

# 3

## Preparing for Research

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## SETTING THINGS UP

This chapter is about some of the things that go on *before* data are collected and analyzed. First, I'll take you through the ideal research process and compare that to how research really gets done. I'll discuss the problem of choosing problems—how do I know what to study?—and I'll give you some pointers on how to scour the literature so you can benefit from the work of others when you start a research project.

### The Ideal Research Process

Despite all the myths about how research is done, it's actually a messy process that's cleaned up in the reporting of results. Figure 3.1 shows how the research process is supposed to work in the ideal world:

1. First, a theoretical problem is formulated.
2. Next, an appropriate site and method are selected.
3. Then, data are collected and analyzed.
4. Finally, the theoretical proposition with which the research was launched is either challenged or supported.

In fact, all kinds of practical and intellectual issues get in the way of this neat scheme. In the end, research papers are written so that the chaotic aspects of research are not

emphasized, and the orderly inputs and outcomes are.

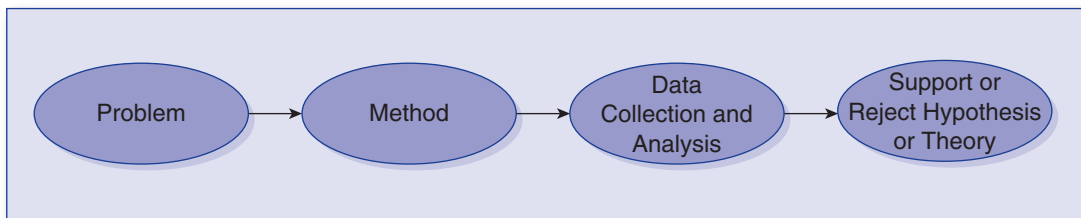
I see nothing wrong with this: It would be a monumental waste of precious space in books and journals to describe the *real* research process for every project that's reported. Besides, every seasoned researcher knows just how messy it all is, anyway. On the other hand, you shouldn't have to become a highly experienced researcher before you're let into the secret of how it's really done.

### A Realistic Approach

There are five questions to ask yourself about every research question you are thinking about pursuing. Most of these can also be asked about potential research sites and research methods. If you answer these questions honestly (at least to yourself), chances are you'll do good research every time. If you cheat on this test, even a teeny bit, chances are you'll regret it. The questions, in no particular order, are

1. Does this topic (or research site, or data collection method) really interest me?
2. Is this a problem that is amenable to scientific inquiry?
3. Are adequate resources available to investigate this topic? To study this population at this particular research site? To use this particular data collection method?

**Figure 3.1** How Research Is Supposed to Work



4. Will my research question, or the methods I want to use, lead to unresolvable ethical problems?
5. Is the topic of theoretical and/or practical interest?

## Personal Interest

The first thing to ask about any potential research question is: Am I really excited about this? Researchers do their best work when they are genuinely having fun, so don't do boring research when you can choose any topic you like.

You can't always choose any topic you like. In contract research, you sometimes have to take on a research question that a client finds interesting but that you find deadly dull. The most boring research I've ever done was on a contract where my coworkers and I combined ethnographic and survey research of rural homeowners' knowledge of fire prevention and their attitudes toward volunteer fire departments. This was in 1973. I had young children at home and the research contract paid me a summer salary. It was honest work and I delivered a good product to the agency that supported the project. But I never wrote up the results for publication.

By comparison, that same year I did some contract research on the effects of coed prisons on homosexuality among male and female inmates. I was very interested in that study and it was much easier to spend the extra time and effort polishing the contract reports for publication (Killworth and Bernard 1974).

I've seen many students doing research for term projects, M.A. theses, and even doctoral dissertations simply out of convenience and with no enthusiasm for the topic. If you are not interested in a research question, then no matter how important other people tell you it is, don't bother with it. If others are so sure that it's a dynamite topic of great theoretical significance, let *them* study it.

The same goes for research populations. If you select a topic of interest, and then try to test it on a population in which you have no interest, your research will probably suffer. Some nursing researchers enjoy working in the maternity ward, while others are drawn to pediatric oncology. The maternity ward is filled with children being born, and the oncology ward with children who are facing death. It doesn't take much to imagine that some people who love working around newborns are going to be less than enthusiastic about doing research in pediatric oncology.

It doesn't matter whether you're going to do experiments, conduct a telephone survey, or do in-depth ethnographic interviews: Enthusiasm counts for a lot in research. Federal prisons and Wall Street banking firms are both complex organizations. But they are very, very different kinds of places to spend time in, so if you are going to study a complex organization, check your gut first and make sure you're excited about where you're going. It's really hard to conduct penetrating, in-depth interviews over a period of a several weeks to a year if you aren't interested in the lives of the people you're studying.

And if you think it's tough to run personal interviews on a topic you're bored with, try making up and administering a 10-page questionnaire on a topic of no interest to you. Or try designing an experiment in which you have to run subjects for months on end and where you have no personal stake in the results. It's not just deadly dull, it's a recipe for bad research.

You don't need any justification for your interest in studying a particular group of people or a particular topic. Personal interest is . . . well, personal. So ask yourself: Will my interest be sustained there? If the answer is "no," then reconsider. Accessibility of a research site or the availability of funds for the conduct of a survey are pluses, but by themselves they're not enough to make good research happen.

## Science Versus Nonscience

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If you're really excited about a research topic, then the next question is: Is this a topic that can be studied by the methods of science? If the answer is "no," then no matter how much fun it is, and no matter how important it seems, don't even try to make a scientific study of it. Either let someone else do it, or use a different approach.

Consider this empirical question: How often do derogatory references to women occur in the Old Testament? If you can come up with a good, operational definition of "derogatory," then you can answer this question by looking through the corpus of data and counting the instances that turn up. Pretty straightforward, descriptive science.

But consider this question: Does the Old Testament offer support for unequal pay for women today? This is simply not answerable by the scientific method. It is no more answerable than the question: Is Rachmaninoff's music better than Tchaikovsky's? Or: Is it morally correct to mainstream slightly retarded children in grades K–6? Or: Is Britain's parliamentary system or the U.S.'s presidential system a better form of democracy? Or: Should the remaining hunting-and-gathering bands of the world be preserved just the way they are and kept from being spoiled by modern civilization?

Whether or not a study is a scientific one depends first on the nature of the question being asked and *then* on the methods used.

I can't stress too often or too strongly that when I talk about using the scientific method I'm *not* talking about numbers. In science, whenever a research problem can be investigated with quantitative measurement, numbers are more than just desirable, they're required. On the other hand, there are many intellectual problems for which quantitative measures are not yet available. Those problems require qualitative measurement.

First-pass descriptions of processes (preparing for surgery, putting on makeup, setting the table for Thanksgiving), or of events (weddings, football games, art shows), or of systems of

nomenclature (kinds of trucks, ways to avoid getting AIDS) require words, not numbers. Dorothy Holland and Debra Skinner (1987) asked some university women to list the kinds of guys there are. They got a list of words like "creep," "hunk," "nerd," "jerk," "sweetie pie," and so on. Then they asked some women, for each kind: "Is this someone you'd like to date?" The yes-no answers are nominal—that is, qualitative—measurement.

We'll get back to this kind of systematic collection of qualitative data in Chapter 10.

## Resources

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The next question to ask is whether adequate resources are available for you to conduct your study. There are three major kinds of resources: time, money, and people. What may be adequate for some projects may be inadequate for others. Be totally honest with yourself about this issue.

### Time

Some social research projects can be completed in just a few days, while others take years. It takes a year or more to do an ethnographic study of a culture that is very different from your own, but a lot of focused ethnography can be done much more quickly. Gwendolyn Dordick (1996) spent 3 months studying a homeless shelter for 700 men in New York City. She visited the shelter four times a week for 3 hours or more each time, and spent 4 days at the shelter from morning until lights-out at 10 p.m. This was enough time for her to understand a great deal about life in the shelter, including how a group of just 15 men had coalesced into a ruling elite and how some men had formed faux marriages (that could, but did not necessarily, involve sex) to protect themselves and their few possessions from violence and thievery.

Some experiments in social psychology can also take months or years to set up, especially

in evaluation studies. By contrast, the data-collection phase of surveys and of some types of experiments might be completed in a matter of weeks.

If you are doing research for a term project, the topic has to be something you can look at in a matter of a few months—and squeezing the research into a schedule of other classes, at that. It makes no sense to select a topic that requires two semesters' work when you have one semester in which to do the research. This effort to cram 10 gallons of water into a 5-gallon can is futile and quite common. Don't do it.

### Money

Many things come under the umbrella of money. Equipment is essentially a money issue, as is salary or subsistence for you and other persons involved in the research. Funds for assistants, supplies, and travel all have to be calculated before you can actually conduct a major research project. No matter how interesting it is to you, and no matter how important it may seem theoretically, if you haven't got the resources to use the right methods, skip it for now.

Naturally, most people do not have the money it takes to mount a major research effort. That's why there are granting agencies. Writing proposals is a special craft. It pays to learn it early. Research grants for MA research are typically between \$1,000 and \$5,000. Grants for doctoral research are typically between \$10,000 and \$40,000. If you spend 100 hours working on a grant proposal that brings you \$10,000 to do your research, that's \$100/hr for your time. If you get turned down and spend another 100 hours rewriting the proposal, that's still \$50 an hour for your time if you're successful. Pretty good pay for interesting work.

