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GETTING STARTED: DEVELOPING RESEARCH IDEAS

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The fact that you're reading this book suggests that you have some interest in the social and/or health sciences. You may even have articulated more specific interests for yourself, for example, studying juvenile delinquency, organizational dynamics, the socialization process, immigrant life, or sexual health. Still, that's only the beginning. Doing research involves translating general interests into specific researchable questions and then designing concrete research procedures that reflect those questions and allow you to collect the information necessary to answer them. Indeed, one of the first truisms you learn about research is that it is not an activity you can do in the abstract—"doing research" ultimately involves gathering very specific information from specific samples of individuals, groups, or social artifacts in particular places at a particular time. In this chapter, we will take you through some of the first steps in that process, in which we outline the different approaches to theorizing and look at some ways research ideas arise.

CAN YOU SOLVE THIS?

Let us begin by telling you about a provocative little YouTube video we found entitled, "Can you solve this?,"¹ in which an interviewer poses a problem to people passing by. The problem is posed thus:

I'm going to give you a three-number sequence, and I have a rule in mind that those three numbers obey that I want you to figure out. The way you can get information about my rule is to offer three numbers of your own that you think follow my rule. I will tell you whether they follow my rule or not, and then will invite you to tell me what my rule is.

It sounds simple enough and the interviewer begins by offering three numbers that follow his rule: "2, 4, and 8."

The first person offers back 16, 32, and 64, and the interviewer says, "Yes, that follows my rule." When asked to report the rule, the fellow says, "Double each number." The fellow is stunned when the interviewer says, "That is *not* my rule."

The next several people offer different numbers. One says "3, 6, 12," while the next says "10, 20, 40." The first person tries again and says "5, 10, 20." In each case, the interviewer says, "Yes, that follows my rule." But when each person suggests again

¹The video is at <https://www.youtube.com/watch?v=vKA4w2O61Xo>.

that the rule is “Double each number,” the interviewer again says, “No, that is not my rule.” Other people make more guesses: “100, 200, 400” says the next person; “500, 1,000, 2,000” says the next. The interviewer acknowledges that each sequence follows his rule. But what is the rule? “That you double each number?” “No,” says the interviewer, yet again.

Do you have a theory about what the rule is? What numbers would you try next? Before we tell you what the rule is that the interviewer had in mind, we want to describe three forms of logical reasoning that parallel different approaches to research and have implications for the ways researchers go about generating and testing theories.

THREE APPROACHES TO THEORIZING

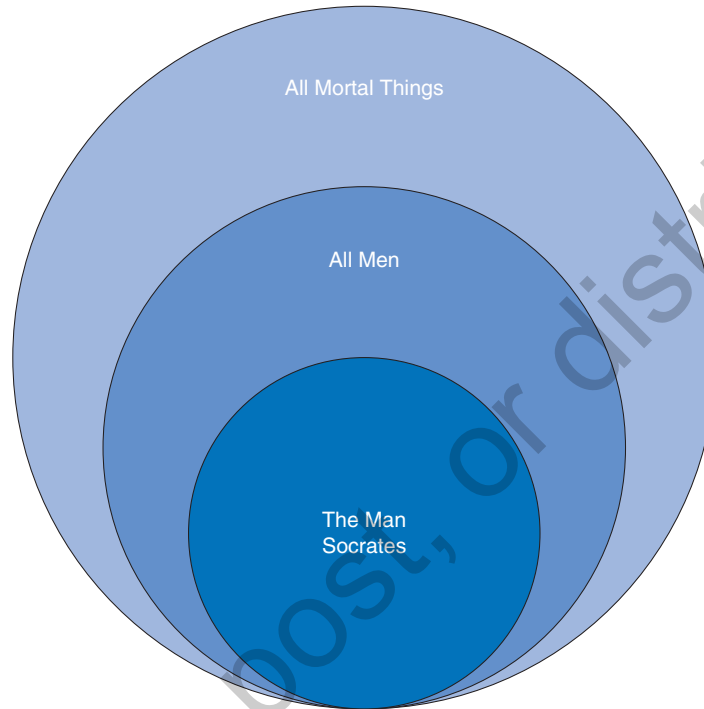
In logic, a distinction traditionally has been made between three different processes of logical reasoning: deduction, induction, and **abduction**. Let’s consider each of these in turn.

Deductive Logic

Deduction involves reasoning from the general to the particular or from premises to conclusion. Often these are stated as *if/then* propositions. *If* the premises are correct, *then* the conclusion follows. The classic example from philosophy, illustrated in Figure 2.1, is (1) all men are mortal; (2) Socrates is a man; (3) therefore Socrates is mortal. There is an implicit “if” there with respect to the premises, i.e., *if* all men are mortal, and *if* Socrates is indeed a man, *then* the conclusion that Socrates must be mortal follows. Of course, it may well be that one or more premises are not true, in which case we still end up with a conclusion that follows logically, but is invalid. For example, we might say (1) all immigrants are criminals; (2) my friend Louise is an immigrant; (3) therefore Louise is a criminal. The problem here, of course, is that while the logic is correct, the premise that all immigrants are criminals is not true; so that while your friend Louise may well have come to the United States as an immigrant, it does not necessarily follow that she is also a criminal.

The hypothetico-deductive method reflects this logic. The method involves (1) developing theories about a phenomenon; (2) expressing hypotheses (predictions, *if/then* statements) based on these theories; (3) creating or observing conditions where we can assess whether things happen as the theory predicts they should; and then (4) looking for new situations in which to test or expand the theory if it succeeds or revising the theory or even abandoning it entirely if its predictions are not supported

FIGURE 2.1 ◆ Deductive Logic



(e.g., Shank, 2008b). As you know from Chapter 1, this deductive model of science has been preferred by many people who engage in quantitative research who often go so far as to call it “the” scientific method. Its strength is that it encourages us to take our speculations and subject them to some real-world test. The logic is quite elegant: If a theory is true, then in a certain situation covered by the theory, some particular result should occur. If it does, we give points to the theory (metaphorically) and look for a new test in a new situation covered by the theory; if it does not, we abandon the theory or at least reevaluate the range of situations to which it applies.

