

SECOND EDITION

METHODOLOGICAL THINKING

BASIC PRINCIPLES OF SOCIAL RESEARCH DESIGN



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Exploring the World of Social Research Design

You know from the title that this book is about social research. I will begin by asking some questions to encourage you to start thinking about what social research *is*. This is the first step to thinking about how research can be designed in order to produce information about the social world that is of the highest possible quality.

Most people reading this book will be students, and if you are a student, you probably live in a world where you take endless tests that measure *what* you know. My question is different: *How* do you know what you know? Of course, we learn about the world as we go through our daily lives, and over time, we develop a considerable amount of knowledge from our own experiences. We also learn about the world by talking with people we know—family, friends, neighbors, coworkers—and we get further information from people we do not know—bloggers, anonymous web page authors, journalists, talk show hosts. Some people seek information by attending public lectures and meetings of religious or social organizations. Students, of course, are in regular contact with textbooks that explicitly teach about the world as well as with teachers whose job it is to teach about the world. I could go on about sources of information, but I probably have made my point: The answer to my question—How do you know what you know?—is that we know through our own experience and through what known and unknown other people tell us. Our environment is saturated with information. Indeed, I believe that a

characteristic of our current world is that it contains too much information from too many sources.

Although we gain considerable knowledge about the world without explicitly searching it out, my second question is about information that you do actively seek: *Where* do you go when you need information? The answer to this question depends on the type of question being asked. Questions in daily life (Should I apply for this job? Why is my best friend angry at me?) are best answered by relying on prior experiences, common sense, or by asking trusted friends or respected elders. There are self-help books, websites, and support groups for questions about personal troubles, and all sorts of questions can be googled or answered in websites such as Wikipedia or Ask.com.

Our technological, mediated world has made it easy to find answers to just about any question at any time. This leads to my next question: How do you know what information can be *trusted*? Our complex era makes assessing the probable truth of information very difficult. Here is a short summary of what I am sure you already know: Anyone can become a blogger, conveying his or her opinions to everyone on everything from how to be a good parent to how to manage the national economy; any person, group, or organization can set up a website to promote any personal, social, political, religious, or economic agenda. The current reality is that some journals somewhat automatically accept *any* manuscript and print it in an e-journal with a name that sounds very “scientific.” Indeed, people who wish to be authors do not even need to go through publishing companies because technology allows self-publishing without any review by anyone. In these and countless other ways, information can come to us unfiltered, without any review, and without even a pretense that it has any relationship to something that can be recognized as truth.

This is not good. In daily life, each of us has countless needs for trustworthy information. Parents need information to make decisions about sending their children to public or charter schools; patients need information to make decisions about what medical treatments offer the best hope; consumers need to know how to evaluate the quality of products; citizens need information to decide how to vote for politicians and policies.

Traditional means of assessing the likely truth value of information—trusting particular categories of people such as elders and church leaders, relying on practical experience, or plain old-fashioned common sense—still can be used as yardsticks to judge the likely credibility of some of what we see and hear. Yet as our world grows larger and more complex, these traditional ways of evaluating knowledge are insufficient. How can

we rely on our personal experiences to make decisions about which public policies to support when the policies are targeted to people we do not know, to people whose lives are far different from our own? Does the wisdom of elders extend to knowledge about the characteristics, benefits, and limitations of the most current medical interventions or computer technology? We live in an increasingly complex, global, and mass-mediated social order, and many of the questions generated in such places cannot be answered by relying on tradition, the wisdom of elders, personal experience, or common sense.

This takes me to my specific topic of *social research*, which is a way of generating information about the social world. I begin with the obvious: What is social research?

DEFINING SOCIAL RESEARCH ●

While social research is only one of many ways to search for answers to questions, it is a very important way. Think about how often you have been asked to accept something simply because it is “based on research.” Many people seem to believe that any information based on research must be true. From validating statements about what kinds of food and exercise lead to good health, to supporting advice about how to have a happy marriage, to offering evidence for opinions about how and what schools should teach, the term *research* seems to have magical powers in making something true.

