2 GETTING STARTED: FROM INSPIRATION TO IMPLEMENTATION

Now let's go back to that campus café and revisit the conversations from the beginning of Chapter 1 to see how they might relate to communication, and specifically to this comm research class.

"Wow, this semester has really started fast. I haven't even gotten the books and already I have reading assignments."

"Did you see that in our comm research course we're supposed to think about topics we could design projects around? I was hoping we could just read about it."

"Hey, it could be fun to see how the textbook stuff applies to a real world topic."

"But I don't know where to begin."

"Well, our textbook says to start with something that interests us, how hard could that be?"

"What interests me most is how we get some decent pizza around here."

"Of course . . . pizza again! Can't you focus on something besides pizza?"

"Why wouldn't pizza work as a starting point?"

"Why limit yourself to pizza? Why not aim to get better food generally?"

"Maybe, but no one is going to just take your word for what is 'better' food. Besides, I don't want to leave the decision to dining services; we want the food we want not the food they think we want."

"We already have that, and they're wrong!"

"I think we should look at foods beyond pizza—like more healthy foods."

"Or ethnic foods like Caribbean, or African, or Asian."

"Or baked goods that aren't stale."

"Or foods that meet dietary or religious requirements."

"Or decent coffee! That alone might get faculty and staff support."

"Whoa, too much! None of this is going to fly unless you can find out what the campus really wants."

"See? Maybe getting better pizza could relate to research after all."

"But think about all those empty pizza boxes. The planet is getting buried in stuff like that. There's a bigger picture here than whether you prefer veggie or pepperoni."

"So you keep reminding us! I'm just one person; my view of the subject won't make a difference."

"So take a different view. We need to think of the future and act now!"

"Some of my friends have been telling me about recycling projects on their campuses. One of them is involved in a big national campaign with goals and rankings and awards—just like sports."

"Wow, if we could win one of the awards!"

"Let's not get ahead of ourselves; we don't even know if students would participate."

"Or if you're the only one who can get enthused about what to do with your used coffee cups and old batteries."

"I'd rather you view it as saving the planet."

"Either way, it sounds like a comm research project that might have real results."

"I know these are pet projects for all of you, but my concern is getting those credits I need to graduate. If I don't work two jobs, I can't afford to go here and if I do, I don't have time to study."

"You're not the only one. I live at home and my commute takes more time than my classes."

"What you both need are more online classes. You could get the credits from the comfort of your living room."

"That's not everything it's cracked up to be. I took two online classes during the internship and it felt like the pandemic all over again. Why would anyone volunteer for one?"

"Well, I worked two jobs this summer and thanks to online classes I got six more credits. Sounds perfect for commuters."

"And others who would enroll if we had more online options."

"But we don't actually know. Maybe this is another topic for a comm research project."

"By the way, how are you progressing with your effort to be a basketball guru before the tournament starts?"

"Not bad but the more I delve into why team X beat team Y, the more I realize that a winning record isn't enough. There are a lot of other things to consider."

"Oh, you mean like defense as well as offense?"

"Or which position is most important?"

"What about good old luck?"

"All of the above; think of it as researching the full picture before I start."

and finally:

"Hey, did you see that student services has a grant for improvements to student life and they want to know what students want."

"I for one will be more than happy to put my two cents in. What do we have to do?"

"They want written proposals with some kind of proof there is support for whatever idea you put forth."

"Hmm . . . maybe comm research projects might have a real purpose. We could use the class to see if there is support for our ideas. Or at least learn how to find out."

"There! It looks like we've found some topics that actually interest us. My roommate says that's the first step and it's one of the hardest parts."

"And maybe, just maybe, we can have an impact on the environment."

"Or improve campus dining."

"Back to pizza, of course."

"And even if that doesn't fly, we'll learn something about comm research."

"Which is the point, after all."

CHAPTER OVERVIEW

Getting started may be the most difficult issue of all for the beginning researcher. As we explored in Chapter 1, there are many possible starting points. Think how many questions could be generated from even the most casual overheard conversation. Of course, this is also good news.

Potential research topics are all around us, for example. What websites are seen as the most credible sources of advice on new apps—and why? Do student behaviors in class influence instructor behavior? Do blockbuster movies shape public opinion or follow it? What predicts whether a social media post will go viral? How do student–faculty interactions change when classes move from the classroom to online?

Research questions are all around us, and identifying questions about topics that interest you is a good start.

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.

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 decisions that you cannot escape about the nature of human communication and of research. For example, a basic assumption that we are all individuals makes it difficult to argue that your research findings can be generalized to individuals not in your study.