One limitation of the hypothetico-deductive approach to theory building is that we can never “prove” a theory because we can never test every single situation in which a theory might potentially apply; all we can do is keep on finding new ways and new situations in which to test the theory. The more such tests the theory meets, the more confidence we have in it. Conversely, when a theory’s predictions are *not* observed, we start to lose confidence in the theory. A mixture of positive and negative findings

may at some level be more confusing, but also may provide us with clues about where and in what circumstances a theory applies, and when it does not.

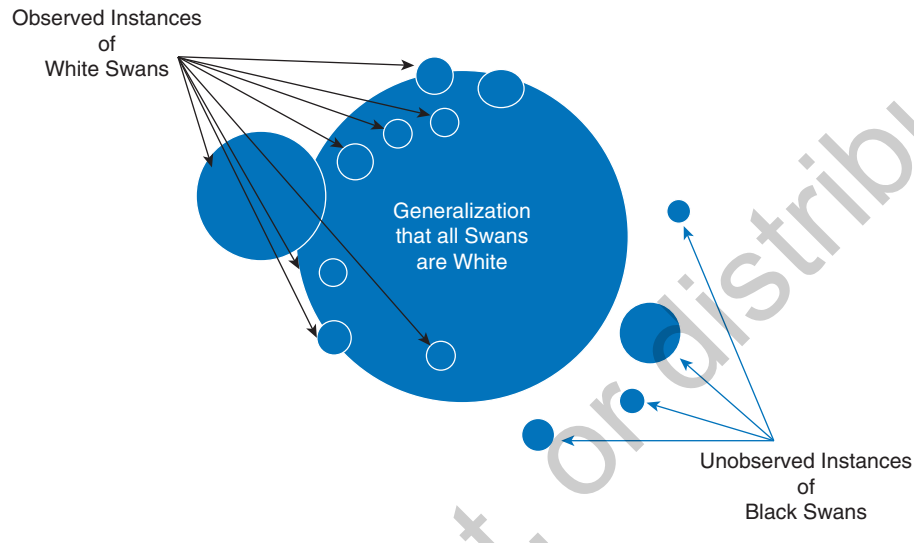
Another difficulty with deductive logic and the hypothetico-deductive method arises when we do not give other explanations an opportunity to be tested. Kuhn (1970/2012) made the point when he talked about how observations are often theory-laden and thereby do not allow us to see that another state of affairs—another theory that could also explain the result—is actually true. We can illustrate the problem by going back to the YouTube video referred to at the beginning of this chapter.

Note what the people who were interviewed did when they were asked to participate. Each of them first heard the sequence the interviewer gave—2, 4, 8—and presumably came up with the theory, which does seem both obvious and quite reasonable, that the second and third numbers simply double the number preceding it. They then take a situation where the theory should apply and offer three numbers that follow the theory—10, 20, 40 and 16, 32, 64 and 100, 200, 400—and in each case hear “Yes, that follows my rule.” However, note that in doing so, the guessers are not taking into account that there are other theories that could also be operating that might also account for the observed sequence.

Inductive Logic

A second form of reasoning illustrated in Figure 2.2, *induction*, begins with specifics and uses these to generate general principles. You *start* by observing, in other words, and then move from observation to theory rather than the other way around. A strength of inductive logic is that it arises from observation, such that any consistent patterns we identify are rooted in the real world. But there are problems associated with inductive reasoning. One is that, unlike deductive logic where, if the premises are true, the logical conclusion must follow, with inductive reasoning the best you can do is make probabilistic statements based on what you have seen. This in turn brings up the problem that what has been true up to now is not necessarily true from here on. While our inclination when we see a number sequence that goes 1, 2, 4, 8, 16 is to say that the next number will be 32, who is to say that the sequence does not then reverse itself to 16, 8, 4, 2, 1 in a continuing wave formation or start anew with triples this time, i.e., 1, 3, 9, 27. There may well be “safe” generalizations. For example, because we see the sun rise every morning and set every evening we are confident in saying that day and night will continue (and no doubt the planet would be in big trouble if that were not the case). And although these examples are trivial, the dynamics of the world we are trying to understand can also change overnight ...

FIGURE 2.2 Inductive Logic



as it did when terrorists destroyed New York’s World Trade Centre on the date that has become known simply as 9/11 or when Edward Snowden revealed the extent of the NSA and CIA’s spying on Americans.

Another limitation to inductive approaches is simply that there are many ways we can be “wrong” about our inferences. For example, we might go to the park and observe the swans and see they are all white. Our inductive logic might lead us to say (1) every swan we have observed is white; (2) therefore, we conclude all swans are white. But we can be wrong, as we realize as soon as we observe our first non-white swan. Indeed, falsification is just around the corner whenever we do a simple generalization in that way. As this example suggests, the problem arises by focusing too narrowly on one option, which unfortunately means that we can feel completely correct and yet be completely wrong either by being lazy and not looking for new examples or by maintaining ideological blinders that cause us to only look for and see information that is consistent with our beliefs or theory—this type of error in inductive reasoning is also known as *confirmation bias*.

One of the fascinating aspects of the “Can you solve this?” video is how unwilling people are to accept they are wrong. After hearing the interviewer give the example of

2, 4, 8 and guessing 16, 32, 64 and being told that “Doubling each number” is *not* the rule the interviewer has in mind, their first inclination is nonetheless to do more of the same, and they offer further examples that follow exactly the same pattern ... 5, 10, 20, then 20, 40, 80, and then 100, 200, 400. Interestingly enough, tunnel vision or confirmation bias is associated with very poor decision-making in other realms. It is a major factor in wrongful convictions, for example (e.g., MacFarlane & Cordner, 2008), as well as in misdiagnoses (and malpractice law suits) in the medical realm (e.g., Redelmeier, 2005). It is also a major reason why researchers who do qualitative research, who favor more inductive approaches, always preach both fascination with and the wisdom of looking for negative cases ... instances that violate your theory ... seeing those as even more informative than confirming instances.