There must be something about social research that encourages trust. What is it? Here is a basic definition of social research, the parts of which combine to give the idea of social research its persuasive power:

Social research is the systematic and empirical exploration of human social life.

Exploration: The central term in this definition of social research is *exploration*. Social research is about exploring the mysteries of social life. Social life contains countless mysteries: Why do some people become saints and others become sadists? What are the causes and consequences of poverty? What are relationships between gender and crime or between race and voting behavior? How and why do people fall in love? Social research of any type is detective work to explore the mysteries of social life.

Systematic: As with all detective work, the process of research is not a haphazard search for clues. Research is *systematic*. Just as good detectives proceed cautiously in finding and developing clues, good researchers work in ways that can be described as structured, orderly, methodical, coherent, consistent, and logical.

Empirical: The exploration in social research is systematic and it also is *empirical*, meaning that it is evidence based. Evidence in research is called *data*, and data are defined as what we can sense about the social world—what we can see, hear, smell, touch, and taste. Most data in social research are from sight and sound: what people say (in talk or in writing), what people do, or records of what people have said or done in the past. Although I will discuss the many types of data and the multiple techniques that can generate data, all research shares the characteristic that it is based on evidence. Stated simply, it is *not* research when people (no matter how smart or powerful they are) simply assert that something is true. In research, something is true because we can sense it—we can see it, hear it, touch it, smell it, or feel it.

Social Life: The final term in the definition of social research describes the types of questions that interest social researchers. These are the mysteries of human social life associated with several fields of study, including sociology, anthropology, history, criminology, political science, psychology, gender studies, social work, public health, and communications. Although there are major differences in the types of questions associated with each of these academic areas, what they all share is a primary interest in people. So while geologists study the physical causes of volcanic eruptions, social researchers are more interested in how these eruptions influence people. While biologists study the physical and chemical workings of human reproductive systems, social researchers are interested in questions about the social nature, social organization, and social consequences of reproduction.

Social research is a particular way of obtaining information about the social world. It requires actually looking at and listening to what is in this world rather than merely speculating about what might be in it. Research requires careful, rather than haphazard, detective work. Information from social research can be highly valued precisely because these characteristics offer the potential for generating information that is of the highest possible quality.

Social Research and Other Ways of Knowing

Knowledge from social research is generated by methods that differ from those producing knowledge in philosophy, religion, or art;

knowledge from research is evaluated by different criteria than is knowledge generated through these other means. The definition of social research as the systematic, empirical exploration of human social life, therefore, distinguishes it from other ways of knowing.

Social research is a particular way of generating knowledge about the social world.

Saying that knowledge from social research is different from knowledge generated through other ways of knowing is *not* saying that other forms of knowledge are somehow inferior to that generated through social research. Different simply means different. Research can tell us what is; it cannot tell us what should be. Research is evaluated through particular systems of logic, rather than through aesthetics, emotion, or belief. There are many questions in life; social research is the best way to answer some of them.

That said, for two practical reasons, it is important for you to understand how social research works even if you personally evaluate other ways of knowing as more important. First, understanding how social research works will give you a detective's set of skills that can serve you well in your daily life as you do your own research to make decisions, such as what types of work to pursue, what kinds of household appliances to purchase, or which political candidate will best represent you. Second, we are constantly bombarded with information about what we should do and think and we are told this information is based on "research." If you understand how research works, you will be able to make your own decisions about the extent to which you should follow that advice. Simply stated, knowledge is the power to make your own evaluations.

THE STUDY OF SOCIAL RESEARCH DESIGN ●

There are three steps in the process of social research: design, implementation, and data analysis. The topic of this book is research design, which is the plan for how research will be done. Design is equivalent to an architect's blueprint; it is the model for the research that will be built. Design is about the specific questions that will be examined; it is about how those questions will be examined. While design is the basis of research, it tends to be invisible to members of the public who tend to equate research with the specific techniques used to generate data. This is unfortunate because reducing research to images of experiments,

surveys, interviews, and so on ignores the actual complex process leading to generating data. This behind-the-scenes design process involves many tasks such as understanding how the particular study fits with what already is known; forming specific questions that can be capable of being examined empirically; and devising techniques to measure objects, events, and people in ways that will answer the questions. In brief, although public visions of research are often confined to images of data generation, the process of design taking place before this is critical and the likely ability of a research project to generate high-quality data depends upon *all* design elements.