If your research requires the comparison of two panels of respondents using face-to-face interviews and you have only enough money to do telephone interviews, ask yourself if you can accomplish your research goal by using telephone interviews. If you can't, then can

you accomplish it by cutting out the comparison and running the more expensive interviews on just one group? Ask yourself whether it's worthwhile pursuing your research if it has to be scaled down to fit available resources. If the answer is "no," then find another topic.

### People

"People" includes you and others involved in the research, as well as those whom you are studying. Does the research require that you do logistic regression? If it does, then are you prepared to acquire that skill? Does the research require access to or acceptance by a particular group of people, like ambulance paramedics? Do you have access to that group?

Does the research require that you speak Haitian Creole? If so, are you willing to put in the time and effort to learn that language? If the research can be done with interpreters, are competent people available at a cost that you can handle?

Will the research require that you interview elite members of the society you are studying—like medical malpractice lawyers, plastic surgeons, Lutheran priests? Do you have access to these populations? Will you be able to gain their cooperation? Or will they tell you to get lost or, even worse, provide you with perfunctory answers to your questions. Better not do the study in the first place than wind up with useless data.

## THE ETHICS OF SOCIAL RESEARCH

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I wish I could give you a list of criteria against which you could measure the "ethicalness" of every research idea you ever come up with. Unfortunately, it's not so simple. The fact is, what is popularly ethical research today may become popularly unethical tomorrow, and vice versa. (This does *not* mean that all ethics are relative. But more on that later.)

During World War II, many social scientists worked for what would today be called the Department of Defense and they were applauded as patriots for lending their expertise to the war effort. Twenty-five years later, during the Vietnam War, social scientists who worked for the Department of Defense were excoriated. Today, social scientists are participating in U.S. military programs for studying local culture in battle zones. This, too, has produced intense debate about the proper role, if any, of social scientists in military and intelligence operations (Rohde 2007) (**Further Reading:** social science in the military and in intelligence).

### Milgram's Obedience Experiment

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It's because popular ethics change that Stanley Milgram was able to conduct his famous **experiment on obedience** in the 1960s. Milgram (1963, 1965) duped people into thinking that they were taking part in an experiment on how well human beings learn under conditions of punishment. The subjects in the experiment were "teachers." The "learners" were Milgram's accomplices. The idea was to see how obedient people would be—how much electrical shock they would administer to a "learner" when told to do so by someone in authority, like an experimenter in a lab coat.

Milgram varied the conditions in his experiments to test for gender differences, for differences in locale (the Yale University campus vs. a run-down building in downtown Bridgeport, Connecticut), and for differences the proximity of the experimenter and the victim to the subject (in the same room, in different rooms), but in all the experiments, the basics were the same. The subjects sat at a panel of 30 switches, labeled from 15 volts to 450 volts. There was a label every fourth switch (that is, every 60 volts), from "Slight Shock" (15 volts) all the way up to "Danger: Severe Shock" (375 volts) and XXX (435 volts and 450 volts). Each time the learner made a mistake on a word-recall

test, the subject was told to give the learner a bigger shock.

Milgram paid each participant \$4.50 up front (about \$35 in 2012), to make them feel obligated to go through with the experiment. He also gave them a little test shock—45 volts (the second lever on the 30-lever panel)—to make them believe that the punishment they'd be delivering to the so-called learners was for real.

In many of the experiments, the learner grunted at 75 volts. The reaction escalated as the putative voltage increased. At 150 volts, learners began pleading to be let out of the experiment. At 285 volts, the learner's response, as Milgram reported it, could "only be described as an agonizing scream" (1974:4). All those reactions by the learners were actually played back from tape so that subjects would hear exactly the same things. The experimenter, in an official-looking lab coat, kept telling the subject to administer the shocks—saying things like: "You have no choice. You must go on."

Most of those who dropped out of Milgram's experiments did so after administering 150-volt shocks. But 65% of the subjects in the original experiment (where, by the way, the learner didn't complain until the subject supposedly gave him a 300-volt shock and then pounded on the wall of the room separating him from the subject) obeyed orders and administered what they thought were shocks beyond the XXX level. Many subjects protested but were convinced by the researchers that it was all right to follow orders.

Milgram's full experiment probably wouldn't get by any committee for the protection of human subjects now, but Jerry Burger (2009) was able to replicate Milgram's original experiment up to the crucial 150-volt limit. The bottom line: 28 of Burger's 40 subjects agreed to continue after the 150-volt limit.

Were Milgram's experiments unethical? Did Milgram cause his subjects emotional harm when they thought about what they'd done? If you were among Milgram's subjects who obeyed to the end, would you be haunted by



this? The literature on this is mixed (see Murray [1980] and Herrera [2001] for contrasting views), but we do know this: Milgram's make-believe experiment was less costly and more ethical than the natural experiments carried out at My Lai, and Shatila, and Srebrenica—the Vietnamese village (in 1968), the Lebanese refugee camp (in 1982), and the Bosnian village (in 1995)—whose civilian inhabitants were wiped out by American, Lebanese, and Serbian soldiers, respectively, “under orders.”

Those experiments, too, showed what ordinary people are capable of doing—except that in those cases, real people really got killed. Until Milgram did his experiments, it had been easy to scoff at Nazi war criminals whose defense was that they were “just following orders.” In 1979, Milgram was asked on CBS's show, *Sixty Minutes*, if that sort of thing could happen again. His answer: “Having observed a thousand people in the experiment . . . if a system of death camps were set up in the United States of the sort we had seen in Nazi Germany, one would be able to find sufficient personnel for those camps in any medium-sized American town” (quoted in Blass 1999:955).

### Zimbardo's Stanford Prison Experiment

In 1971, Philip Zimbardo and his colleagues built a mock prison in the basement of the psychology building at Stanford University. They put an ad in the newspaper, asking for college-student volunteers to participate in a study of prison life. They screened 75 young men and chose 21 whom they felt were the most mature and stable—people who could take the planned 2 weeks of role playing in the “Stanford County Prison.”

These researchers had a rude shock ahead of them. “Most dramatic and distressing to us,” they wrote at the end of the experiment, “was the ease with which sadistic behavior could be elicited from individuals who were not ‘sadistic types’ and the frequency with

which acute emotional breakdowns could occur in men selected precisely for their emotional stability” (Haney et al. 1973:89).

The 21 recruits, all White men between 17 and 30, were told that if they were assigned to be prisoners, they should expect to go through a hard time for 2 weeks—no physical violence would be tolerated, but prisoners would give up privacy and other basic rights for the duration of the experiment. The participants would get \$15 per day for their participation in the study (about \$80 in 2012), and could quit at any time, but they would forfeit the money if they did so.

Once everyone was on board and fully briefed, the experimenters assigned 10 of the men randomly to be prisoners and 11 to be guards. The guards were issued uniforms, whistles, and night sticks and were told they would serve on three-man, 8-hour shifts around the clock. Then everyone went home to wait.

When the time came for the experiment to begin, the Palo Alto City Police Department sent real officers to the homes of the “prisoners.” The police handcuffed the prisoners and hustled them off to jail, sometimes in full view of neighbors. The prisoners were fingerprinted, placed in a detention cell, and then taken to the makeshift prison at Stanford University, where the guards were waiting. There, they were stripped and sprayed with what they were told was a delousing solution (it was really deodorant). They were issued smocks, with a number painted on the front and back, and no underwear. They were made to stand for mug shots in the humiliating uniforms and were given work assignments, exercise periods, and movie rights. Then they were assigned, randomly, three at a time, to 6 × 9 ft. cells. The cell doors shut.

Though no physical violence was allowed, the guards quickly became verbally abusive and learned to use every bit of the power they had. Prisoners had to ask permission to light a cigarette, read a novel, write a letter, go to the toilet—permission that some of the guards arbitrarily denied. When the prisoners were allowed to go to the toilet, they were blindfolded and handcuffed and led, publicly, from

their cells by some guards. Some guards called the prisoners “girls,” referring to the smock uniforms.

The prisoners became docile and passive. During the **debriefing**, after the experiment, some prisoners said they thought that the roles had been defined by size, with the larger men assigned the role of guard. In fact, the roles had been assigned randomly and there was no difference in the average weight of the guards and prisoners.

Some guards tried not to get into this abusive behavior pattern. But they immediately bought into the norm of never interfering with another guard whose behavior they didn’t approve. They went along to get along.

By the second day, the guards had defined eating and sleeping time as privileges, and four of the prisoners had gone into what the experimenters diagnosed as “extreme emotional depression . . . and acute anxiety,” accompanied by crying and rage (Haney et al. 1973:81). These four were released from the experiment, as was a fifth who had to be treated for a psychosomatic rash that covered parts of his body. Three times a day, the guards took the prisoners out of the cells for a count. On the first day, the counts lasted a few minutes. By the fifth day, the counts were lasting hours.

Five prisoners stuck it out. The warden of the prison held a hearing and asked each of the five if they would forfeit the money they were due if they were paroled and released early from the experiment. Three of them said they would. By the time of the so-called parole hearing, the prisoners were owed \$75 apiece—about \$400 today. When they were told that any decision to parole them would have to be discussed with the staff, each prisoner went quietly back to his cell.