Abductive Reasoning

A third form of reasoning illustrated in Figure 2.3, *abduction*, accommodates and goes beyond both deductive and inductive logic. It is somewhat different from the other two in several respects. First, it is less oriented toward prediction and hypothesis testing and more interested in inference and explanation—explaining the why and how of what *did* happen rather than speculating on what *will* happen. Shank (2008a) cites 19th century American philosopher Charles Peirce as an early proponent of abduction, which he explained using the following form:

Some event, X, is surprising to us.

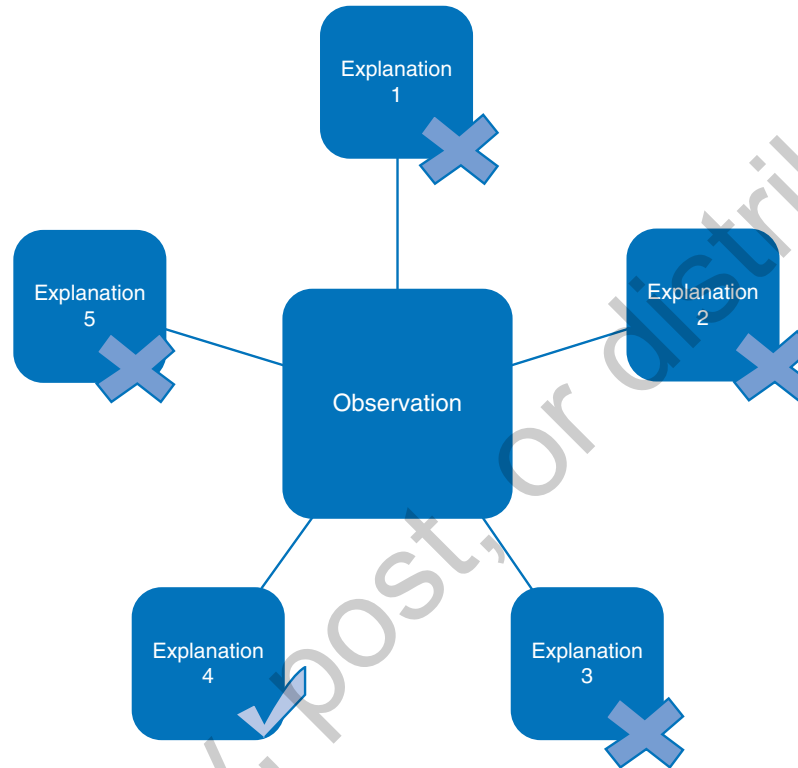
But if some explanation, Y, were in place, then X would be ordinary.

Therefore, it is plausible that X is actually a case of Y.

The key takeaways here are the idea that abduction seeks to offer “explanations,” and further that the measure of the adequacy of an explanation is its “plausibility.” Abduction is also known as “Inference to the best explanation” (Douven, 2017), which captures well the idea that abduction urges us to consider which of various different explanations best accounts for whatever has been observed. In doing so, it parallels the processes we use in many different research and other life situations.

Douven (2017) gives a number of simple examples of abductive reasoning at work. In one, we learn that Tim and Harry recently had a terrible argument that ended with them terminating their friendship. But then a mutual friend tells you that she just saw the two of them jogging together. What would account for this? Note how the example is dealing with a specific case and that you are asked for a plausible

FIGURE 2.3 Abductive Logic



explanation. The trick with abduction is to have as many rival plausible explanations as possible and then to decide through a process of elimination which of the explanations best accounts for the evidence. In the example given, the possibilities are pretty thin because very little information is given. We might posit that Tom and Harry resolved their argument and rekindled their friendship. Another possibility is that, even though their friendship has ended, they may have other dealings—e.g., a business they share—that needs attention and does not give them the luxury of ignoring one another. Another possibility is that the mutual friend may have mistaken the identity of one or both of the joggers they saw. Note how in each case the pull is to gather more information that would allow you to decide on the plausibility of each alternative.

In the case of the “Can you solve this?” video, an abductive approach would see any given person first thinking about what all the possibilities are when the interviewer gives the example of 2, 4, 8 exemplifying his rule. One possibility has been mentioned, i.e., that the progression starts with a number that is doubled and then redoubled. But there are many other rules that could be in effect. Some examples of rules that could potentially be operative with 2/4/8 include (1) list three even numbers; (2) list three single digit numbers; or (3) list three different numbers of increasing value. Once we start gathering some of the different possibilities, our attention can then turn to figuring out ways to determine which of the possibilities is most plausible.

It is in the closing portion of the video where we finally see someone being interviewed change tack. As the video proceeds and the people being interviewed become more exasperated at being told their theory is incorrect even though the numbers they are offering are consistent with the interviewer’s rule, one of them then says, “Well, now I’ll tell you three numbers that don’t fit the rule, and see what you say: 2, 3 and 7!” Much to his astonishment, the interviewer says, “That fits my rule.” Interestingly, the fellow’s first response is, “So the rule is that anything I say is okay?” But the interviewer says, “No, that is not my rule.” Nonetheless, the fact that 2, 4, 7 does fit the rule is now immediately informative. It immediately eliminates the “doubling” explanation and also eliminates the “even numbers” possibility we suggested, but leaves the other two, i.e., that the rule might be either “three single digit numbers” or “three numbers of increasing value.” How might we decide between those? All we need do is suggest the numbers 8, 9, and 10 because that sequence violates the “single digit” rule but not the “increasing magnitude” rule. If 8, 9, 10 were suggested, and the interviewer were to respond with, “That fits my rule,” that would eliminate “All single digit numbers” as the possible rule, while leaving “Each number is larger than the one before it” as the most plausible rule that we have come up with. Are there still other plausible options? Possibly. And that is one of the challenges to abductive reasoning—there might always be some other more plausible alternatives that we have not yet thought of and ruled out.

Although Shank (2008a) has argued that abduction is particularly well-suited to qualitative research, we would go a step further and suggest that abduction is a reasonable model for all research. The notion of “rival plausible explanations” appears throughout this book as a concept that underlies all the methods we will discuss (see Palys, 1989 for an early statement of this rationale). In any piece of research, the researcher must be sensitive to “what else” might be going on other than whatever putative explanation is being offered. The challenge for the researcher is always to

manage and control those rival plausible explanations as part of showing why the explanation offered is the most plausible.