The quality of data from social research depends on the quality of the research design.

While research design can be a fascinating process, incredibly interesting detective work, it is not uncommon for social science students to approach their research methods courses with dread. The term *research* often conjures images of “scientists” who use very big words and who talk in ways that make them seem much smarter than the rest of us; research can be associated with unappealing images of experiments with frogs or rats; the research endeavor can seem cold and lifeless. For many reasons, some understandable and some simply unfortunate, students can find the actual experience of their research methods courses parallels their negative expectations.

Students’ negative experiences often are at least partially created by the tendency of introductory methods courses to emphasize learning the specialized vocabularies and technical details of research methods. To be absolutely clear, such course contents are important because a strong foundation of factual information is necessary for understanding *any* topic. However, a regrettable consequence of stressing the rule-bound nature of research is that it encourages students to focus on memorizing vocabulary words and technical details. This leaves too little time to think about research methods as ways of knowing about the social world.

This is where I hope to intervene. My interests are in helping you—the person reading this book—to understand the *reasons* for the rules governing social research, which means learning about the kinds of thinking that makes the rules logical. This leads me to a particular focus in this book which simultaneously leads to its limitations.

First, although social research involves the work of design, implementation, and data analysis, I want to do more than a glib overview, so I will cover only topics most obviously connected with research

design. This is the work of forming questions, showing why these questions are important to examine, finding and evaluating the existing literature that tells us what already is known about the topic, determining the best way to measure the major study concepts, developing techniques of data generation, and designing samples. I will *not* talk about how social research design is implemented—how interviews or observations are done, how experiments are conducted, how documents are coded and so forth. Nor will I discuss how data are analyzed.

Second, I will focus on what is often ignored in regular methods textbooks or what can get lost in the blizzard of technical details characterizing many such texts. While these textbooks typically focus on how to *do* social research, my interest is in how to *think* about research. I will call this *methodological thinking*, which is a way of thinking underlying the rules and procedures associated with research methods. While this means you will need to go elsewhere to learn technical details and practicalities, my experience has taught me that people who understand research as a way of thinking find it relatively easy to then learn the specific rules and technicalities because these follow logically from the basic principles.

So that is my plan: I will leave it to others to tell you about research implementation and data analysis, and I will focus on encouraging you to *think* about research design in particular ways.

This takes me to the next topic: evaluating research. Although relatively few people want or need to *design* social research, the skills to *evaluate* research are becoming increasingly important as our information-saturated environment simultaneously produces both more information and fewer oversights on information credibility. For this reason, I think this book is as much about how to evaluate research as it is about how to design it.

EVALUATING SOCIAL RESEARCH ●

Social research is an excellent method to generate information about the world, yet not all research is high quality. One of my primary goals for this book is to help you gain some insight into the characteristics of high-quality research. The general lesson is quite simple.

Rules and standards define the expectations for high-quality social research.

While these chapters will show you multiple visions of the specific characteristics of quality research, all researchers share fundamental understandings that research must be a *systematic* generation of data. The results of social research deserve to be taken seriously when, and only when, research design, implementation, and data analysis all have been done systematically. Furthermore, all research is evaluated by communities and these communities develop particular understandings of the criteria for quality. Take an obvious example: Class projects as well as thesis and dissertation research are evaluated by faculty members who judge the extent to which research done by students meets standards as defined within their particular departments that are located within particular colleges and universities. Likewise, reports of research submitted for publication to journals are evaluated by reviewers and editors and, if published, will be evaluated by the people who read the journal. Although there are multiple disagreements about the *precise* content of rules and standards, there is complete agreement that social research is not a haphazard endeavor. Yes, the social world can be chaotic but the study of this world must be orderly. A large part of professional socialization is learning the specific standards associated with particular communities of scholars and practitioners.