They didn’t have to. They could have just quit what had become a very painful experience. “Yet, so powerful was the control which the situation had come to have over them, so much a reality had this simulated environment become . . . they returned to their cells to

await a ‘parole’ decision by their captors” (Haney et al. 1973:93).

After 6 days, then, there were still two prisoners who wanted to continue, but the experiment was stopped. The researchers decided that they couldn’t ethically continue. Besides, they had already learned enough to support Milgram’s conclusion: Otherwise good people can be induced by circumstances to do evil things.

In a way, Zimbardo’s experiment is even more frightening than Milgram’s, something Zimbardo himself recognized immediately and has continued to talk about publicly (Zimbardo 1973, 2007, 2009). There were no men in white lab coats telling the guards that they had to harass their charges into acute anxiety, depression, and psychosomatic rashes. Everyone, guards and prisoners alike, knew at the outset that they could get out by just saying they *wanted* out.

Instead, the participants picked up the roles they were assigned and played them to the hilt. The guards had the freedom to define their role any way they wanted to—and did so by becoming abusive at the first opportunity they had. The prisoners who were emotionally disturbed in the first 2 days didn’t ask to be released.

If you were assigned the role of guard in a replication of Zimbardo’s experiment, would you become abusive? Before you answer, recall the pictures of American soldiers in 2003 laughing while psychologically torturing Iraqi prisoners of war at Abu Ghraib. And think about the title of Zimbardo’s book (2007) summarizing 30 years of work: *The Lucifer Effect: Understanding How Good People Turn Evil* (**Further Reading:** Milgram’s and Zimbardo’s obedience experiments).

### What Does It All Mean?

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Just because times, and ethics, seem to change, does not mean that anything goes. Everyone agrees that scholars have ethical responsibilities, but not everyone agrees on what those responsibilities are. All the major scholarly



societies have published their own code of ethics—all variations on the same theme, but all variations nonetheless. I've listed the Internet addresses for several of these codes of ethics in Appendix E.

These documents are not perfect, but they cover a lot of ground and are based on the accumulated experience of thousands of researchers who have grappled with ethical dilemmas over the past 60 years. Look at those codes of ethics regularly during the course of any research project, both to get some of the wisdom that has gone into them and to develop your own ideas about how the documents might be improved.

Don't get trapped into nihilistic relativism. Cultural relativism (the unassailable fact that people's ideas about what is good and beautiful are shaped by their culture) is a great antidote for overdeveloped ethnocentrism. But, as Merrilee Salmon makes clear (1997), ethical relativism (that all ethical systems are equally good since they are all cultural products) is something else entirely.

Can you imagine defending the human rights violations of Nazi Germany as just another expression of the richness of culture? Would you feel comfortable defending, on the basis of cultural relativism, the so-called ethnic cleansing in the 1990s of Bosnians and Kosovar Albanians by Serbs in the former Yugoslavia? Or the slaughter of Tutsis by Hutus in Rwanda? Or of American Indians by immigrant Europeans in the nineteenth century?

There is no value-free science. Everything that interests you as a potential research focus comes fully equipped with risks to you and to the people you study. Should social scientists do social marketing for a state lottery, knowing that poor people will be squandering their meager resources on false hopes of sudden riches? Or is social marketing only for getting people to use condoms and to wash their hands before preparing food?

How about working on projects that raise worker productivity in poverty zones if that

means some workers will become redundant and lose their jobs? In each case, all you can do (and *must* do) is assess the potential human costs and the potential benefits. And when I say "potential benefits," I mean to you, personally, not just to humanity through the accumulation of knowledge.

Don't hide from the fact that you are interested in your own glory, your own career, your own advancement. It's a safe bet that your colleagues are interested in their career advancement, too. We have all heard of cases in which a scientist put his or her own career aggrandizement above the health and well-being of others. This is devastating to science, and to scientists, but it happens when otherwise good, ethical people (1) convince themselves that they are doing something noble for humanity, rather than for themselves; and (2) consequently fool themselves into thinking that *that* justifies their hurting others. (See Hudson [2004] for more on fraud in science.)

When you make these assessments of costs and benefits, be prepared to come to decisions that may not be shared by all your colleagues. Remember the problem of the relation between darkness of skin color and various measures of life success (including wealth, health, and longevity)? Would you, personally, be willing to participate in a study of this problem?

Suppose the study was likely to show that a small, but significant percentage of the variation in earning power in the United States was predictable from (*not* caused by) darkness of skin color. Some would argue that this would be useful evidence in the fight against racism and would jump at the chance to do the investigation. Others would argue that the evidence would be used by racists to do further damage in our society, so the study should simply not be done lest the information it produces fall into the wrong hands.

There is no answer to this dilemma. Above all, be honest with yourself. Ask yourself: Is this ethical? If the answer is "no," then skip it;

find another topic. Once again, there are plenty of interesting research questions that won't put you into a moral bind (**Further Reading:** ethical issues in social science).

## Research and Institutional Review Boards

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The key ethical issue in the conduct of all social research is whether those being studied are placed at risk by those doing the studying. This goes for field research—including surveys, ethnographies, and naturalistic experiments—as much as it does for laboratory studies. All universities in the United States have long had Institutional Review Boards, or IRBs. These are internal agencies whose members review and pass judgment on the ethical issues associated with all research on people, including biomedical and psychosocial.

With regard to the protection of human subjects, most social research in the United States is covered by the Code of Federal Regulations, Title 45, Part 46, from the Department of Health and Human Services. (See <http://www.nsf.gov/bfa/dias/policy/human.jsp> and <http://ohsr.od.nih.gov/info/sheet5.html>.) This set of regulations has been adopted by many agencies, including the National Science Foundation and the National Institutes of Health and is known as the Common Rule. Many American Indian tribes have their own IRBs. Social research on American Indians is often governed by those IRBs.

Here are some tips for getting your IRB application approved:

1. Learn the rules and learn them thoroughly. Read the literature—and the blogs—about the experiences that others have had in getting acceptance for projects that involved field research, for research with children or other vulnerable people, for research that was entirely inductive (like many grounded theory projects) or that had an inductive and confirmatory phase where the investigator had to

use unstructured interviewing at one stage and structured interviewing later (like many mixed-methods projects).

2. If you are doing ethnography to understand process and mechanism rather than outcomes, explain that. Participant observation is a strategic method, at the same level of generality as experiments or archival research or survey research. You wouldn't say that you will do survey research and let it go at that.

3. Get your IRB protocol in long, long before you plan to start your research. Don't make a lack of planning on your part anyone else's emergency. Some universities (but not all) will let you submit a grant proposal to an agency without having IRB approval for the work you propose. The agencies just can't release the money to your institution if your proposal is funded until you have the IRB approval. If your university allows this, you usually have at least 6 months after sending in the proposal to work with the IRB on appropriate methods. In any case, getting a proposal in for master's or doctoral-level funding 6 months before you want to do your work is not a burden. It's just part of time management.

4. If you are working overseas and using a language other than English, translate your informed consent document or oral presentation—into Swahili or Urdu or whatever language you'll be using in the field.

5. The IRB can use expedited review of minor changes in a previously approved protocol if you make the change within a year. Adding a survey to an ethnography is not a minor change, but outlining a survey as part of the research design means that you only have to submit the actual questions for review when you get beyond the inductive and into the hypothesis testing phase of your research. Some IRBs take this as appropriate for expedited review, since the protocol—ethnography, followed by a survey—has already been approved. But even if full review is required, you're less likely to run into problems since the

protocol, including methods of sampling and recruiting has already been approved.

6. Request permission to recruit and interview more people than you think you'll need in your study to cover all contingencies. What contingencies? Sample attrition is one, but you'll also find that you need to be flexible in recruiting people into in-depth interviews. This may mean changing not only the number of people you have to recruit, but the way you recruit, as well. And this means putting *all* the potential methods for recruiting into your proposal.

7. Don't settle for a short-term gain from the IRB that may cripple your research agenda later. Don't agree, for example, not to collect names if you may need them later.

8. Treat all this as part of normal training in how to do research. This will help make the relationship between researchers and those whose job it is to protect human subjects of social research from harm collaborative rather than confrontational.

### Theory—Explanation and Prediction

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All research is specific. Whether you conduct ethnographic or questionnaire research, do content analysis or run an experiment, the first thing you do is *describe a process* or *investigate a relation* among some variables in a population. Description is essential, but to get from description to theory is a big leap. It involves asking: "What causes the phenomenon to exist in the first place?" and "What does this phenomenon cause?" Theory, then, is about explaining and predicting things.

It may seem odd to talk about theory in a textbook on research methods, but you can't design research until you choose a research question, and research questions depend crucially on theory. A good way to understand what theory is about is to pick a phenomenon

that begs to be explained and to look at competing explanations for it. See which explanation you like best. Do that for a few phenomena and you'll quickly discover which paradigm you identify with. That will make it easier to pick research problems and to develop hypotheses that you can go off and test.