WHERE DO RESEARCH IDEAS COME FROM?

Our description above of the three approaches to logical reasoning (summarized briefly in Table 2.1) sets the stage for telling you some of the different places that ideas come from for research. From deductive logic and the hypothetico-deductive method, you should start to appreciate the role of theory and theory development in suggesting research designed to test and thereby potentially extend or constrain a theory's reach. From inductive logic we start to see the role that raw observation in particular settings can play in theory generation and in providing fodder for further inquiry. The explanation of abductive reasoning should sensitize you to the central role that rival plausible explanations—identifying them, managing and controlling them, and testing for them—play in encouraging our creative juices and providing new routes of investigation. Noted methodologist Donald T. Campbell once talked about a “tribal” model of knowledge in which the role of each generation of researchers—who he referred to as “disputatious questioning truth-seekers”—was to come up with new rival plausible explanations and new ways of looking at the world that would go beyond the vision of their predecessors (e.g., Campbell, 1979b, 1986). Consider yourself encouraged.

Connecting With the Literature

If there is a “tribal” or collective element to the research community—which we believe there is—then “the literature” is where we store our tales of discovery. While

TABLE 2.1 Summary of Approaches to Theorizing

Deduction	Induction	Abduction
Also known as the hypothetico-deductive model, research begins with theory, from which hypotheses are deduced and then tested by gathering data. Sometimes known as a “top-down” approach.	Research begins with observation, from which empirical generalizations can be induced, and then, through analytic induction, attempts to develop a full-blown theory that adequately reflect the observed reality are made. Sometimes known as a “bottom-up” approach.	Moving away from prediction and hypothesis testing; research considers which of various different explanations best explains an observed phenomenon.

literature most often refers to things like books, book chapters, and journal articles, it can also include background sources such as encyclopedias; magazines; newspapers; government reports and information; reports from industries, NGOs, and associations; law reports, legal cases, and court transcripts; videos, audios, and images; datasets; and maps or spatial data. In short, any collection of published materials on a topic can be considered part of “the literature.” Since such a wide array of materials can be considered literature, one of the first challenges we are faced with is getting access to these materials.

Real and Virtual Libraries

There are several places you can go to locate literature on a topic you are interested in. One is the library—the heart of every university. If you are uncertain about what to do once you get to the library, ask your librarian about tours or look on your school’s library website under the “help” section where you are likely to find a wealth of guides, references, and answers to “frequently asked questions” that will help you familiarize yourself with the physical and virtual resources your library has to offer. Books, journals, media, databases, and other materials are *not* filed randomly, and a working knowledge of what’s available, where things are, and how to find them is invaluable. Knowing the general area in the library that contains material related to your topic of interest still provides splendid opportunities for browsing.

Increasingly, however, library buildings and the physical books and journals they hold are being supplemented and sometimes replaced with virtual materials that you can acquire from your institution’s online library catalogue. The catalogue of your institution’s library holdings provides you with a comprehensive list of all of the books, articles, reports, guides, FAQs, and digitized collections relating to your topic of interest that your institution owns. While searching your library catalogue is a great place to begin your quest for literature on your topic, it often reveals just the tip of the iceberg when it comes to the depth and breadth of extant literature on a topic because catalogue searches do not search all available databases, they do not map to specific disciplines, and they only return findings for materials that are owned by or accessible to your institution.

A second, and arguably more lucrative, place to start looking for literature is in *subject-specific databases*. Subject-specific databases generally catalogue materials published in a single academic discipline or a group of related disciplines. One major advantage of subject-specific database searches is that you can fine-tune or “*scope*” your search to find materials that have been produced by people working in specific disciplines such as health science, epidemiology, anthropology, or criminology. Another advantage is

that they provide you with valuable metadata or descriptive information about the resource such as title, author, keywords, abstract, number of pages, number and content of citations, and citation ranking. This metadata is vital for helping you sift through thousands or even tens of thousands of sources to locate the select few pieces of literature that are most relevant for your literature review objectives.

While databases offer a very powerful and efficient way to locate literature on your topic, using them is often time-consuming, more technically difficult, and dependent upon your institution having a paid subscription to access the database you want to use. Beyond this, it is important to keep in mind that the database you use can greatly impact the efficiency and success of your search for literature. Some databases are restricted to certain types of literature, published by specific publishers, within a particular set of fields or subfields. The larger and more comprehensive databases give you direct access to a wider array of literature (e.g., all materials from multiple disciplines as opposed to just books, articles, and reports published in the social or health sciences). Table 2.2 lists some of the most popular and inclusive databases that are used within the health and social sciences.

A third place to begin your search for literature is **Google Scholar**. Google Scholar is a publicly accessible web search engine that indexes the full text and metadata of literature across an array of publishing formats and disciplines. What sets Google Scholar apart from databases is that it provides a single catalogue of the tremendously large array of literature that is archived on the internet. In fact, the literature catalogued in Google Scholar is exponentially more than all of the subscription-based databases (such as the ones listed in Table 2.2) combined. Since the search engine that powers Google Scholar is built upon a sophisticated algorithm, it tends to be efficient, easy to use, and provides you with access to the most popular literature. Moreover, because it catalogues materials archived across various public and private domains of the internet, it is excellent for locating literature outside of standard academic publications or “gray literature” such as preliminary reports; institutional, internal, technical, and statistical reports; research memoranda; market research reports; reports of commissions and study groups; conference proceedings; and technical and commercial documentation.