There are two fundamentally different ways of approaching research. Just as you can dine out knowing in advance precisely what you want to eat or being open to whatever the chef's special might be, so too you can focus your research with specific research questions and hypotheses, or you can let the world come to you and be open to what you might find.

Then there's deciding on the purpose of your research. Most scholars are ultimately motivated by a desire to understand human communication, but the specific "whys" of research can be as varied as human motivations. Every research study starts with a purpose, be it as wide as general curiosity-driven observations, or as narrow as testing a specific theoretical concept or attempting to get an A in a research course. Peer pressure, "first-to-publish" pressure, ego, or financial incentives may all motivate researchers.

Last but not least is the question of a research topic itself. This chapter shows how a simple model can help generate specific research topics and methods. You might also use the basic "who," "what," "when," "where," "why," and "how" questions to get started.

By moving between basic assumptions about human communication and your interest areas, your degree of focus, and purpose of research you should arrive at a sound research proposal with a defensible match among theory, method, and the data you plan to collect.

LEARNING OBJECTIVES

After reading this chapter, you should be able to:

- Identify the relationships between theory and observations.
- Understand the basic beginning points for research.
- Explain the concept of operationalizing constructs
- Explain the basic reasons for doing research.
- Understand why you should base your research on the work of other researchers.
- Identify some decisions that are unavoidable in communication research.

THE RELATIONSHIP BETWEEN THEORY AND OBSERVATIONS

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. Induction moves from specific to general. As an observer—online or on campus—you might note communication behaviors such as the following:

- "Major clustering"—students are more likely to socialize with others in their major than outside it.
- "Class distinction"—upper-class students are more likely than first- or second-year students to socialize with each other.
- "The Monday buzz"—The level of communication, which you define roughly as a combination of the number of students involved in a discussion together with the frequency of contributions to the discussion seems highest on Monday mornings.

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

- students have a greater comfort level talking with others with shared interests.
- students in the same major have already formed separate social groups.

For your class-distinction observation, you might theorize that

- upper-class students have more classes in common and are therefore more likely to be in contact with each other because of their academic schedules.
- upper-class students are more likely to have off-campus placements and therefore have to be more active in networking with their peers.

To explain your "Monday buzz" observation, you theorize that

- this activity is largely social and explained by students discussing their weekend social, cultural, or other activities.
- campus food services post food specials for the week on Monday mornings and students are discussing the new options.

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; it moves from the general to the specific. For example, you might have some reason to

theorize that seniors are more likely than freshmen to be concerned about 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 seniors and freshmen 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 seniors' conversations than freshmen's, your theory would be supported—except, first, you will want to be confident that your statement is true for all seniors, not just the group you observed. Second, you will want to know that the pattern you observed is true at all times, not just for the discussions you observed, perhaps as final examinations were approaching. This is where appropriate sampling (Chapter 6) can help us.

In a sense, deduction is 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 might induce 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 such as this is a Monday-ized holiday on which children do not have school.

STARTING WITH A MODEL OR THEORY

A classic telecommunications-based model of human communication posits source, message, channel, and receiver as basic components, with an important add-on—effects.

A major area of research on the first—"source"—component of the model is source credibility. For example, why do some news consumers find alt-right websites more credible than, say, The Huffington Post or The Huffington Post more credible than Al Jazeera or vice versa?

The "message" or content component raises questions about communication content. For example, how best to present complex scientific information to a lay public, or how nations in conflict differ in their official presentations of that conflict. With respect to content, market researchers would want to know if their marketing communications work or don't—and why? A critical theorist would want to know whose interests are advanced by the message.

The "channel" component raises questions about the impact of the channel or medium. Does the channel itself such as radio, email, social media, web conferencing, X posts or newspaper, have an effect on how the content is understood? For example, what happens to recipients' understanding of a complex issue when message content is reduced to 280-character X posts? Which social media sites are the most user friendly or navigable?

The "receiver" component raises questions about the demographic, cultural, and psychological characteristics of message recipients, and how these characteristics influence their comprehension of messages or receptiveness to persuasive messages.

The "effects" question basically asks what happened as a result of exposure to content? Often, this is analyzed in terms of the knowledge, attitude or behavior of message recipients. As a result of communication, what do the recipients know, what do they believe and how do they behave?

You will likely have already decided that none of these components can be studied in isolation because communication is a process in which almost by definition receiver and sender interact and swap roles. In the case of advertising, consumers influence advertising content and channel selection just as advertisers influence consumers—or hope to. But researchers will typically find one component of this model more important or theoretically compelling and will focus on that in their investigations.

By way of example, let's consider how the basic model might be used as a basis for advertising research.

Source: What Can Content Creators Tell Us?

