredictable, and subjective. This view assumes that knowledge is socially constructed out of interaction between people and is subjective. Research based on these assumptions attempts to describe and assess the subjectivity and individuality of human communication, rather than aiming to discover universal laws. This emphasis on individual understanding is called an **idiographic** approach.

Worldview I privileges the researcher's perspectives; Worldview II privileges participants' perspectives. For example, the student discussions recorded in Chapter 1 are what we might call "naturally generated" or "participant generated." An external observer or researcher has had no influence on this content. However, as soon as a researcher decides to impose a method such as a survey on the group members, the research data are researcher generated and may have little or no resemblance to the participant-generated data.

Thus, researchers who are interested in how consumers respond subjectively to media content will spend time listening to individuals, with a view to capturing this subjectivity. Their goal might be, for example, to understand why some television viewers develop a close relationship to soap opera characters or a Second Life avatar and how they describe those relationships. Researchers make no assumption that their findings will be generalizable and typically reject counting or measuring in favor of reporting what their interviewees said. They may take an interest in the overall organizational culture of a campus but may become even more interested in how residence life cultures vary from dorm to dorm within a campus. Their overall goal is understanding rather than generalization or prediction.

There is no inherent reason that one aspect of human communication should be privileged over others for research anymore than one specific research method should be privileged. Rather, the focus and the method of research are the outcome of the researchers' interests and the environments in which they are doing research. The research method you select should logically follow from the basic assumptions you have made about human behavior. For example, a Worldview I researcher who believes that people's thinking can be measured and that careful sampling will allow her to generalize results from a small sample to a large number of people may ask "What type of survey can I run?" A Worldview II researcher interested in hearing people's subjective experiences in their own words is more likely to ask "What focus groups or interviews will I need?" The first researcher will use quantitative methods by virtue of her worldview; the second will prefer qualitative measures.

An ethnographic study aimed at uncovering the hidden metaphors of organizational life implies that experimental design and scaled survey questions would not be appropriate. There

must be a logical match among theory, method, and data. The researcher in this instance therefore will prefer in-depth interviews and perhaps focus group–type discussions in order to be able to report organizational imagery and metaphor in organization members' own words.

The first question for researchers, then, is not whether to prefer qualitative over quantitative methods. Rather, it is "What are my basic assumptions about human behavior?" It is the answer to this question that will drive the decisions about the nature of the research data to be gathered and therefore the research methods to be employed.

These foundational beliefs and arguments about human behavior are issues ultimately of **ontology**, which addresses the nature of what we study.

Ontological questions deal with the nature of existence and what language actually refers to. In communication studies, ontology wrestles with assumptions about the nature of human communication and what we "really" observe when we observe it.

For example, have you ever seen someone's attitude? You might answer "Yes, many times." But what have you really seen? What you have really seen is someone behaving in a particular way, being verbally aggressive perhaps. Or perhaps all you saw was check marks on an attitude rating scale, from which you infer an attitude. Where is the attitude itself? Is there, in fact, such as thing as an attitude?

Ontological questions for communication scholars include "To what extent do we make real choices?" For example, is your decision to attend class voluntary or not? Is human experience primarily individual or societal—what would you know of the world and of yourself if you had no interaction with other people? Is communication contextual or universal—does a smile always mean the same thing, or does the meaning depend on who is smiling and under what conditions?

Starting From the Work of Others

Starting a research project without regard to the work of others is risky business. You run the risk of doing research that has already been done and therefore making no new contribution to knowledge. You will also miss out on knowing about especially relevant research methods, advances in research, and findings that might help you. Most importantly, perhaps, you will miss out on knowing about "good research"—the research that most scholars agree is well designed, is professionally executed, and makes a significant contribution to knowledge.

The easiest way to join the community of scholars who share your interests is to use your academic libraries regularly. Academic journals (**serials**) record in the form of articles and letters ongoing conversations among researchers. They are admittedly conversations punctuated by lengthy periods of silence as we wait for the next issue of a journal to come out, but browsing communication journals regularly will keep you up to speed with current research and ideas in your interest area.

Chapter 4 discusses this essential starting point in more detail.

Firming Up Questions

Getting started often requires that you identify key **constructs** and **operationalize** them. Constructs are ideas or concepts. Operationalizing them means to define them in such a way that they can be measured. For example, let's suppose that you are interested in the relationship between playing video games and academic performance. You observe individuals who are heavily involved in such games. You conclude inductively that such people keep weird hours and some have peculiar personal habits, but that could be true for any group of people, gamers or not.