While Google Scholar is an impressive search tool, it is important to keep in mind that it is not mapped to specific disciplines and it doesn't allow for use of more sophisticated search techniques, so it is not uncommon to return hundreds or thousands of items in your search results that you then have to sort through in order to locate the handful of materials that will be most useful for your literature review. Moreover, the sophisticated algorithm that the search engine is built upon is

TABLE 2.2 ● Popular Subject-Specific Databases

Database	Database Description
Criminal Justice Abstracts	Major criminology database: covers crime trends, prevention and deterrence, juvenile justice, legal issues, psychology, and more.
EconLit	The American Economic Association's electronic database, the world's foremost source of references to economic literature.
ERIC (Education Resources Information Center)	Online digital library of education research and information.
JSTOR (Journal Storage)	Multidisciplinary digital library of books and other primary sources and current issues of journals.
LexisNexis	World's largest electronic database for legal and public records related information.
MEDLINE/PubMed	A bibliographic database of life sciences and biomedical information. It includes bibliographic information for articles from academic journals covering medicine, nursing, pharmacy, dentistry, veterinary medicine, and health care.
Project Muse	Digital humanities and social science content for the scholarly community. MUSE provides full-text versions of scholarly journals and books.
PsycINFO	Comprehensive database of abstracts of literature in the field of psychology produced by the American Psychological Association. Contains citations and summaries from the 19th century to the present of journal articles, book chapters, books, and dissertations.
PubPsych	Open access information retrieval system for psychological resources.
Scopus	Abstract and citation database of peer-reviewed research literature (book series, journals, and trade journals) from life sciences, social sciences, physical sciences, and health sciences.
Semantic Scholar	A multidisciplinary artificial intelligence backed search engine designed to retrieve the most important scholarly papers and to identify the connections between them.
Sociological Abstracts	Major sociology database with an emphasis on sociocultural topics.
Web of Science	Multidisciplinary database, including coverage of criminology, psychology, law, labor, gender, political science, policy, sociology, and more.

proprietary, so the searches are “optimized” in such a way that the results are geared toward most popular or newest (or some other unknown factor) as opposed to the best or most relevant for your needs. Finally, and perhaps most importantly, unlike the materials located by academic databases, those located by Google Scholar are

TABLE 2.3 Main Advantages and Disadvantages of Different Sources of Literature

	Advantages	Disadvantages
Catalogue and library search	<ul style="list-style-type: none"> • Gives you a comprehensive list of books, articles, reports, etc., that are available through your institution • Searches books and articles at same time • Particularly good for book searches • Good for getting you access to actual holdings 	<ul style="list-style-type: none"> • Does not search all databases • Does not map to specific discipline
Subject-specific databases	<ul style="list-style-type: none"> • Mapped to a specific discipline • Search limiters unique to discipline, allow fine-tuning of search results • Records search history and search sets • Can use subject headings that are key to a literature review 	<ul style="list-style-type: none"> • Time-consuming • More difficult due to technical search aspects • Access to these databases is often by paid subscription only
Google Scholar	<ul style="list-style-type: none"> • Provides catalogue of a lot of literature • Helps you identify the most popular literature • Efficient due to use of algorithms • Great for searching for known items and when using unique terminology (words) • Excellent for locating literature outside of standard academic such as repositories, legal rulings, and grey literature 	<ul style="list-style-type: none"> • Database not mapped to specific discipline • Does not allow for use of more sophisticated search techniques • Searches are optimized so they will be biased • Emphasizes new or popular first • Proprietary algorithm makes it hard to know how searches are being done and what is and is not being located • Does not actually provide access to the actual materials, only links to materials that are often stuck behind pay walls

frequently locked behind pay walls making it more difficult and expensive to actually access them. Table 2.3 summarizes some of the advantages and disadvantages of different sources.

Take a Broad View of Your Topic

Your initial review of the relevant literature will sometimes be cursory and sometimes quite exhaustive, but you do owe it to yourself and to your colleagues to have a look at what's been done in your area of interest. By familiarizing yourself with the literature, you can find out what theory, research, and/or policy has been constructed; you can see how others have approached finding answers to particular research questions, the problems and successes experienced by others in the area, and what gaps in theory and research remain.

Of course, “the literature” is a big place, and one big question you have to address is the one of “which literature?” you should look at. One of the biggest mistakes novice researchers make is that, when they examine “the literature” on a topic, they construe the topic too narrowly and too concretely. Suppose, for example, that you’re interested in understanding the decisions made by customs officials at border crossings. How do they decide whether to wave someone through without further scrutiny or pass the person on to their colleagues for more detailed questioning and examination? What makes customs officers suspicious about some people but not others? What makes them decide to look through a person’s suitcases, take a person into an interrogation room, or search or even dismantle someone’s car?

If you begin your literature search by looking for studies that deal with that specific situation—customs agent decision-making with respect to the identification of individuals who warrant further scrutiny—you’ll find very little. Many people would mistakenly leave off searching there, saying, “Gee, I guess there’s nothing on this topic, so I’ll just have to start off on my own.”

But stopping there is quite inconsistent with the spirit of doing research. Any piece of research involves constantly working back and forth between theory and data, that is, between the abstract and the concrete. Seen in this manner, a researcher would rarely be interested in the decision-making of customs officers per se, unless they are doing a project in collaboration with those providing border services. But in most cases, if that’s as far as our interest goes, we might as well look at when people choose to mow their lawns or why some people prefer chocolate and others vanilla when they buy ice cream. The question to be asked is, “What makes the decision-making of customs officers more ‘interesting’ (from a research perspective) than someone’s choice of ice cream?”

Let’s first consider what it is that customs officers’ work involves. They are government employees whose job involves security and social control. They are the first Americans that a border crosser meets, and their job involves keeping apparently “nasty” people or other perceived “undesirables” (e.g., people who are escaping prosecution; people who are trying to bypass “normal” immigration channels; “terrorists”) out of the country; keeping nasty things (e.g., unsafe products) out of the country; and ensuring that people who bring goods into the country pay the relevant duties and fees. In the process of executing their jobs, customs officers have an incredible amount of power: you must answer any question they ask, they can seize your car or other belongings, and they can subject you to processes that most of us consider invasive and undesirable (e.g., interrogation, body scans, strip searches). But if they interrogated, scanned, and searched every would-be border crosser, there would soon be lineups miles long and many exasperated people would be calling for

their heads. Instead, customs officers are given discretion and are expected to use that discretion wisely. Perhaps only one in ten persons is asked more than a few simple questions (e.g., Where do you live? How long have you been away? Do you have any goods to declare?), and only a small sample is subjected to more detailed searches of their persons or belongings (e.g., people who fit the profile of a “drug mule” or “terrorist”). But where in the literature can we look beyond “customs officers”?