Our understanding of any content would, of course, be enhanced if we could talk with its originators—in this case writers, producers, directors and designers—as appropriate. One focus of interest might be finding out how and why they made decisions about content and production.

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 organizational decision making would want to interview members of the creative team individually so that each member feels free to talk. They might also want to interview the team as a group and probably would want to get permission to record the creative meetings as they take place. Such research could give us insight on how communication facilitates or discourages creativity and decision making or the process by which professional communicators build an image of the consumers they are trying to reach.

Message: What Can the Content Tell Us?

There are many approaches to studying media content, including rhetoric, content analysis, and critical theory. These approaches share an interest in media content but take different approaches for different reasons.

Rhetoricians are essentially interested in the **appeals** or tactics used to persuade an audience to adopt the behavior. Advertising may use fear, sex, authorities, statistics or financial gain appeals, to name just a few. Rhetoricians using theory developed by Aristotle (384–322 BCE) might search for appeals based on *logos* (logic), *ethos* (character) or *pathos* (emotion).

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 media content using Burke's questions.

Rhetorical approaches to media 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, content analysts might set up categories of content based on their interests in

representations of occupations in advertising. They count the number of appearances in the ads that interest them of, say, blue-collar and white-collar workers and compare them. They could also compare their results to a known distribution of these categories. They might then be able to conclude what product or service advertising overrepresents or underrepresents each occupational group relative to 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 implicit, between message source and recipient rather than on just one component of the communication process. With that as a basis, the critical researcher asks "Whose interests are served by the 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.

Channel: How Do Media Characteristics Influence Communication?

Even though we are in an era of media convergence where, for example, a newspaper may have audio and video on its website, it is still apparent that different media have different attributes. For example, radio is not a visual medium but advertisers may prefer radio as the best way of reaching drive-time audiences. As you have no doubt discovered, face-to-face classroom learning differs from online learning and both differ from hybrid "brick and click" learning, which is a combination of both modes.

Researchers interested in the media of communication may be interested in topics such as website usability—for example, how easy is it to register for next semester's classes or do your taxes online, how complex issues such as vaccination become simplified when reduced to the brevity of X posts, or what production techniques will most attract and retain the attention of children watching instructional television.

Receiver: What Can Message Recipients Tell Us?

Here we are interested in what message recipients have to tell us. Establishing that message content influenced 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 content influential—the celebrity spokesperson, animation effects, or message length or complexity, for example.

However, audiences may have totally different perceptions of what is important about an ad; viewers may decide that the catchy soundtrack far more than content 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. Surveys present a series of specific, predetermined questions to a predetermined group of respondents. Focus groups bring together maybe 6 to 12 people to discuss their reactions to an advertisement, issue, or product. The essential focus group strategy is careful 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.

Effects: What Effects Did the Message Have?

This is a question that, essentially, focuses on what individuals knew, did or how they felt as a result of exposure to a message. For example, 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 an advertisement. The question is not that readily answered.

One way to assess the effectiveness of an ad is to look for relationships between how much advertising time or space an ad campaign received and the supposed effects of the ad—for example, increases in sales figures or safe driving practices. Both of these could be measured and any relationship between the two assessed using some of the statistical methods discussed in Chapter 7. We would hope to discover that as the amount of advertising increased, sales went up or traffic accidents went down. But we would also need to be sure that any observed changes were related to the ad and not to any other causes such as 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 ad in question and *only* this ad had an effect.

The above questions might be asked of almost any media content—for instance, the social media your academic department uses to inform its student community of relevant news such as new course offerings, faculty changes, and scholarship opportunities.

We might, again, ask the "Did it work?" question. For example, can we observe that these messages triggered additional numbers of students to register for new course offerings or apply for scholarships? 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 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."

Analogous questions can also be asked of interpersonal, group, or organizational communication.

With interpersonal communication, we might be interested in tracking how communication between two people changes in content and frequency as they move from acquaintances to friends to romantic partners. The "Did it work?" question might be reframed in terms of trying to observe what vocabulary or behaviors appear 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 texting to relate the content to key events in the relationship.

STARTING WITH "5W+H" QUESTIONS

The classic "who, what, when, where and why" questions can also help us get started in research.

The "What" Question

The most obvious "what" questions are "What shall I research?" or "What's going on here?"

Communication in the form of song lyrics, interpersonal behaviors, group dynamics, social media, news coverage, and virtual realities is all around us. So a good starting point is to observe the communication you are interested in.

"Communication" is a large umbrella under which many research interests find a home. Your career interests and academic electives likely already have you heading toward a general interest area.

Often, your interest may be triggered by a news item, a casual observation, or an occupational interest. Perhaps, a casual question about whether men and women view dating differently may have triggered the scholarly investigation into what people look at in multimodal online dating profiles (van der Zanden et al., 2022).