Here is an example of something that begs to be explained: Everywhere in the world, there is a very small chance that children will be killed or maimed by their parents. However, the chance that a child is killed by a parent is much higher if a child has one or more nonbiological parents than if the child has two biological parents (Daly and Wilson 1988, 1998; Lightcap et al. 1982). This "Cinderella effect," as it's known, means that those evil-step-parent folk tales are based on more than fantasy. Or are they? A lot depends on the paradigm you start with.

### Alternative Paradigms for Building Theories

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One explanation is that it's biological—in the genes, as it were. Male gorillas are known to kill off the offspring of new females they bring into their harem. Humans, the reasoning goes, have a bit of that instinct in them, too. They fight the impulse, and culture usually trumps biology, but over millions of cases, biology is bound to come out sometimes. This is an explanation based on assumptions from **evolutionary theory**. (There are several varieties of this, which you'll see under the label of **sociobiology** or **evolutionary psychology** or **evolutionary anthropology**.)

Another explanation is that it's cultural. Yes, it's more common for children to be killed or hurt by nonbiological than by biological parents, but this kind of mayhem is more common in some cultures than in others. Also, the deaths of some children at the hand of their biological parents may go unnoticed and unreported simply because we don't expect that, while the deaths of children at the hands of nonbiological parents get more notice simply because we're on the lookout for it (Crume

et al. 2002). And, although killing and maiming of children is rare everywhere, in some cultures mothers are more likely than fathers to be the culprits, even when the woman's partner is the stepfather (Alexandre et al. 2010). Women and men learn different gender roles in different societies, and so, the theory goes, we have to look at cultural differences for a true explanation of the phenomenon. This is called an **idealist** (or **ideational**) **theory** because it is based on what people think—on their ideas.

Yet another explanation is that when adult men and women bring children to a second marriage, they know that their assets are going to be diluted by the claims the spouse's children have on those assets—immediate claims and claims of inheritance. This leads some of those people to harm their spouse's children from the former marriage. In a few cases, this causes death. This is a **materialist theory**, as is the idea that women who have children from a previous marriage may, on average, be forced to marry men who carry a higher risk of being abusive.

Sociobiology, idealism, and materialism are **theoretical paradigms** or **theoretical perspectives**. They contain a few basic *rules for finding theories* that explain observed events. The evolutionary paradigm stresses the primacy of biological features of humans as the basis for human behavior. Idealism stresses the importance of internal states—attitudes, preferences, ideas, beliefs, values—as the basis for human behavior. And materialism stresses structural and infrastructural forces—like the economy, the technology of production and reproduction, demography, and environmental conditions—as causes of human behavior (**Further Reading:** paradigms for research).

When you want to explain a specific phenomenon, you apply the principles of your favorite paradigm and come up with a specific explanation—a theory.

Why do women everywhere in the world tend to have nurturing roles? If you think

that biology rules here, then you'll be inclined to support evolutionary theories about other phenomena as well. If you think economic and political forces cause values and behavior, then you'll be inclined to apply the materialist perspective in your search for explanations in general. If you think that culture—people's values—is of paramount importance, then you'll tend to apply the idealist perspective to come up with explanations.

The different paradigms are not so much in competition as they are complementary, for different **levels of analysis**. The evolutionary explanation for the battering of nonbiological children is appealing for aggregate, evolutionary phenomena—the big, big picture. An evolutionary explanation addresses the question: What is the reproductive advantage of this behavior happening at all?

We know that the behavior of hurting or killing step-children is not inevitable, so an evolutionary explanation can't account for why some step-parents hurt their children and others don't. A materialist explanation is more productive for addressing that question. Some step-parents who bring a lot of resources to a second marriage become personally frustrated by the possibility of having their wealth raided and diluted by their new spouse's children. The reaction would be strongest for step-parents who have competing obligations to support their biological children who are living with yet another family. These frustrations will cause *some* people to become violent, but not others.

But the materialist explanation doesn't tell us why a particular step-parent is supportive or unsupportive of his or her nonbiological children. At this level of analysis, we need a processual and psychological explanation, one that takes into account the particular historical facts of the case (Box 3.1).

Is there a sociobiological basis for powerful spouses to batter powerless ones? Or is this all something that gets stimulated by material conditions, like poverty? Lots more research is

### Box 3.1 Intimate partner violence on Barbados

Handwerker (1996b) found that step-parents in Barbados were, overall, no more likely to treat children violently than were biological parents. But the presence of a *step-father* increased the likelihood that women battered their daughters and decreased the likelihood that women battered their sons. In homes with step-parents, women saw their daughters as potential competitors for resources available from their partner and they saw sons as potential sources of physical protection and income.

And there was more. Powerful women (those with their own sources of income) protected their children from violence, treated them affectionately, and elicited affection for them from their man. The probability that a son experienced an affectionate relationship with a biological father rose with the length of time the two lived together, but only for sons who had powerful mothers. Men battered powerless women and the children of powerless women, and powerless women battered their own children.

needed on this fascinating question, but I think the points here are clear: (1) different paradigms produce different answers to the same question; and (2) a lot of really interesting questions may have answers that are generated from several paradigms.

There is a long list of things that beg to be explained in the social world: Why does total fertility (the number of children born to women of childbearing age) decrease when societies move from agricultural to industrial production? Why does modernization result in a lower ratio of ascribed to achieved statuses? Why does romantic love become the basis for marriage in economically advanced societies?

### The Consequences of Paradigms

Differences in theoretical paradigms have profound consequences. If you think that beliefs and attitudes are what make people behave as they do, then if you want to change people's behavior, the obvious thing to do is change their attitudes. This is the basis of the **educational model of social change** I mentioned in Chapter 2—the runaway best-seller model for change in our society.

Do you want to get students in American high schools to achieve more? Educate them about the importance of taking the most challenging courses. Want to get women in developing nations to have fewer children? Educate them about the importance of small families. Want to lower the rate of infectious disease in developing countries? Educate people about the importance of good hygiene. Want to get adolescents in Boston or Seattle or wherever to stop having high-risk sex? Educate them about the importance of abstinence or, if that fails, about how to take protective measures against sexually transmitted disease. Want to get people in the United States to use their cars less? Educate them about car pooling.

These kinds of programs often fail—but they do work sometimes. The closer a behavior is to the culture (or **superstructure**) of society, the easier it is to intervene culturally. Brand preferences are often superstructural, so advertising works to get people to switch brands—to change their behavior. But if people's behavior is rooted in the **structure** or **infrastructure** of society, then forget about changing their behavior by educating them to have better attitudes.

If you need a car because the only affordable housing is 30 miles from your job, no



amount of rhetoric will convince you to take the bus. In poor countries, having many children may be the only security people have in their old age. You can educate people (through social advertising) about using the pill as opposed to less-effective methods of birth control, once people have decided to lower their fertility, but educational rhetoric doesn't influence the number of children that people want in the first place.

### Idiographic and Nomothetic Theories

Theory comes in two basic sizes: elemental or **idiographic** theory and generalizing or **nomothetic** theory. An idiographic, or elemental, theory accounts for the facts in a single case. A nomothetic theory accounts for the facts in many cases. The more cases that a theory accounts for, the more nomothetic it is.

The distinction was first made by Wilhelm Windelband, a philosopher of science, in 1894. By the late 1800s, Wilhelm Dilthey's distinction between the **Naturwissenschaften** and **Geisteswissenschaften**—the sciences of nature and the sciences of the mind—had become quite popular. The problem with Dilthey's distinction, said Windelband, was that it couldn't accommodate the then brand-new science of psychology. The subject matter made psychology a *Geisteswissenschaft*, but the discipline relied on the experimental method, and this made it a *Naturwissenschaft*.

What to do? Yes, said Windelband, the search for reliable knowledge is, indeed, of two kinds: the sciences of law and the sciences of events, or, in a memorable turn of phrase, “the study of what always is and the study of what once was.” Windelband coined the terms *idiographic* and *nomothetic* to replace Dilthey's *Natur-* and *Geisteswissenschaften*.

Organic evolution is governed by laws, Windelband observed, but the sequence of organisms on this planet is an event that is not likely to be repeated on any other planet. Languages are governed by laws, but any given

language at any one time is an event in human linguistic life. The goal of the idiographic, or historical sciences, then, is to deliver “portraits of humans and human life with all the richness of their unique forms” (Windelband 1998 [1894]:16).

Windelband went further. Every causal explanation of an event—every idiographic analysis, in other words—requires some idea of how things happen at all. No matter how vague the idea, there must be nomothetic principles guiding idiographic analysis.

Windelband's formulation is a perfect description of what all natural scientists—vulcanologists, ornithologists, astronomers, ethnographers—do all the time. They describe things; they develop deep understanding of the cases they study; and they produce explanations for individual cases based on nomothetic rules. The study of *a* volcanic eruption, of *a* species' nesting habits, of *a* star's death is no more likely to produce new nomothetic knowledge than is the study of *a* society's adaptation to new circumstances. But the idiographic effort, based on the application of nomothetic rules, is required equally across all the sciences if induction is to be applied and greater nomothetic knowledge achieved.