One “trick of the trade” that Howard Becker (1998) calls the “**Bernie Beck trick**” is a very useful device here. The trick gained its name because Becker had the office next door to Beck’s when both were at Northwestern University in Chicago, which led to Becker hearing Beck pose a certain challenge to his students many times over the years when they would come in and tell Beck there was “no literature” on a topic or had completed their research and did not know where to go next. The challenge was: “Tell me briefly what your research is all about, but without using any of the identifying characteristics of the actual case.” If he were to issue the challenge to someone studying customs officers, it would have been gone something like this: “Tell me what your research is about, but without using the words ‘border,’ ‘customs officers,’ or ‘screening.’” In response, the researcher might say, “Well, basically I’m looking at a situation where one individual has to form an impression and make a discretionary decision very quickly about another individual in very ambiguous circumstances with very little if any feedback as to whether the decisions they make are ‘correct.’”

Given this more general description, you should see that there are now several “relevant” literatures that the researcher might look at, including (1) the various literatures on how people make decisions in an atmosphere of uncertainty (since, after the person leaves without being checked, we can never know for sure whether they did indeed smuggle something into the country or import a dangerous weapon); (2) the “impression formation” literature, which deals with factors people take into account when “sizing up” another person they meet for the first time; these might include studies that look at both “lay people” and “professionals” (e.g., social workers, clinical psychologists); and (3) the “discretion” literature, which looks at the use of discretion by agents of social control (e.g., police officers, judges, parole boards, psychiatrists). And, of course, this is not to say that you should forget about checking for any existing literature on “customs officers” as well, since the results of such studies might help us understand more about who these people are, how they are trained, how their job is defined, how they perceive their job and their role, and so on, which would be useful in placing them in the larger realm of individuals who make decisions in the theoretical realms you’ve identified.

You might think of other areas that could be relevant to the study of customs officers and their decisions (e.g., whether and how stereotyping and racist or classist attitudes enter into the decision-making process or a study of interview techniques). But the above discussion should suffice to show that “the relevant literature” for such a study includes far more than just whatever research deals with that specific decision by that specific group. Belonging to the community of scholars who engage in research means always looking for ways to benefit from the work of others, whether for positive reasons (e.g., to incorporate methods they’ve used or to include factors shown to be important) or negative ones (e.g., to avoid repeating mistakes and pursuing dead ends). And as this text argues, your search for “relevant” literature should cast a necessarily wide net.

Additional Techniques for Searching the Literature

It should be clear by now that the quality of your literature review will depend on the quality and relevance of the literature that goes into it. Knowing where to go to find literature and developing better ways to construe your topic once you start looking for literature is only half the battle. Becoming skilled at finding literature also requires that you employ specific search strategies and techniques to help you scope your search so that you are able to locate the most relevant and important literature. There are several important search strategies and techniques that you can employ.

The most basic search strategy and one that most people start with when they begin to delve into the literature is the *simple subject search*. Articles and books frequently have 3–8 broad subject headings assigned to their bibliographic record as metadata. These subject headings are the most basic and universal way of classifying a particular piece of literature. Searching literature by subject will return materials that are specifically ABOUT your topic instead of just mentioning it.

While subject searches are a good way to start to narrow down the literature to locate relevant materials, they frequently return quite a broad array of materials, many of which are not directly relevant to your interests or needs when it comes to writing your literature review. In order to start to restrict the scope a bit more, it is a good idea to identify a narrow set of *keywords* or terms (and their synonyms and antonyms) that are most associated (or not associated) with the topic, problem, or question that your literature review is structured around. Combining subject and **keyword searches** will most certainly yield fewer results while generating more relevant materials for your literature review. Depending on how successful your keyword restricted search is on helping you retrieve literature, you may find that you have to narrow down or expand your list of terms.

As you search you will likely find better keywords as you go. Looking at the metadata associated with keywords that you identify as being potentially most useful is a great way to cycle your search by revising your keywords. Beyond combining subject and refined keywords in your searches, you can further restrict the scope of your searches by directing the search engine to restrict searches to specific disciplines, languages, date ranges, study types, and geographic regions. From here you can order your search results by date in descending (i.e., newest to oldest) or ascending (i.e., oldest to newest) order, allowing you to locate the most contemporary literature or helping you to quickly locate the seminal source that everyone else quotes or references.

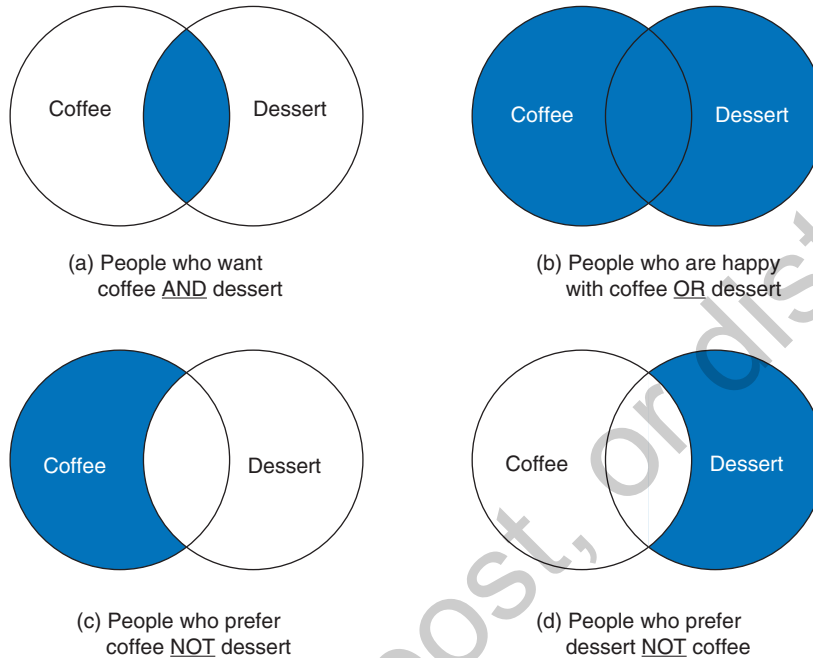
As you become more comfortable using more elaborate combinations of subjects and keywords and restricting the scope of your searches, you will probably want to start to take advantage of some more advanced techniques such as the use of **Boolean operators**. Boolean operators allow you to combine keywords with modifiers in order to generate more complex searches. There are numerous Boolean operators, but the three main ones are AND, OR, and NOT. To illustrate the way they work, imagine you are at a restaurant with family and friends and have just finished dinner, and the waiter comes to check on whether anyone is interested in coffee (apologies to the tea drinkers) and/or dessert. The waiter finds that people fall into one of the four groups as illustrated in the Venn diagrams shown in Figure 2.4.