An interest in politics and polling no doubt triggered a question about how political campaigns use social media to understand and represent public opinion (McGregor, 2020).

And what triggered research into country music and hillbilly feminism? Take a look at Haynes (2018).

Reading relevant scholarly articles is a "must." See Chapter 4 for a discussion of one of your most important starting points—your academic library.

While popular news and entertainment media and events plus your own observations and experiences might trigger a research interest, your academic resources will provide the best examples of theoretically sound research using research methods appropriate to the task and reviewed by other researchers. As Chapter 4 explains, the scholarly articles in academic databases will suggest ideas about topics and appropriate research methods, point you to other relevant articles, and help you decide whether your research would help test an existing theory or be pioneering new research.

The "Who," "Where," and "When" Questions

"Who?" pinpoints a person or a group of people as a starting point. It may trigger your interest in the rhetoric of a political or religious leader, sports celebrity or an advocacy group. If you elect to research one person the "who" is self-apparent, but with large groups of people there is usually a sampling decision, for both practical and theoretical reasons. For example, about 20 million students attend U.S. colleges and universities (National Center for Educational Statistics, n.d.)—an impossible number to survey.

"Where?" suggests a geographic starting point such as how U.S. news media coverage of U.S. presidential elections differs from the coverage in, say, France or China. It may suggest a more specific location such as employee–management communication in one specific factory. Under the "where" umbrella, we find rhetoricians' interest in **rhetoric of place**—studies that examine how public places such as museums, memorials, parks and sports stadiums can shape public memory and shared understandings of history and events. "Where" may also suggest a broad disciplinary starting point, such as critical theory rather than applied communication.

"When?" suggests a point-in-time start. For example, you are interested in discovering how or if newspaper portrayals of women's suffrage differ before and after World War I or how the Vietnam War was portrayed in movies produced during that period. The "when" question means that you see time as a critical concept in your research. "Time" may be long term as in examining the behavior of adolescents exposed to particular media content as children; or short term as analyzing how communication within a family changes over the course of a day.

The "How" Question

"How" may be a research question in its own right as in "How does a student collaborative writing project get coordinated?" From a getting-started point of view, a "How" question is more likely to be a method question—"How do I do my research?"

Experienced researchers may start with a method preference. For example, a political communication consultant may know that monitoring X/Twitter or Meta/Facebook postings is the best way to track rapid changes in voter preferences and to make some generalizations about them. Or a brand consultant researching 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, a "How?" or method start is really not intellectually defensible. It is the equivalent of saying you will record online behaviors because you know how to record online behaviors. For experienced researchers, however, a method start is grounded in a defensible argument of what aspects of human communication are 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 FOCUS

Focus is a broader issue than deciding on a specific research method. It is one of being open to whatever the world of human communication might have to tell us versus approaching that world with preformulated questions.

You can opt to begin your study with no prior assumptions—to the extent that this is possible. For example, organization culture researchers Evered and Reis (1981) described their process of finding out about a new organization as

> We were "probing in the dark" into the hidden organizational realities around us, in many directions simultaneously. . . . We did not form and test explicit hypotheses, we did not do a literature search, we had no elaborate instruments, and we did not use sample statistics or draw inferences at the ".05 level of significance." In comparison to the idealized scientific method, the process we used to make sense of our organization was a messy, iterative groping through which we gradually, though quite rapidly, built up a picture of the organizational system of which we were a part. (p. 387)

This is an approach that has almost no initial focus but builds a picture of human communication, impression by impression, until the researchers can confidently make statements about the topic that interests them.

Alternatively, you can begin with specific research questions and hypotheses. As the following section shows these are formal, structured ways of getting a specific research focus.

Research Questions: Less Certainty; More Room to Move

One way to focus more precisely on a topic is to pose research questions, as shown below.

(In this text, we use *RQ* and *H* to denote research questions and hypotheses, respectively.)

Open-ended research questions basically ask whether there is a relationship between variables. For example:

RQ_1: Is there a relationship between involvement in video gaming and academic performance?

Closed-ended research questions focus on the direction of a hypothesized relationship. For example:

RQ_2: Does academic performance decline as involvement in video gaming increases?

Starting with an open-ended research question, such as RQ_1 above, is appropriate for an exploratory study you would conduct when you don't have a lot of evidence as to what might be going on. With additional evidence, you can question the direction of the relationship between variables as in RQ_2 above.

With still further evidence or theoretical support, you may be able to predict a relationship and to write that prediction in the form of a hypothesis.

Hypotheses: Statements of Prediction

Hypotheses are statements about the relationship that we expect to find between variables.