Research design, data generation, and data analysis must be systematic.

● METHODOLOGICAL THINKING

I want to help you develop what I am calling methodological thinking. The remainder of this book will fill in the details and offer many examples of the following basic principles of the kind of thinking I want to promote. Consider these a series of guidelines about how to approach both designing research as well as evaluating it. What I would like you to notice is how these themes are basic and straightforward. As with social research itself, there is nothing mystical or complicated about these points *as long as you think*.

I will start with the overriding principle: *critical thinking*.

Learn How to Think Critically

During the past several years, there have been growing complaints—by educators, parents, and employers—that schools and colleges are not

developing students' critical-thinking skills. This is not surprising: Grade schools and high schools have moved increasingly to evaluating performance by multiple-choice tests measuring knowledge of "facts." All but the most elite universities also have moved away from traditional goals of producing informed and engaged citizens toward helping students acquire technical skills for particular jobs. What these trends have done is diminish time to build critical thinking, the more abstract skills that cannot be assessed via multiple-choice tests. The best way to define critical thinking is that it is *thinking about thinking*.

Methodological thinking is critical thinking. It is about analyzing and evaluating not only *what* you think but also *why* you think it.

Critical thinking means analyzing and evaluating; it means not accepting information simply because you agree with it and not rejecting information simply because you disagree with it. Critical thinkers do not merely accept or reject something they read or hear; they ask questions.

Although thinking—questioning, assessing, and appraising—is something humans can do, it is not something we do automatically. Scientists studying cognition have found that human brains are not capable of consciously processing all the information coming from all of our senses while simultaneously directing the workings of each and every part of our physical bodies. Brains partially compensate for this physical inability by having "nonthinking" (called *automatic cognition*) as a default mode for incoming information. Stated in another way, while our brains will automatically do a great many things (such as pull our hands from fire), evaluating the possible truth value of abstract information is a higher order brain function that is *not* automatic. Thinking takes effort and thinking takes time. We can do it, but we need to tell ourselves to do it because the default mode is not thinking.

Methodological thinking is critical thinking applied to social research. Methodological thinking requires practicing how to think, and this means learning how to move from the automatic mode of not thinking to the more difficult and time-consuming mode called *deliberative processing*.

Train yourself to think about what you are reading or hearing.

Four particular characteristics of critical thinking are central to designing and evaluating social research.

Treat All Knowledge as Tentative

Critical thinking in general, methodological thinking about social research in particular, is characterized by a *critical/skeptical* attitude. This is an outlook, a mindset that searches for the *negative* (called *disconfirming evidence*) and for alternative explanations (called *rival hypotheses*). What this requires is treating all knowledge as tentative. Knowledge is true only until shown otherwise.

**Methodological thinking requires a critical/skeptical attitude:
Treat all knowledge as tentative.**

Treating all knowledge as tentative and subject to change differs from usual public understandings of knowledge from research. In daily life, people often talk about how one or another study *proves* something, but treating knowledge as tentative means that nothing can be proved once and for all. Research can confirm or disconfirm existing knowledge; new data can add to the existing evidence, or it can challenge existing knowledge, but nothing can be proved. It is necessary to think of research as not being able to prove anything because there would be very negative consequences if things *could* be proved: If something is proved, there is no need to ever question it, and that is not the way to increase knowledge.

Everything in science, even something whose facticity is as assured as gravity, retains a formal status as a *theory*—something that potentially could be disproved. Most certainly, no one expects that gravity will be disproved. Of course not. Treating *all* knowledge as tentative is part of the scientific attitude, a general approach to knowledge that leads to questioning, to thinking, to not simply accepting what is presented as a “truth.”