Those efforts in the social and behavioral sciences are well known. Sigmund Freud (1962) based his theory of psychosexual development on just a few cases. Jean Piaget (1952) did the same in developing his universal theory of cognitive development, as did B. F. Skinner (1938) in developing the theory of operant conditioning. In anthropology, Lewis Henry Morgan (1877) and others made a brave, if ill-fated effort in the nineteenth century to create nomothetic theories about the evolution of culture from the study of cases at hand. The unilineal evolutionary theories they advanced were wrong, but the effort to produce nomothetic theory was *not* wrong. Leslie White (1949) and Julian Steward (1955) advanced more nuanced theories about how the process works.



## Nomothetic Is Not Necessarily Better

When you first run into these concepts, it's easy to suppose that nomothetic is better than idiographic, but idiographic theories are often more immediately useful. The following examples showcase the contributions of both idealist and materialist perspectives as well as the importance of both idiographic and nomothetic theory.

### *The Gender Gap in Wages*

Across the world, and although there are some exceptions, women tend to earn less than men do for the same work. In the United States, women earned about 77 cents in 2009 for every dollar men earned. A theory that explains this **gender gap** for wages in the United States is an idiographic theory. A theory that explains why women in all industrial societies earned less than men did in 2009 (controlling for currency differences, and differences in cost of living across countries) is more nomothetic. But suppose we are involved in developing legislation on the matter in, say, England or Sweden or Chile. Then, an idiographic theory—one that takes account of the political and economic realities of a particular country—is what we need.

### *The Gender Gap in Voting*

In 1920, when women got the vote in the United States, politicians were afraid that women would swamp the polls and vote for things like child-support programs. For decades, neither of those fears materialized. By 1954, women were still only 34% of voters and they were not voting in blocs for so-called women's issues. Since 1980, though, the percentage of eligible female voters who have gone to the polls in U.S. presidential elections has exceeded the percentage of eligible male voters who turned out. In this voting gender

gap, a greater proportion of women voters than men went for the Democratic candidate. Jeff Manza and Clem Brooks (1998) analyzed data from 11 presidential elections, from 1952 to 1992, to measure and explain the then emerging gender gap. Their theory is that since: (1) women are disadvantaged in the labor force (earning less than men do, hitting that glass ceiling in management, and so on); and (2) women depend more on public sector jobs than men do; and (3) women need more help with child care and with welfare than men do; then (4) women's increasing participation in the labor force would naturally drive them toward the Democratic Party and away from the Republican Party in national elections.

It turns out that the gender gap may be more complicated. Kellstedt et al. (2010) analyzed U.S. presidential election data and public policy data from 1980 through 2004 and found that the general tendency is for the U.S. electorate to become more conservative during periods of liberal policy and vice versa. This goes for both men and women, but men respond more quickly and in greater numbers than women do in making this shift. The result: The gender gap increases when public policy becomes more liberal because men become more conservative faster than do women. And conversely: the gender gap decreases when public policy turns conservative—again, because men react more quickly than do women in moving to the left.

Manza and Brooks's theory about the rise of the gender gap in U.S. presidential elections doesn't explain why it took women in the United States so long to use their political power in presidential elections, and it doesn't tell us why women don't consistently put Democrats into the U.S. House of Representatives and Senate. But Manza and Brooks's theory accounts for the facts on the ground in the case they deal with, and that's enough for a theory to do. In any science, a lot of the best work is at the idiographic level of theory making.

### *The Second Demographic Transition*

Demographic transition theory accounts for variations in the average number of children born to women in a society. The first **demographic transition** happened at the end of the Paleolithic when people swapped hunting and gathering for agriculture as the main means of production. During the Paleolithic (from about 2.5 million to about 12,000 years ago), population growth was very, very slow. But across the world, as people switched from hunting and gathering to agriculture, as they settled down and accumulated surplus, their populations exploded.

The second demographic transition began in the late eighteenth century in Europe with industrialization and has been spreading around the world ever since. Today, Japan, Germany, Italy, and other highly industrialized countries have **total fertility rates**, or TFRs, in the neighborhood of 1.5 to 1.2—that's 29% to 43% below the 2.1 TFR needed in those countries just to replace the current population.

Demographic transition theory—explaining the link between economic development and lower TFR—is highly nomothetic. It accounts for why Japan, a fully industrialized nation, has such a low TFR. But it doesn't predict what the consequences of that low TFR will be. For the time being, at least (until even bigger nomothetic theories are developed), we still need an idiographic theory for this.

Japan has about 126 million people—about 40% of the population of the United States—living in an area the size of Montana. Japan has the world's second-largest economy, and the Japanese enjoyed a per capita income of about \$34,000 in 2008 (IMF 2009). This is based on manufacturing products for export. The oil to run the factories that produce all those exports has to be imported. So does a lot of food to feed all those people who are working in the factories. The TFR of 1.3 in Japan makes it easy to predict that Japan's industries need to find lots of new workers to maintain productivity—and the lifestyle supported by that productivity.

Belgium and Italy—two other countries with low TFRs—solved this problem by opening

their borders to people from the formerly communist countries of eastern Europe and by increasing female participation in the labor force. There was strong resistance to these solutions in Japan, but in 1990, the need for workers prevailed. Japan began offering Brazilians and Peruvians of Japanese descent special visas to resettle on the theory that it would be easy for people who looked Japanese to assimilate. Some 236,000 Brazilians and Peruvians took the offer, but in 2009, after nearly two decades of economic stagnation and the fact that the South Americans weren't becoming Japanese, the Japanese government was offering those hundreds of thousands of immigrants money to go home (Ducanes and Abella 2008:18; Tabuchi 2009).

The Japanese case shows that lower TFR in industrialized countries doesn't lead to the same response—at least not in the short run. But what about the long run? Japan's economy will recover and the need for workers will only get stronger. This will once again challenge the culture of ethnic nationalism in Japan. A nomothetic theory of how industrialized countries react to lower TFR requires a longer time frame, as does one that posits a change in culture (like ideas about ethnic nationalism) in accommodation to changes in the economy, in technology, and in fertility.

### *Dowry Deaths*

In 1977, the New Delhi police reported 311 **dowry deaths**—deaths by kitchen fires of women, mostly young brides who were killed because their families had not delivered a promised dowry to the groom's family (Claiborne 1984). By 2005, the government of India reported 6,787 such dowry deaths of young women but this may be an underestimate (Sanghavi et al. 2009). The numbers are in dispute (for one thing, many cases apparently go unreported), but even if the incidence were a fraction of what's reported, the phenomenon demands an explanation.

Daniel Gross (1992) theorized that the phenomenon was the consequence of female hypergamy (marrying up) and dowry. Families that can raise a large dowry in India can marry off their daughter to someone of greater means. This created a bidding war as the families of wealthier sons demand more and more for the privilege of marrying those sons. Apparently, many families of daughters in India have gone into debt to accumulate the dowries. When they can't pay off the debt, some of the families of grooms have murdered the brides in faked "kitchen accidents," where kerosene stoves purportedly blow up. This gives the grooms' families a chance to get another bride whose families can deliver. (For more on dowry inflation, see S. Anderson [2003]. For more on dowry death, see Van Willigen and Chana [1991].) Gross's explanation for the kitchen fires in India doesn't explain why other societies that have escalating dowry don't have kitchen fires. Nor does it tell us why dowry persists in India despite its being outlawed since 1961, or why dowry—which, after all, only occurs in 7.5% of the world's societies—exists in the first place. But Gross's theory deals effectively with the facts of the case.

There is no list of research questions. You have to use your imagination and your curiosity about how things work and follow your hunches. Above all, never take anything at face value. Every time you read an article, ask yourself: "What would a study look like that would test whether the major assertions and conclusions of this article were really correct?" If someone says: "The only things students care about are sex, drugs, and twitter," the proper response is: "We can test that."

## A GUIDE TO RESEARCH TOPICS, ANYWAY

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There may not be a list of research topics, but there are some useful guidelines. First of all, there are very few big-theory issues—I call them **research arenas**—in all of social science.

Here are four of them: (1) the nature-nurture problem; (2) the evolution problem; (3) the internal-external problem; and (4) the social facts or emergent properties problem.

1. **The nature-nurture problem.** This is an age-old question: How much of our personality and behavior is determined by our genes and how much by our exposure to different environments? Many diseases (cystic fibrosis, Tay-Sachs, sickle-cell anemia) are greatly determined by our genes, but others (heart disease, diabetes, asthma) are at least partly the result of our cultural and physical environment.

Schizophrenia is a genetically inherited disease, but its expression is heavily influenced by our cultural environment. Hallucinations are commonly associated with schizophrenia but when Robert Edgerton (1966) asked over 500 people in four East African tribes to list the behavior of people who are severely mentally ill, less than 1% of them mentioned hallucinations (see also Edgerton and Cohen 1994; Jenkins and Barrett 2004).

Research on the extent to which differences in cognitive functions of men and women are the consequence of environmental factors (nurture) or genetic factors (nature) or the interaction between those factors is part of this research arena (Caplan et al. 1997; Coluccia and Louse 2004). So are studies of human response to signs of illness across cultures (Clark et al. 2009; Kleinman 1980).

2. **The evolution problem.** Studies of how groups change through time from one *kind* of thing to another kind of thing are in this arena. Societies change very slowly through time, but at some point we say that a village has changed into a town or a town into a city or that a society has changed from a feudal to an industrial economy. All studies of the differences between small societies—**Gemeinschaften**—and big societies—**Gesellschaften**—are in this arena. So are studies of inexorable bureaucratization as organizations grow.