Two-tailed hypotheses state that there is a relationship between variables but do not specify the direction of the relationship. For example:

H_1: There is a relationship between level of involvement in video gaming and academic performance.

One-tailed hypotheses require extra confidence because you commit to predicting the direction of the relationship between the variables. For example:

H_2: As time spent in video gaming increases, academic performance decreases.

Null hypotheses, usually symbolized as H_0, specify that there is no relationship between variables. For example:

H_0: There is no relationship between level of involvement in video gaming and academic performance.

The null hypothesis proposes there is no relationship between variables other than what we would find by chance. The probability of getting the results we did can be calculated, as we shall see in Chapter 7. Based on that probability, we can then decide which of these hypotheses to accept, and which to reject.

Preferring a hypothesis over a research question gives you the advantage of focusing your study because you have said with some level of confidence "I know what's going on." Your study then becomes an exercise in determining whether your hypothesis is supported.

A research question, on the other hand, is more speculative. You sense that something is going on, but you may need to be more open-minded in your research design in order to capture relationships you had not anticipated.

Hypotheses and research questions have the advantage of focusing your research and, importantly, telling you what you do not need to focus on, but may do so at the cost of blinding you to relevant and important phenomena outside your immediate focus. This essentially is the argument for the Evered and Reis (1981) "probing in the dark" approach outlined previously.

OPERATIONALIZING CONSTRUCTS

If you are concerned with measurement and precision in your observations, getting started requires that you identify and operationalize key **constructs**. **Constructs** are ideas or concepts. To **operationalize** them means defining 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 unconventional hours, but that could be true for any group of people, gamers or not.

Deductively, you reason through to two contrary conclusions. First, time spent on gaming must detract from time spent on studying. Therefore, gaming must be detrimental to academic performance. On the other hand, gaming appears to need mental agility, imagination, and the ability to think and make decisions quickly. Deductively, it seems that gaming ought to have a positive effect on academic performance.

You have identified two important ideas or constructs—involvement in gaming and academic performance. You think that there is a relationship between them; you're just not sure what that relationship is.

To operationalize these constructs means to define them in such a way that other researchers could replicate your study. Now comes a question of how we operationalize these constructs—that is, define what they mean in practice.

Table 2.1 shows some of the ways the two constructs could be operationalized or made measurable. We have taken ideas (mental constructions or "constructs") and translated them into observable operations that can be measured.

TABLE 2.1 ■ Operationalizing Constructs

CONSTRUCT	
INVOLVEMENT IN GAMING	**ACADEMIC PERFORMANCE**
OPERATIONALIZING THE CONSTRUCTS	
Time spent on gaming	Class rank
Money spent on gaming	Number of academic awards
Number of memberships in gaming clubs	Current grade point average
Number of online "personas" or avatars	Cumulative grade point average
Percentage of time spent with other gamers	Class participation as rated by faculty
Number of gaming software titles owned	Class attendance as recorded by faculty
Percentage of gaming terms used in conversation	Number of memberships in academic honor societies

At the heart of many studies is a decision as to what measures will be used. Intuitively, some of the measures shown in Table 2.1 appear to do a better job than others. Grade point average, for example, is a widely, though not totally, accepted measure of academic performance. On the other hand, membership in a gaming club or amount of money spent on games may have little or

no relationship to whether an individual is an active game player. Of all the options, a best guess might be that time spent on gaming is the best measure of involvement as long as we can measure it accurately. (Note, however, the assumption that objective measurement of time spent is going to be the most relevant or useful measure. It could well turn out that gamers' subjective ratings of time spent ["not much time," "most of my time," etc.] have greater explanatory power than an objective measure such as "hours per week.")

These constructs or concepts have now been operationalized into **variables**. Variables are capable of being measured or taking on a value. In other words, they can vary. The constructs "gaming" or "academic performance" cannot be measured; the variables "time spent on gaming" and "grade point average" can.

Hypotheses and more specifically the process of operationalization have the advantage of focusing your research, but you may not be able to do this initially, or indeed want to.

For some researchers, the specificity of hypothesis testing is its own weakness. Researchers out of the **ethnomethodology** and phenomenology traditions especially would argue that complex human behavior cannot be simplified into measurable variables. They may further argue that finding a relationship between two variables provides no explanation of why the relationship exists and oversimplifies complex relationships by focusing on a few variables rather than on the multitude of influences on human behavior. Fundamentally, such researchers are interested in rich description that provides understanding rather than a simple "Yes, there is a relationship" answer to their questions. We will examine such approaches to communication more fully in Chapter 12.