Think Both as a Scientist and an Artist

Although critical thinking is organized around logic, that does not mean it is opposed to creativity. True, research is a science because it is systematic; it requires the competent use of a variety of rules. Yet all aspects of research design, implementation, and data analysis can reflect creativity. Sociologists talk about the importance of the sociological imagination, I think about the importance of the *methodological*

imagination. How can we study topics such as racism when people are unlikely to honestly answer direct questions? How can we safely do research on dangerous topics such as terrorism or drug dealing? How can we know anything about people in “hidden” populations, such as undocumented immigrants or corporate executives who use Adderall to increase their concentration? While designing research to explore such questions requires thinking logically, it also requires thinking creatively.

Methodological thinking is creative as well as logical.

Methodological thinking is logical and rule bound, and people who are skilled at this kind of thinking have a good chance of becoming competent researchers. Yet excellent researchers are more than technically competent—they are excellent, at least in part, because they are creative. As with good detectives, good researchers are curious; they will figure out creative ways to circumvent the multiple roadblocks that social life throws up around attempts to understand its mysteries.

Understand the Tools of Research

Researchers are like carpenters because both accomplish their work by using tools. It follows that being a researcher or a carpenter requires understanding what various tools do and how to use them. This has many implications. First and most clearly, good carpenters understand how to use more than one or two tools. Carpenters who say, “I like saws, so I won’t learn how to use hammers,” will not be able to build much. The more tools a carpenter understands, the better. So it is in methods: Individual researchers might have personal preferences for some data generation techniques, some kinds of questions, or some forms of data, but it is very good to understand as many kinds of questions, data, and data generation techniques as possible.

Also, and just as clearly, just as it would make no sense for a carpenter to say that pliers are better than screwdrivers or that electricity is better than plumbing, it makes *no* sense for researchers to say that some forms of data or data generation techniques are better than others. As with carpenters’ tools, methodological tools are specialized: Surveys are the best way to collect data to answer some kinds of questions, but only some kinds of questions; numbers can tell us some things about the social world and words can tell us other things. Sometimes we need to measure what people think and at other times we need to measure what people do, and so on. Methodological thinking

means understanding as many research tools as possible. It requires understanding that no one type of question, data, or tool used in research is better or worse than any other.

Methodological thinking requires understanding how to use many tools in the methodological tool box.

Recognize Biases and Their Likely Consequences

We each view the world through our own places in it. Our personal characteristics (such as gender, race/ethnicity, age, religion, nationality, etc.) lead us to have different kinds of experiences, different experiences lead to different ways of understanding the world and these lead to biases that can hinder methodological thinking. Research consistently shows a strong tendency for people to overlook flaws and somewhat automatically agree with statements that seem to confirm what we already believe about the world and to search for flaws and quickly reject findings we do not personally agree with. A characteristic of critical thinking is thinking about biases and being honest about their likely consequences.

I will return to the topic of biases in the next chapter because naturalist and constructionist philosophies underlying social research can lead to the so-called quantitative versus qualitative debate which is a source of heated disagreements that become biases for and against particular kinds of work. I also will return to this issue of biases in Chapter 8 when I offer summary statements about social research design and evaluation. The major lesson is clear:

Methodological thinking requires being honest about biases and their likely consequences in research design and evaluation.

In this book, I hope to encourage you to develop the skills of methodological thinking. These skills will be the foundation upon which you can design high-quality research. Perhaps more important, I anticipate that most people reading this book will not become social researchers, so the skills to design research might not seem important. Yet all of us are consumers of research in our daily lives. Methodological thinking is a skill that will serve you well in evaluating the quality of research underlying the information that bombards us.