3. **The internal-external problem.** Studies of the way in which behavior is influenced by

values and by environmental conditions are in this arena. Studies of **response effects** (how people respond differently to the same question asked by a woman or by a man, for example) are in this arena, too.

4. **The social facts, or emergent properties problem.** The name for this problem comes from Emile Durkheim's (1933 [1893]) argument that social facts exist outside of individuals and are not reducible to psychological facts. A great deal of social research is based on the assumption that people are influenced by social forces that *emerge* from the interaction of humans but that transcend individuals. Many studies of social networks and social support, for example, are in this arena, as are studies that test the influence of organizational forms on human thought and behavior.

## GENERATING TYPES OF STUDIES

Now look at Table 3.1. I have divided research topics (not arenas) into classes, based on the relation among five kinds of variables.

1. **Internal states.** These include attitudes, beliefs, values, and perceptions. Cognition is an internal state.

2. **External states.** These include characteristics of people, such as age, wealth, health status, height, weight, gender, and so on.
3. **Behavior.** This covers what people eat, who they communicate with, how much they work and play—in short, everything that people do and much of what social scientists are interested in understanding.
4. **Artifacts.** This includes all the physical residue from human behavior—radioactive waste, tomato slicers, sneakers, arrowheads, computer disks, Viagra, skyscrapers—everything.
5. **Environment.** This includes physical, biological, and social environmental characteristics: the amount of rainfall, the amount of biomass per square kilometer, location on a river or ocean front—the physical and biological features that influence human thought and behavior. Living under a democratic versus an authoritarian regime or working in an organization that tolerates or does not tolerate sexual harassment are examples of social environments that have consequences for what people think and how they behave (Box 3.2).

**Table 3.1** Types of Studies

	Internal States	External States	Reported Behavior	Observed Behavior	Artifacts	Environment
Internal States	I	II	IIIa	IIIb	IV	V
External States		VI	VIIa	VIIb	VIII	IX
Reported Behavior			Xa	Xb	XIa	XIIa
Observed Behavior				Xc	XIb	XIIb
Artifacts					XIII	XIV
Environment						XV

### Box 3.2 Biological variables

A sixth kind of variable comprises **biological indicators**, like blood pressure and body mass index. We won't cover this kind of variable here, but biocultural research—the interaction among biological, cultural, and environmental factors in shaping human thought and human behavior—is a rapidly growing field in the social sciences. See Dressler (2005) for more on this.

Category (3) includes both **reported behavior** and **actual behavior**. A great deal of research has shown that about a third to a half of everything people report about their behavior is not true (Bernard and Killworth et al. 1984). If you ask children what they eat or how much they exercise, they'll tell you, but their report may have no useful resemblance to what they actually eat or how much they actually exercise (Johnson et al. 1996). If you ask people how many times a year they go to church, you're likely to get data that do not reflect actual behavior (Hadaway and Marler 2005).

Some of the difference between what people say they do and what they do is the result of out-and-out lying. Most of the difference, though, is because people can't hang on to the level of detail about their behavior that is called for when they are confronted by social scientists asking them how often they go to church, or eat beef, or whatever. What people *think* about their behavior may be precisely what you're interested in, but that's a different matter.

### Matching Kinds of Variables and Kinds of Problems

Most social research focuses on internal states and on reported behavior. But the study of humanity can be much richer, once you get the hang of putting together these five kinds of variables and conjuring up potential relations. Here are some examples of possible studies for each of the cells in Table 3.1.

Cell I: The interaction of internal states, like perceptions, attitudes, beliefs, values, and moods.

Religious beliefs, authoritarianism, and prejudice against homosexuals (Tsang and Rowatt 2007).

Perceived gender role and attitudes about rape in Turkey (Gölge et al. 2003).

Religious beliefs and attitudes about gun control in the United States (Flanagan and Longmire 1996).

This cell is also filled with studies that compare internal states across groups. See, for example, Cooke's (2004) study of attitudes toward gun control among American, British, and Australian youth and Yarrow et al.'s (2006) study comparing the early development of implicit racial prejudice in rural Japan and urban United States.

Cell II: The interaction of internal states (perceptions, beliefs, moods, etc.) and external states (completed education, health status, organizational conditions).

Attitudes about the price of food among women of different socioeconomic and health statuses (Bowman 2006).

Variations in organizational structure correlate with employee satisfaction (Cummings and Berger 1976; Gregory et al. 2009).

Cell IIIa: The interaction between *reported* behavior and internal states.

Perception of how well the economy is doing and reported voting behavior (Kwon 2010).



Attitudes toward the environment and reported environment-friendly behavior (Bamberg and Moser 2007; Kahn and Morris 2009).

Reported rate of alcohol consumption and attitudes toward gender roles (Christie-Mizell and Peralta 2009).

Cell IIIb: The interaction between *observed* behavior and internal states.

Attitudes and beliefs about resources and actual behavior in the control of a household thermostat (Kempton 1987).

Behavioral indicators of nervousness among men at an STI clinic (Lichtenstein 2004).

Cell IV: The interaction of material artifacts and internal states.

The effects on Holocaust Museum staff in Washington, DC, of working with the physical reminders of the Holocaust (McCarroll et al. 1995).

How young children in New Zealand learn gender roles from pictures in early school readers (Jackson and Gee 2005).

Cell V: The interaction of social and physical environmental factors and internal states.

As homes become more crowded, parents are less responsive to their children (Evans et al. 2010).

Children in Africa who witness violence are likely to develop symptoms of stress, but a positive school climate reduces the effect (O'Donnell et al. 2011).

The design of memorials can help people recover from trauma and loss (Watkins et al. 2010).

Cell VI: How the interaction among external states relates to outcomes, like longevity or financial success.

The effect of where immigrant scientists in the United States get their college education (in the United States or in their native countries) on their earning power (Tong 2010).

The interaction of income and income inequality on low birth weight (Olson et al. 2010).

Cell VIIa: The relation between external states and *reported* behavior.

The impact of gender, area of residence, and religious affiliation on the likelihood of attending church as people get older (Schwadel 2010).

Factors affecting self-reported suicidal behavior among adolescents in Ireland (McMahon et al. 2010).

Cell VIIb: The relation between external states and *observed* behavior.

Ethnicity of clientele, gender of bartender, and other factors associated with smoking in bars, despite laws against smoking (Moore et al. 2009).

Cell VIII: The relation of physical artifacts and external states.

How age and gender differences relate to cherished possessions among children and adolescents from 6 to 18 years of age (Dyl and Wapner 1996).

Cell IX: The relation of external states and environmental conditions.

The effect of neighborhood street culture on violence among adolescents, beyond that predicted by individual values (Stewart and Simons 2010).

How poor physical and social conditions of poor neighborhoods contribute to bad health and early death (Cohen et al. 2003).

Cell Xa: The relation between behaviors, as *reported* by people to researchers.

The relation of self-reported level of church attendance and self-reported "hooking up" among American college women (Burdette et al. 2009).

Adolescents are more likely to drink alcohol regularly if they report that their same-sex twin or their friends are drinkers than if their parents report regular drinking (Scholte et al. 2008).



Cell Xb: The relation between behaviors, as *observed* by researchers.

The relation among various responsible environmental behaviors (REB), like recycling and turning off the light when leaving a room, and actual REB (Chao and Lam 2011).

Direct observation and comparison of behaviors is used in many fields, including psychology (in assessing behavioral disorders), in education (in assessing learning disabilities), in nursing (in assessing patients' dietary habits), in political science (in assessing the bellicosity of nations toward one another), in occupational sociology (in assessing ergonomics and performance), and so on. I'll discuss direct observation at some length in Chapter 14.

Cell XIa: The relation of observed behavior to specific physical artifacts.

Content analysis of top-grossing films from 1950 to 2006 shows that the portrayal of tobacco use declined proportionate to the actual decline of smoking in the population (Jamieson and Romer 2010).

Cell XIb: The relation of reported behavior to specific physical artifacts.

People who are employed view prized possessions as symbols of their own personal history, while people who are unemployed see prized possessions as having utilitarian value (Dittmar 1991).

Cell XIIa: The relation of reported behavior to factors in the social or physical environment.

The relation of compulsive consumer behavior in young adults and whether they were raised in intact or disrupted families (Rindfleisch et al. 1997).

Cell XIIb: The relation of observed behavior to factors in the social or physical environment.

The influence of environmental factors (one-way vs. two-way traffic, the presence or absence of a specific pedestrian signal,

number of lanes in a road, and so on) on pedestrians obeying a traffic signal in Montreal (Cambon de Lavalette et al. 2009).

People spend more or less time in a store and spend more or less money, depending on factors in the store environment (Sherman et al. 1997).

Cell XIII: The association of physical artifacts to one another and what this predicts about human thought or behavior.

Comparing the favorite possessions of urban Indians (in India) and Indian immigrants to the United States to see whether certain sets of possessions remain meaningful among immigrants (Mehta and Belk 1991).

This is also an example of Cell IV. Note the difference between expressed *preferences* across artifacts and the coexistence of artifacts across places or times.