"My method beats your method" arguments take place repeatedly and heatedly in research circles, but your reading of this chapter should have you understanding that one method never "beats" another method except in the context of the research. The real question is "Is your research method theoretically and practically appropriate for the research you want to do?" Or, to put it another way, "Can you make defensible connections among your theory, your method(s), and the data you plan to collect?"

As you will see from Table 2.2, there should be a match between assumptions about human communication and the most appropriate approaches to studying it. This does not preclude mixing methods. For example, health communication researchers may spend a great deal of time with adolescents who drive and text in order to understand qualitatively what texting means in the adolescents' own terms. This subjective information may then be used to develop **scaled questions** for quantitative analysis in a broader survey of young people's risky driving behavior.

TABLE 2.2 ■ Assumptions About Human Communication and Their Research Implications

Assumptions About Human Communication	Research Implications
People are generally similar, predictable, and motivated by events, personality type, and other people. We can make generalizations about their behavior.	Surveys, experiments, and other quantitative methods allow for precision in reporting and generalizations to populations from smaller samples.
Each person is unique, unpredictable, and self-motivated. We cannot make generalizations about their behavior.	Ethnography, interviews, and observations allow for insight, understanding, and the authenticity of the research participants' own language.

STARTING WITH A PURPOSE

In addition to the personal motivations and foundational assumptions that shape research, research is further shaped by the purpose a researcher has in mind—exploration, description, explanation, prediction, control, interpretation, or 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 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 "Why don't students phone each other anymore?" may be the beginning of your research career in organizational cultures or communication and technology, 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 quantitatively in terms of major, class year, topics of conversation, political affiliation 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 setting helps them get work done.

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 seniors are more likely than freshmen to discuss their grades is informative but does leave us wondering why.

Explanation

Studies focused on **explanation** attempt to answer the "why" question. For example, your observed increase in students' online discussions on Monday mornings puzzles you. You have theorized that this is most likely social—students discussing what they did over the weekend. It is also possible though that the heightened level of discussion is a response to the campus food service posting menus for the week on Monday morning.

You decide to investigate further by interviewing students and by looking at the content of these discussions. You discover that most students you interview have either a class project due on Monday or a weekly quiz. Thus, what you initially thought might be lifestyle/campus discussions turn out to be primarily class-related discussions as students prep for quizzes or make last minute edits to papers due later in the day.

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. For example, political communication consultants want to know what appeals will predictably move swing voters toward a particular candidate.

The conclusion we arrived at about students' Monday discussions being essentially academic would be even more impressive if we could predict this result. In principle, this is easily done. We could run a low-level experiment in which we sample two different groups of students—one group known to have assignments due on Monday morning, and one not. If our theory is correct, we should see the assignment group showing a higher level of discussion next Monday.

Note that this experimental design is quite weak because it does not rule out other explanations. For example, we cannot totally rule out the possibility that the most active group is discussing campus food or Saturday's game. We would obviously need to strengthen our study by looking at the content of discussions. Ideally, we also need a more rigorous experimental design such as discussed in Chapter 10.

Note that at this point our research now includes observation, interviews, content analysis, and experimental design.

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, it means having the ability to influence, lead, or shape opinions and behaviors.

For example, campus administrators want to maximize the effectiveness of their communications to students about moving to all online classes. Advertisers 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 publish advice—often research based—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.

Interpretation

Interpretive studies can be 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. 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 research results in the language of the research participants.

In the interpretive frame of mind, the researcher's questions focus on language in use and its meaning.

For example, in the case of a student group meeting for coffee what do its members understand by "meeting for coffee"? Obviously, a coffee bar provides a common meeting place and 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? To set up dates for the weekend, to engage in intimate conversation with significant others, to clarify a difficult assignment from a professor, or simply the ability to relax in a convenient, friendly setting?

Careful listening of the type discussed in Chapter 12 will tell us.

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, many administrators use "team" as a metaphor to describe their organization. Critical researchers will be interested in how such metaphors work to bind individuals to being good team members and "following the rules."

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.

The above starting points may mix to a greater or lesser degree. 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 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 the research that most scholars agree is well designed, professionally executed and that makes a significant contribution to knowledge.

The easiest way to join the community of scholars who share your interests is to access academic journals, their publishers' websites and other relevant websites regularly. Academic journals (**serials**) record in the form of articles and letters ongoing conversations among researchers. 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.

THE 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.

Researchers may, for example, share a common focus on understanding public service advertising, or politically extreme websites but differ markedly in what exactly they choose to research and the reasons for doing their research.

In addition to their theoretical priorities, all researchers face the reality of limited time, limited resources, and an inability to be in more than one place at a time (web conferencing excepted). Some decisions are almost inevitable for researchers, based on their theoretical predispositions and resources. These include the following:

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, researchers typically focus on one of the many possible interest areas you will find at the ICA, SCA, AEJMC and other websites referenced in Chapter 1.