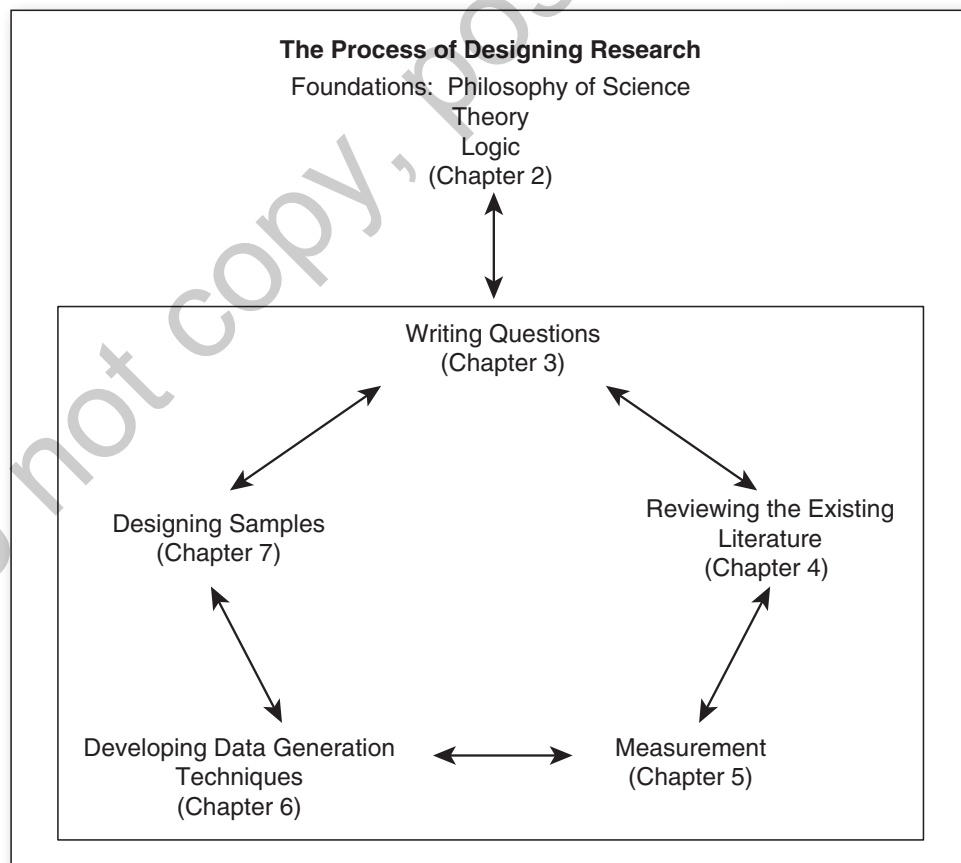
STUDYING RESEARCH DESIGN AS METHODOLOGICAL THINKING ●

I will again describe my goals just to remind you what I am (and am not) trying to do. I want to help you understand methodological thinking as it pertains to the design of social research. My focus on how to *think* about research leads me to ignore, or only briefly discuss, the details of how to *do* research. Clearly and most certainly and without a doubt, the details for how to actually do research are important. Good research design *must* reflect adequate attention to all relevant technical details. Because there are many textbooks that are excellent in explaining the *whats* and *hows* of social research, I will attend only to the *why* questions—the logic underlying the basic principles of research design.

The seven chapters that follow parallel the arrangement of chapters in many standard methods texts. Chapter 2, *Foundations*, considers a variety of topics that influence all research design, including the components of all social research (data, concepts, and theories), relationships between data and concepts/theories (logic), and underlying philosophies of science (naturalism, constructionism). I am calling these the *foundations of research* because they are very much like the foundations of houses—absolutely critical yet often invisible. Chapter 3, *Research Questions*, proceeds to the topic of writing and evaluating questions leading to research projects; Chapter 4, *Literature Reviews*, begins with why research projects should be situated within the existing literature which is the ongoing dialogue of what already is known. Then it continues with discussing how to go about doing this. Chapter 5, *Measurement*, examines how the events, objects, and people of interest in research are defined (conceptualized) and measured (operationalized), and how the quality of these conceptualizations and operationalizations can be evaluated. Chapter 6, *Data Generation Techniques*, is a summary of the most common ways to generate data in social research projects (experiments, surveys, interviews, focus groups, observations, document analysis); and Chapter 7, *Samples*, examines how researchers are able to generalize their findings beyond the particular people, objects, or events they actually studied. Finally, Chapter 8, *Thinking About Social Research Design*, is a summary of sorts. It begins with reminders about the importance of critical thinking, proceeds to discuss how variations in research design influence how reports are written, and then concludes with the general issues of writing and evaluating research design.