Cell XIV: The probability that certain artifacts (relating, for example, to subsistence) will be found in certain physical or social environments (rain forests, deserts, shoreline communities). This area of research is mostly the province of archeology.

Cell XV: How features of the social and physical environment interact and affect human behavioral and cognitive outcomes.

Environmental features of offices, like amount of cubicle privacy, lighting, and noise, affect job satisfaction and worker performance (Goins et al. 2010; Newsham et al. 2009).

Social and physical environmental features of retail stores interact to affect the buying behavior of consumers (Baker et al. 1992).

The above list is only meant to give you an idea of how to think about potential covariations and, consequently, about potential research topics. Always keep in mind that *covariation does not mean cause*. Covariation can be spurious, the result of an antecedent or

an intervening variable. (Refer to Chapter 2 for a discussion of causality, spurious relations, and antecedent variables.)

And keep in mind that many of the examples in the list above are statements about possible **bivariate correlations**—that is, they are about possible covariation between two things. Social phenomena being the complex sorts of things they are, a lot of research involves **multivariate relations**—that is, covariation among three or more things at the same time.

For example, it's well known that people who call themselves religious conservatives in the United States are likely to support the National Rifle Association's policy on gun control (Cell I). But the association between the two variables (religious beliefs and attitudes toward gun control) is by no means perfect and is affected by many intervening variables.

I'll tell you about testing for bivariate relations in Chapter 21 and about testing for multivariate relations in Chapter 22. As in so many other things, you crawl before you run and you run before you fly.

## THE LITERATURE SEARCH

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The first thing to do after you get an idea for a piece of research is to find out what has already been done on it. Don't neglect this part of the research process and never say "little is known about . . ." any topic in any research paper or grant proposal you write. You need to make a heroic effort to uncover sources. Without that effort, you risk wasting a lot of time going over already-covered ground. Even worse, you risk having your colleagues ignore your work because you didn't do your homework. Fortunately, heroic efforts are pretty easy, what with all the **documentation resources** available for scouring the literature. Begin by looking through volumes of the *Annual Review*. There are *Annual Review* volumes for psychology (every year since 1950), anthropology (every

two years from 1959 to 1971 and every year since 1972), sociology (since 1975), public health (since 1997), and political science (since 1998). Authors who are invited to publish in these volumes are experts in their fields; they have digested a lot of information and have packaged it in a way that gets you right into the middle of a topic in a hurry.

Also contact people on listservs and networking groups that deal with your research topic. If there are central figures in the field, contact them by e-mail and request a time when you can call them on the phone. Yes, by phone. E-mail and texting may be convenient for *you*, but many scholars are too busy to respond to requests for lists of articles and books. On the other hand, many scholars *will* talk to you on the phone if they think they can really help.

All you need are a few key references to get started. Don't worry about the key references being out of date. The *ISI Web of Knowledge*, and, in particular, the *Web of Science*, eliminates the problem of obsolescence in bibliographies.

### The Web of Science

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The *Thompson Reuters Web of Science* contains the *Science Citation Index*, the *Social Sciences Citation Index*, and the *Arts and Humanities Citation Index*. This set of indexes, available at most university libraries and in many small college libraries, covers about 10,000 journals, including about 2,500 in the social sciences. The title, author, journal, year, and page numbers for every article goes into the database, along with the e-mail address of the corresponding author, when it's available.

Most important is that all the references cited by each author of each article in each journal surveyed go into the database. Some articles have a handful of references, but review articles, like the ones in the *Annual Review* series, can have hundreds of citations. If you know the name of just one author whose work *should* be cited by anyone working in a

particular field, you can find out, for any given year, who cited that author and where. In other words, you can search the literature *forward* in time; this means that older bibliographies, like those in the *Annual Review* series, are never out of date.

For example, anyone writing on **locus of control** (whether people feel that they are in

charge of their own destinies or are pawns of external forces) is going to cite one of Julian Rotter's classic papers (1966, 1990). Anyone writing about urban gangs in the United States is likely to cite William Foote Whyte's *Street Corner Society* (1981 [1943]) or Gerald Suttles's *The Social Order of the Slum* (1968) (Box 3.3).

### Box 3.3 About the citation indexes . . .

I want to make sure that you understand the power of this resource. Without the citation indexes, you can only search *backward in time*. If you have an article or book published in 2008, the references will only go up to, say, 2005 or 2006. Each of *those* references would also have a bibliography going back in time. But with the citation indexes, if you know of a single, classic article written in, say, 1978, you can find all the articles published *today* in which that article was cited and then work backward from those.

The *Social Science Citation Index* alone indexes about 150,000 articles a year. Ok, so 150,000 *sources* is only a good-sized fraction of the social science papers published in the world each year, but the *authors* of those articles read—and cited—about 3 *million* citations to references to the literature. That's 3 million citations every year, for decades. I used the paper versions of these indexes for 30 years before they went online. If the online versions vanished, I'd go back to the paper ones in a minute. They're that good.

### Other Documentation Databases

These days, documentation is a robust business, and there are many indexing and abstracting resources. Besides the citation indexes,

some important resources for social scientists are: ERIC, NTIS and FDsys, PsycINFO, PubMed, Cambridge Sociological Abstracts, ProQuest Dissertations and Theses Database, LEXIS-NEXIS, and OCLC (Box 3.4).

### Box 3.4 Indexing and archiving: JSTOR and other full-text archives

There is an important distinction between indexing-abstracting services, like ERIC, NTIS, etc., and full-text archiving services. JSTOR, for example, archives complete runs of hundreds of journals in 55 disciplines, including the social sciences. The archive for sociology and political science alone comprises some 200 journals. Most of the journals in JSTOR have moving walls of between three and five years. A three-year moving wall means that articles published in 2012 will be available in JSTOR in 2015.

### *ERIC*

ERIC is a federally funded product of the Educational Resources Information Center and is available free at <http://www.eric.ed.gov/>. It covers literature since 1966 of interest to researchers in education, but many of the 1,130 journals in the database are of interest to all social scientists. The ERIC database includes a lot of grey literature—government reports and reports from private foundations and industries that contain useful information but can be tough to find. The ERIC database contained 1.3 million records in 2011 and is continually updated.

### *NTIS and FDsys*

NTIS, the National Technical Information Service, indexes and abstracts federally funded research reports in all areas of science. It's available free at <http://www.ntis.gov/>. The research that Peter Killworth and I did in the 1970s and 1980s testing our computer program for network analysis was supported by contracts from the Office of Naval Research. When you have a contract with a U.S. government agency, you generally produce a series of technical reports on the work you do as you go along. Those technical reports get logged in to the NTIS.

Many technical reports later get published as articles. But many don't. Some of the reports aren't published because they are too preliminary—"not ready for prime time," as it were. But lots of technical reports don't get published because they contain huge tables of basic data. That's not the stuff that journals can publish, but it may be treasure for another researcher. It used to be that reports on government contracts were filed and then shelved, never to be heard from again. But with the NTIS database, the public can now easily locate all that information.

The NTIS has technical reports from archeological digs, from voter registration surveys, from consumer behavior surveys, from focus groups on attitudes about unprotected sex,

from evaluations of new designs for low-cost housing, from laboratory experiments on how much people might be willing to pay for gasoline, from natural experiments to test how long people can stay in a submerged submarine without going crazy—if the federal government has funded it under contract, there's probably a technical report of it.

Agencies of the U.S. government publish a vast array of reports and data on housing, the elderly, alcohol and drug abuse, violence against women, Native American health, prisons, and hundreds of other topics. These reports are available through FDsys, the Federal Digital System at <http://www.gpo.gov/fdsys/>.

### *PubMed*

PubMed is a product of the National Library of Medicine (National Institutes of Health) and is available free at <http://www.ncbi.nlm.nih.gov/pubmed/>. This database covers about 5,400 journals in the medical sciences, including the medical social sciences. It contained over 20 million citations in 2011 and is continually updated.

If you are working on anything that has to do with health care, PubMed is a must. Ask PubMed for articles from 2005 to 2011 on "high-risk sexual behavior and adolescents" and it returns a list of over 700 items.

### *PsycINFO*

PsycINFO is a product of the American Psychological Association. The Jurassic version of this database goes back to the seventeenth century. It indexes and abstracts about 2,500 journals in the behavioral and social sciences and contains over 3 million records.

### *CSA Sociological Abstracts*

Sociological Abstracts is a product of CSA Illumina. It indexes and abstracts about 1,800

journals dating from 1952, with excellent coverage of research methods, the sociology of language, occupations and professions, health, family violence, poverty, and social control. It covers the sociology of knowledge and the sociology of science as well as the sociology of the arts, religion, and education.

### *ProQuest Dissertations and Theses Database*

This database indexes and abstracts dissertations and theses back to 1997. Around 2 million of those dissertation and theses are available in full text. Much of the best and most up-to-date research is done by graduate students. If your institution subscribes to this database, be sure to check it out when you do the background reading for your own project.

### *LEXIS/NEXIS*

If your library has LEXIS/NEXIS, don't consider any literature search complete until you've used this database. The system began in 1973 as a way to help lawyers find information on cases. Today, the database contains the searchable text of over 5 billion documents from some 40,000 sources, including the major English-language newspapers in the world, law cases, transcripts of U.S. congressional hearings, and publications and reports of the U.S. Congress. (The congressional database is a product of ProQuest and is incorporated in the Lexis/Nexis database.)