Researcher—Dispassionate or Involved?

To what extent should researchers get involved with their human "subjects"? The scientific tradition values objectivity and dispassionate observation without regard to the human implications. 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. The action tradition is to be closely involved with people in order to better their lives. One school sees research as a quest for knowledge, and the other sees research as an engaged contribution to bettering society. In both cases, the researcher's behavior has ethical implications, as we shall see in Chapter 3.

Approach—Objective or Subjective?

Can research be objective? Should it be? **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 even 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 are defined subjectively by the people they are researching, not to mention by researchers themselves. Such concepts vary from culture to culture, and from individual to individual. For example, simple interpersonal behaviors 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.

Priority—Your Questions or Their Answers?

All researchers have a basic question that frames their research, for example, "Do different generations view social media differently?" To get an answer to such a question, researchers have two basic options. The first is to ask people of different ages a series of specific questions that 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 use or 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.

Sample—Large or Small?

How many people do you need to talk to confidently 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 extreme weather, COVID, international conflicts, 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."

Data—Quantitative or Qualitative?

Are humans storytelling animals, counting animals, or both?

Numbers are important; they are the basis on which democracies and committees make decisions. Count the vote; majority wins. Numbers and counting are an important component of scientific methods, and the number of research findings in agreement can suggest the current "truth" of the findings.

Researchers with interests in human subjectivity respond that the complexities and subtleties of interpersonal attraction or use of social media cannot be captured in mere numbers. The "truth" can best be understood by listening to what research participants and researchers themselves tell us. By extension, there may well be more than one "truth" or understanding of an issue or situation.

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. In an approach called **triangulation** 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 face-to-face family life interacts with social media usage, a researcher might survey several families on their use of and attitudes toward social media, interview a few family members in depth, live with a family to observe member behaviors, and conduct a content analysis of social media to determine how content shapes the family's interactions and vice versa.

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.

Reporting—Subjective or Objective?

Just as there are different ways of doing research, there are different ways of presenting research. Researchers interested in interpreting the subjective world of their informants may use the primarily qualitative languages of ethnomethodology and phenomenology and report what their

informants have to tell them in their informants' own words. By contrast, social science researchers are more likely to use statistics to report, interpret and make generalizations from 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 analyzed for changes in response to visual stimuli." Critics will point out that such a dispassionate style is 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 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 presentations have an argumentative component does not necessarily mean they are adversarial. The journals that publish scholarly research and in particular the web-based sites capture 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 on scholarly communication sites (some listed at the end of this chapter) as a considered, continuing worldwide conversation among researchers on how best to understand human communication.

Chapter 1 and Chapter 2 have taken us from broad conceptual thinking about communication research to getting focused on a specific research topic or topics. Whatever the topic or method, we are inescapably researching people. In Chapter 3, we will move on to research ethics and the implications of researching our fellow human beings.

EXAMPLES AND INSIGHTS: FACING A META/FACEBOOK FUROR WITH FURTHER FINDINGS

Pasek et al. (2009) discuss a study which was interpreted and widely publicized by news media as suggesting that Meta/Facebook use might be related to lower academic achievement in college and graduate school. Not publicized, apparently, were the facts that the results were based on correlational data in a draft manuscript that had not been published, or even considered for publication.

Pasek and colleagues replicated this study with three different samples of U.S. students, using more sophisticated statistical analyses and controlling for other variables such as socioeconomic status that might also explain academic performance. Their findings directly contradicted the original study; they found no negative relationship between Meta/Facebook usage and grades.

Our lessons from this study are:

- Scholarly knowledge progresses by correction.
- Be critical when reading news media reports of research.

- Correlation is not causality, as we will discuss in Chapters 8 and 9.
- *First Monday*, which you can find online, is an example of an online, open-access peer-reviewed journal focused on internet studies.

ETHICS PANEL: DO SOME RESEARCH METHODS HAVE MORE ETHICAL IMPLICATIONS THAN OTHERS?

The subjectivity in human communication requires that you explore the subjective life of individuals as they report it. Typically, this means interviewing people and "probing" as to why they see things the way they do. To facilitate this process, you assure your interviewees that their confidences will be respected and that nothing you report will identify them.

As you explore the complexities of organizational culture in a major corporation, one informant, based on your assurances of confidentiality, "lets loose." You hear all about his unsatisfactory working conditions, personal life, and prospects in general. The veiled threats that emerge from the informant's interview suggest that he may become a danger to his colleagues, if not himself. What do you do?

As you walk away with a record of statements that you have chosen to interpret as veiled threats, you contemplate the fact that had you asked simple yes/no or multiple-choice–type questions, the troubling information you now have may never have surfaced.