I arranged my comments into these chapters; I placed these chapters into a particular order. While this is satisfactory for learning how

to evaluate research done by others, I worry about the unintended consequences of my presentation for those of you wanting to design research yourself. I will repeat in every chapter how it is wrong to think of research design as a series of tasks that are each done once and that are done in a particular order. People who design research often find that their original research questions or plans to use particular data generation techniques must be modified based on what they learn by reading the existing literature or from the impossibility of obtaining particular samples. I will return to the following point repeatedly, because it is important: Published reports of research typically are cleaned up; they do not include truthful descriptions of the actual messiness of the research process. If you are new to research design, simply assume that information or problems arising at one stage of the design process will lead you to make changes in other elements of your design. When this happens, it will seem to be a setback. While frustrating, however, often what begins as a problem leads to changes that make research better. The actual process of designing research looks like the following diagram, with every design component influencing all others:



I like this diagram, because the double arrows (\longleftrightarrow) truthfully show that every component of research design influences all others. This is good to remember, because the goal of design is to create research that is a package of ideas with each component—question, existing knowledge, measurement, data generation techniques, and samples—logically related to all others. At the same time, if you look closely it will seem that there is no way out of the loop; it looks as if research design is an endless process! That, of course, is not true. Throughout this book, I will talk about the very minor modifications that can sometimes be made that will make elements flow together logically.

METHODS IN THEORY AND IN PRACTICE ●

I think there is similarity between learning about research methods and learning music: You can read a book about how to play a piano, and you can memorize the scale and all the rules about playing the piano, but you will not actually learn how to play until you sit down and do it. Likewise, you can read books defining the characteristics of “good music,” but to really understand the differences between good and not-so-good music, you need to listen to music. So it is with research methods. Abstract talk about methods is not enough to understand what methods look like in real research.

What I want to do is to merge abstract talk about methodology with how design appears in real research. I will do this by using real examples from published research throughout this book. Because I will return to the same examples over and over, by the end, you should have a fairly detailed understanding of how methodological thinking applies in real-life research.

It is important to note that I *highly* edited the articles contained in the appendix to make them shorter and to include only information needed to understand research design. Therefore, they are *not* the same as the articles that actually appear in journals. You can find the actual SAGE articles on a website (<https://study.sagepub.com/loseke2e>).

These articles explore a variety of mysteries about college students: How do movies marketed to teenagers portray young women and how do these portrayals influence teens’ attitudes about women? How do students’ experiences with computer technology before college reflect inequality and how do colleges perpetuate this inequality? How do threats to identity influence the eating preferences and actual eating behaviors of immigrant college students? What experiences with

stalking are reported by college students? How does brotherhood neutralize some of the negative consequences of marginalization experienced by Black male college students? Have college students changed over time in the kinds of social relationships they value? Can Facebook postings be used to estimate alcohol use among college men? What barriers to and supports for achieving college education are experienced by children growing up in foster care?

I used two criteria to choose my eight examples. First, each is about college students. I hope the diversity of topics will encourage you to see an important characteristic of social research: There are multiple and equally good questions about *any* topic. Second, I selected articles for their diversity in order to demonstrate how social research encompasses many varieties of perspectives on social life, types of data, and techniques of data collection.

While each of these articles is a very good example of social research, I do *not* offer any of them as examples of “perfect” research. On the contrary—One of my recurring themes throughout this book is that perfection is not a good standard upon which to evaluate research. The complicated nature of humans and our lives together leads to many common problems in doing research that cannot be wished away. Of course, we always should work to make research as good as possible, yet simultaneously, we need to understand that less-than-perfect research can offer important insights about humans and social life.

So, that is my plan: I hope I can help you develop the ability—and the desire—to think methodologically about designing and evaluating social research. The next chapter begins at the beginning: the foundations of research design.