### *OCLC*

OCLC (Online Computer Library Center) is the world's largest library database. Over 71,000 libraries across the world catalog their holdings, in 479 languages, in OCLC's catalog, called WorldCat. The system had 190 million bibliographic records in 2011. If you find a book or a journal article in the SSCI or PsycINFO, etc. and your library doesn't have it, then OCLC will tell you which library *does*

have it. Interlibrary loans depend on OCLC. In addition, OCLC publishes a database called ArticleFirst. This leviathan, which is updated daily, covers 16,000 journals in all fields, including many in the social sciences. Coverage is only from 1990, but as the database grows—it was over 27 million records in 2011—it becomes more and more useful.

## **META-ANALYSIS**

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**Meta-analysis** involves piling up all the quantitative studies ever done on a particular topic to assess quantitatively what is known about the size of the effect. It is, as Hunt (1997) says, how science takes stock. The pioneering work on meta-analysis (M. L. Smith and Glass 1977) addressed the question: Does psychotherapy make a difference? That is, do people who get psychotherapy benefit, compared to people who have the same problems and who don't get psychotherapy? Since then, there have been thousands of meta-analyses on everything from gender differences in performance on math tests (Lindberg et al. 2010) to the influence of the Internet on citizen participation in public policy making (Yang and Zhiyong 2010).

Meta-analysis forces you to become familiar with the literature on a particular topic and it makes you aware of the research holes that need to be filled. Schutte and Hosch (1997), for example, did a meta-analysis of mock jury studies about rape or child sexual abuse. In a mock jury study, participants are shown evidence of a defendant's guilt and innocence in a particular crime. The jury deliberates and renders a verdict. It's an attractive method because it mimics a real-world situation and because you can manipulate the experimental treatment—the crime, the various kinds of evidence for the defendant's guilt or innocence, the demographics of the jurors, and so on.

Schutte and Hosch scoured the literature. They began by searching the PsycINFO database from 1967 on for articles that contained

any of the terms “sexual abuse,” “child abuse,” “rape,” “sex,” and “juror.” They also posted requests on PSYLAW, an Internet discussion group for people interested in law and psychology. They then used the bibliographies from the articles they turned up to hunt for further references and kept on doing this iterative search until no new studies turned up that fit their criteria.

And what were the criteria? First, they only used reports that were based on studies of jury-eligible people. That meant excluding studies of people under 18 years of age and excluding studies of non-U.S. citizens (so all studies of Canadians and Britons, for example, were excluded). Second, they excluded studies in which respondents (mock jurors) were asked to rate a mock defendant’s guilt on a Likert-type of scale of, say, 1-to-5. In real jury cases, defendants are judged guilty or not guilty, not “somewhat guilty” or “very guilty.”

Schutte and Hosch wound up with 36 studies, 19 involving accusations of rape, and 17 involving accusations of child sexual abuse. All these studies together comprise 9,813 participants

(51% of whom were women) and a mean of 273 participants per study. This points to one of the strengths of meta-analysis: Even though the number of *studies* in such an analysis might be low, the number of *people* represented in those studies can be huge.

Across the 36 studies, women jurors were far more likely to vote for conviction than were men (58.5% compared to 41.5%). This was hardly surprising, but the study did turn up something very interesting: 29 out of the 36 studies involved female victims and male defendants. Of the seven studies in which females were the accused, every case was about child sexual abuse, and three of the seven studies reported no difference in the probability that male or female mock jurors would vote to convict. This is just the sort of finding that sharp-eyed researchers latch on to when they’re out shopping for interesting research gaps to fill. Indeed, recently, there have been more mock-jury studies examining the effects of gender of both victim and defendant (Pozzulo et al. 2010; Quas et al. 2002) (**Further Reading:** meta-analysis).

### Key Concepts in This Chapter

experiment on obedience  
debriefing  
evolutionary theory  
evolutionary psychology  
evolutionary anthropology  
sociobiology  
idealist (ideational) theory  
materialist theory  
theoretical paradigms  
theoretical perspectives  
levels of analysis  
educational model of social  
change  
superstructure  
structure  
infrastructure

idiographic theory  
nomothetic theory  
Naturwissenschaften and  
Geisteswissenschaften  
gender gap  
demographic transition  
total fertility rate, or TFR  
dowry death  
research arenas  
the nature-nurture  
problem  
the evolution problem  
Gemeinschaften  
Gesellschaften  
the internal-external  
problem

response effects  
the social facts, or emergent  
properties problem  
internal and  
external states  
behavior  
artifacts  
environment  
biological indicators  
reported behavior  
actual behavior  
bivariate correlations  
multivariate relations  
documentation resources  
locus of control  
meta-analysis



## Summary

- Research is idealized, but in the end, it gets done the way most things get done: by doing the best we can and by trying to do better next time.
  - Researchers choose their problems for many reasons, including personal interest, availability of research funds, contractual obligations, and to build sound explanations for social and behavioral phenomena.
- The ethics dilemma in social research is profound. The operational test of whether a particular piece of research is ethical is whether social norms tolerate it.
  - This relativistic position, however, does not encourage absolute moral judgments. Ultimately, the choice is left to researchers, and the researchers are responsible for the consequences of their actions.
  - It is unlikely that either Milgram's or Zimbardo's experiments on obedience would be funded today, yet the lessons from their experiments continue to provide guidance on the responsibility of the individual for her or his actions.
- There are quite different approaches, or paradigms, to theory building in the social sciences. These paradigms guide us to search for different *kinds* of answers—biological, ideational, and material—to the same question.
  - The three main paradigms for explanation are idealism, materialism, and sociobiology.
- All research projects begin with a literature search. The bibliographic tools available today make it much easier than in the past to cover the literature thoroughly.
  - The Social Science Citation Index, ERIC, NTIS and FDsys, PubMed, Sociological Abstracts, LEXIS-NEXIS, and OCLC are some of the documentation resources available.
  - Many topics of research have been the subject of meta-analysis. Begin your assessment of the literature by reading any meta-analyses that may be available.

## Exercises

1. Building a database of references for a research topic of your choice is the best way to learn how to use the bibliographic tools in your college library. Choose any topic you like and try to make the literature search exhaustive. This is a great way to learn about narrowing down your research *interests* into manageable research *problems*.

If you're interested in gender differences, for example, the initial search for the string "gender differences" in PsycINFO returns about 25,000 items between 1685 (yes, 1685) and 2011. Better focus it more. Asking for "gender differences" and "test taking" returns about 40 items, with the earliest at 1987. Asking for "human sex differences" and "test taking" returns about 90 items, beginning with 1966.

2. Use Table 3.1 to think up some research problems. Think about how you would operationalize the variables for each study you think up. Go to the library and see if you can find any studies on the research problems you come up with.
3. After reading this chapter, you should have more to say about the concepts of value-free science and research. The examples, though, have been experiments, not research based on questionnaires or on participant observation ethnography.

Does questionnaire research done over the telephone pose any ethical problems? How about online? How about ethnographic research? Use the bibliographic tools in your library to find articles on these issues in social research ethics. Look up the problem of informed consent and learn about the different requirements in social research and medical research. If you stop someone on the street to administer a questionnaire and they answer you, does that imply consent?

4. Use the bibliographic tools in your college library to find at least one example of social research that is based explicitly on the idealist paradigm. Then find an example of research based on the materialist paradigm and another based on the evolutionary paradigm. Be sure that the three articles are reports of research, not a theoretical discussion. Write a brief report describing the articles and then discuss the different approaches taken by the authors.

### Further Reading

#### **Social science in the military and in intelligence.**

For opposing views of social scientists' involvement in the wars in Iraq and Afghanistan, see Price (2003) and McFate (2005); see also González (2007) and Kilcullen (2007). For a summary of this debate, see Fluehr-Lobban (2008) and Forte (2011).

#### **Milgram's and Zimbardo's obedience experiments.**

Benjamin and Simpson (2009), Blass (2004), Bocciaro and Zimbardo (2010), Packer (2008), Slater et al. (2006).

**Ethical issues in social science.** Boruch and Cecil (1983), Bosk (2004), Burgess (1989), Citro et al. (2003), Fluehr-Lobban (1996), Hammersley (2009), Herrera (1996), Keith-Spiegel and Koocher (2005), Lyman (1989),

Mertens and Ginsberg (2009), van den Hoonaard (2002), Weisstub (1998), Weisstub and Diaz Pintos (2007).

**Paradigms for research.** On evolutionary perspectives, see Pinker (2003) and the online journal *Evolutionary Psychology* (<http://www.epjournal.net/>); for examples of cultural, or idealist approaches, see Geert (1973); on the materialist approach, see Harris (1979).

**Meta-analysis.** Cook et al. (1992), Cooper et al. (2009), Farley and Lehman (1986), Glass (1976), Guzzo et al. (1987), Hedges and Olkin (1985), Hunt (1997), Hunter and Schmidt (2004), Matt and Navarro (1997), Pan (2008), Rosenthal (1984), Wolf (1986).