Could it be that some research methods raise more ethical problems than others?

What is your obligation to those who might be harmed in some way if the threats you detect were to translate into action?

What is your obligation to the individual you interviewed?

What is your obligation to the research process in general? For example, should you stay away from such research because of its potential complications or be prepared to break your assurances of confidentiality when you detect potential danger to your participants or others?

You can jump ahead to Chapter 3 for some help with these questions.

CHAPTER SUMMARY

- The processes of induction, deduction, and abduction link observations to theory.
- Ways of understanding communication include tenacity, intuition, authority, and empiricism.
- The general purposes of research are description, explanation, prediction, control, interpretation, and criticism.
- Research may begin with specific hypotheses, general research questions, or no specific questions at all.
- Credible research has a logical link between the methods chosen and the assumptions that underpin them.

KEY TERMS

abduction
action research
appeals
authority
closed-ended research questions
constructs

control
deduction
description
empiricism
epistemology
ethnomethodology
explanation
exploration
hypothesis
induction
intuition
null hypotheses
one-tailed hypotheses
open-ended research questions
operationalize
positivism
prediction
Q-Methodology
rationalism
research questions
rhetoric of place
scaled questions
scientific methods
serials
social scientists
tenacity
triangulation
two-tailed hypotheses
variables

APPLICATION EXERCISES

Exercise 1: Fine-Tuning Your Worldview

In Chapter 1, Exercise 1 you located yourself relative to two fundamentally different assumptions about human behavior—Worldview I and Worldview II. You are now in a position to fine tune your perspectives on human communication and how it might be studied. Revisit Creswell's four worldviews and Craig's seven communication research traditions outlined in Chapter 1. Based on your consideration of worldviews, research traditions and this chapter's discussion of research starting points decide which one of Craig's seven research traditions you most align with. This will help you narrow down the communication research literature to something aligned with your own view of human communication and how best to research it.

HINT: Review Craig (1999) and Craig & Xiong (2022). You might also use the tradition and worldview names as search terms to see examples of research based on each.

Exercise 2: Fine-Tuning Your Interests

In practice, a specific research focus is often an intersection of topic interest and the appropriate method(s) for that topic. From readings and exercises in Chapter 1 and this chapter you should have been able to identify some broad topic interests. Now use the checklist below to discover the approaches to research that most appeal to you.

What Is My Basic Reason for Research?

- Get results that can be used in practice.
- Get results that test ideas and theories.
- Get results that show how communication shapes ideas and advances special interests.

What Research Context Most Interests Me?

- Social and mass media, for example, thousands of Instagram users
- Organizations, for example, your school
- Groups, for example, a class or sports team

- Interpersonal, for example, two friends
- One individual, selected for a specific reason

What Relationship to Research Participants Most Appeals to Me?

- Observe from a distance.
- Engage closely with people.

What Level of Research Most Interests Me?

- Study messages and behavior at face value.
- Analyze the agendas and interests behind messages.

What Type of Data Collection Most Interests Me?

- Count and categorize the communication behaviors of people in social settings or online.
- Observe and describe behaviors in detail.
- Interview and record in their own words what individuals have to say.
- Survey individuals using predetermined questions.
- Analyze media content by counting the occurrences of specific words or ideas.
- Understand media content by identifying important ideas and how they are used.

Your Chapter 1 and Chapter 2 readings plus this exercise should have you preferring some research topics, methods, and assumptions over others. Make a note of your preferences and of any specific scholarly research that has interested you to date. These will all be a helpful basis for the bibliographic research to be discussed in Chapter 4.

RECOMMENDED READING

Chan, C., & Grill, C. (2022). The highs in communication research: Research topics with high supply, high popularity, and high prestige in high-impact journals. *Communication Research, 49*(5), 599–626. https://doi.org/10.1177/0093650220944790

Sundar, S. S., & Lee, E.-J. (2022). Rethinking communication in the era of artificial intelligence. *Human Communication Research, 48*(3), 379–385. https://doi.org/10.1093/hcr/hqac014

RECOMMENDED WEB RESOURCES

Communication Research (SAGE Publications): http://crx.sagepub.com

You can sign up for free content alerts from this journal at this site.

Communication Institute for Online Scholarship: www.cios.org

Offers access to a variety of online resources including The Idea Monkey and the Visual Communication Concept Explorer. Use these tools to explore the relationships among key concepts in the communication literature. An individual or institutional membership is required to access most services.

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

See Chapter 1.

Revisit the websites for the Association for Education is Journalism and Mass Communication, The International Communication Association, The National Communication Association shown in Chapter 1.