Figure 2.4(a) shows the situation where people want coffee AND dessert, i.e., the area in the overlap where both elements are present. Figure 2.4(b) shows the most inclusive situation where people are happy with whatever arrives, coffee OR dessert. Figure 2.4(c) and (d) show where people want one, but NOT the other.

Now instead of coffee and tea, imagine you are doing a library search because you are assigned a paper on research methods. A search for research AND methods would retrieve all literature containing the keyword research AND methods. Similarly, the OR operator placed between keywords will broaden your search to literature that contains any of the two or more keywords (e.g., research OR methods will return all literature related to research OR methods). Placing the NOT operator between keywords will narrow your search to materials indexed at one keyword and not another (e.g., methodology NOT methods will only return literature related to methodology). You can join multiple operators together to narrow your search even further (e.g., research AND [methods OR methodology] will return all literature indexed as research methods and research methodology).

There are two other handy variations you can employ as well. The first is when you are looking for an exact phrase. If you were to put the keywords SOCIAL AND

FIGURE 2.4 ■ Boolean Operators AND, OR, and NOT



HEALTH RESEARCH METHODS in a search engine, the default assumption is that the words are separated by OR, such that you would probably get back thousands of links for all sources that include the word SOCIAL, thousands more that contain HEALTH, thousands more for RESEARCH, and so on. But if you were to put quotation marks around the phrase, so that it appears as “social and health research methods,” then only those links that include that whole exact phrase will be returned.

A second variant is useful when various forms of a word are possible, and you want to ensure that all the various possibilities are included in the search. The operator that is used there is the asterisk (*), which is essentially a **wildcard** saying that you are open to receiving whatever variations on the root word exist. So, for example, if you were to make method* your search word, the search engine will include method, methods, methodology, methodologist, methodologian, and any other word out there that begins with METHOD. Placing the wildcard in the middle of a keyword instructs the search engine to retrieve results with multiple spellings of your

keyword. For example, `behavior*r` will return literature indexed with the keywords `behavior` and `behaviour`, which would ensure that you retrieve links that include both the American (`behavior`) and British/Canadian (`behaviour`) versions of that word.

And of course these can be combined with other Boolean operators. For example, `research AND method*` will return items indexed at `research method`, `research methods`, `research methodology`, and so forth.

Creating and Managing a Personal Digital Archive

We recommend that you always download and save a digital copy of relevant materials you find in the course of your searches of the literature. There are several reasons for this. First is that it is far lighter and more convenient to have a library of files at your disposal on your laptop or flash drive than to haul around heavy things like books or stacks of photocopied articles. Second is that the biggest challenge you face these days with all of the information at your disposal is actually going through and managing it, and it is far easier to do so with electronic materials than physical ones. Third is that developing your own electronic archive of readings in the substantive areas you are interested in will be an invaluable tool as you move through your career.

The two of us now manage our materials as much as we can electronically by downloading documents, or scanning and creating our own pdf or docx documents, cataloguing them with a citation software such as Zotero or Mendeley, and then incorporating them as part of a “project” in an analysis program known as NVivo. We will be talking more about NVivo in Chapter 13, which deals with the analysis of nonnumeric data, where the program is already well-recognized as among the best nonnumeric data analysis software programs available, but the program’s usefulness as an information management tool is only now being more fully recognized (e.g., Palys & Atchison, 2012).

Briefly, incorporating documents into NVivo involves creating an overall “project” into which all “data”—documents in this case—are imported. Two very powerful processes are enabled by doing so. The first is that all of the documents within the project are searchable, which is rather like having your own personal search engine that only goes through the materials that you have included within the project shell. The second is that you can do anything electronically that researchers formerly would do with highlighters—tagging particular sections with the concepts they include, noting interesting quotes, making memos or notes (annotations) of your thoughts about particular passages of your material, and so on, so that any tagged passage or

thought you had about that passage can be retrieved at will. The program also introduces new options that would not be possible manually, such as autocoding, word cloud coding, running a network analysis of bibliographies to help identify seminal authors in a field, and so on. These will be described in greater detail in Chapter 13 on “analyzing nonnumeric data.” Suffice it to note for now that these possibilities arise because the “data” the program is capable of managing can be any sort of text, audio, or image file, which makes it as useful for managing your literature as it is for managing qualitative data.

Theory as a Source of Research Ideas

Theory is also an important source of research questions simply because that is what good theory is supposed to do. A theory is essentially a set of *conceptually grounded propositions* and a delineation of their *interrelationships* that, taken together, purport to explain a phenomenon or set of phenomena. One function of theory is to help make sense of the world or of a particular class of phenomena. In doing so, theories also guide research, which makes them both powerful and constraining.

Perhaps an example will help here. Suppose we’re interested in explaining why some people do not use condoms when they have sex with casual sex partners. An infinite number of factors could potentially “explain” failure to use a condom during casual sex—everything from not having one available, to individual religious beliefs, to lack of knowledge about the “risks” that can be associated with not using condoms.

A theorist takes a particular subset of these factors and tries to offer a convincing explanation of why and how they combine to generate condom use or avoidance. These speculations, made public, give theorists and others a research direction to pursue by offering propositions that can be tested. For example, advocates of health belief theory (HBT) such as Rosenstock (1974) theorize that health-related behaviors are the result of a rational decision-making process whereby people evaluate (1) the severity of risk associated with a particular behavior; (2) the degree to which they believe they are susceptible to such risk; and (3) the benefits and barriers (practical and psychological) they expect to gain from acting in a particular way to avoid or reduce such risks. A researcher guided by this theory would thus want to seek information not only about the type and frequency of sexual activities people engage in but also about (1) the severity of risk they believe they are or would be exposed to if they did not use a condom; (2) the extent to which they believe their own behavior choice—to use or not use a condom—creates or mitigates risk during casual sexual encounters; and (3) the benefits or other consequences they feel arise from their choices.

But while it makes logical sense to ask about the elements a theory you are advancing or testing says are important, note that there is also a downside to this focusing of attention. Because HBT focuses on individual cognitive processes as determinants of sexual safety behavior, researchers employing this theory focus all their energies on measuring people's opinions and beliefs about their likelihood of risk and completely ignore other cultural, social, and situational factors that also might play a significant role in a person's risk-taking behavior. For example, some other health researchers began to look toward social ecology theory (Bronfenbrenner, 1979) to help fill in what they saw as theoretical gaps in explaining health behavior in general and condom use in particular. Social ecologists maintain that health behavior such as condom use is influenced by a combination of personal factors (e.g., individual knowledge, attitudes, skills, and beliefs), your relationships (e.g., ties to family and friends), organizational factors (e.g., educational, occupational, religious, recreational organizational structures), community factors (e.g., belonging to and participation in organizational activities), and policy frameworks. As this suggests, an important dimension on which theories vary is in their prospective *comprehensiveness*.

In sum, "good" theories are useful devices because they help coordinate research by *providing a research focus* and by *implying hypotheses* that can be tested empirically. Their weakness is that they may blind you to other factors or other perspectives that are beyond the scope of the theory. This suggests an important consideration when researching or testing a given theory is whether the test is solely of elements internal to the theory or whether the situation allows for other, potentially competing or rival plausible explanations to be considered as well.

Applying Theory to Situations

Many research ideas emerge from theory. If a theory states that some set of events *should* go together, you can test the theory by thinking of a specific situation in which the theory should be able to predict or account for what occurs. For example, cognitive dissonance theory (see Festinger, 1957) suggests that people will feel differently about things after they have committed themselves to a course of action than before. In a now-famous field experiment, Knox and Inkster (1968) decided to test that theoretical proposition at their local racetrack. They approached two groups of bettors—some who were in the lineup waiting to place their bets, and others who had just finished placing their bets—and asked them how confident they were their horse would win. Sure enough, those who were asked *after* they had placed their bet how confident they felt about their wager expressed significantly greater certainty about whether their horse would win than those who had not yet made it to the betting window, even though the difference between the two situations was less than a minute.

Extending or Limiting a Theory's Coverage

Another procedure for generating research ideas is to try to *extend the coverage* of an existing theory. One person might have posited a theory that explains a certain social dynamic within business organizations. You'd be making a significant contribution by showing that the same theoretical principles also apply to illicit markets run by drug dealers or organized crime. Conversely, you'd also be making a contribution if you were to *point out limitations* to the applicability of existing theories. Theories of aggression, for example, have typically been developed to account for aggression toward minority groups and/or sources of frustration. But do these theories also account for violent behavior toward intimates, child abuse by parents, or wife assault by husbands?

Offering Alternative Explanations

Yet another source of research ideas involves trying to formulate *alternative explanations* for a given phenomenon, as is very much in keeping with the abductive reasoning we outlined above. For example, early criminological theories (e.g., Lombroso, 1911) saw those who went through the justice system as “born criminals” and tried to ascertain the ways in which “criminal” differed from the rest of us. But later theorists (e.g., Rubington & Weinberg, 1968) demonstrated that many, if not most, of us have indulged in “criminal” behavior at various points in our lives. This finding shifted the research focus of interest from identifying who the “born criminals” in society were, which was based on the assumption that some people do criminal things while others do not, to the ways that society reacts to criminal activity and the process by which some persons or actions are labeled “criminal” while others are not.

Wagner (1984) refers to this process of theory development as *variation* and offers numerous other examples of theorists building on one another's work by offering competing explanatory mechanisms for similar phenomena. Also, note how one role of theory in science is to generate research possibilities; if a theory doesn't suggest research possibilities, it's not a very good theory. Perhaps even more importantly, in order to be considered “scientific,” a theory must be capable of being tested and disproved. If there are no data that can possibly lead us to say, “Oh, I guess we were wrong,” then we are not talking about theory or science, but about faith, ideology, and dogma.

A list of ways that theory can be a source of research ideas is summarized in Table 2.4.

TABLE 2.4 Different Ways Theory Can Be a Source of Research Ideas

Theory as Source of Ideas
<p><i>Theory as explanation of a phenomenon</i> Theory A explains part of a phenomenon BUT it is limited in its scope. Is there a theory that explains more or more completely explains the phenomenon?</p>
<p><i>Test of theory</i> A good theory will generate hypotheses. If we test them, can we find support? How well does this theory explain this phenomenon?</p>
<p><i>Extend coverage of theory</i> A theory explains one phenomenon, but can it explain other phenomena as well?</p>
<p><i>Alternative theoretical explanation</i> Which theory offers the best explanation of this phenomenon?</p>

Inductive Sources of Research Ideas

We've seen that theories are an integral starting point when employing a deductive approach to science and that they can be very useful for those who take a more abductive approach. But what about for those employing more inductive approaches? Inductivists place no less emphasis on theory than deductivists, but they disagree over whether theory should *guide* or *emerge from* the research process. Recall that, for deductivists, you *begin* with theory, and then “good” theory suggests or implies what to research. In contrast, inductivists argue that such theory—particularly when it is not grounded in thorough observation—is unlikely to be profound and may represent little more than a premature imposition of theoretical blinders that says more about the theoretician than about the phenomenon under consideration. They suggest that ideas and theories should emerge from interacting with and observing the phenomenon itself.

Recall that, from within qualitative perspectives, the inductive (grounded) approach to data gathering and theorizing is encouraged, and “intimate knowledge” of the phenomenon under consideration is not considered a liability. Accordingly, while some individuals schooled only in more quantitative approaches might be worried if you are “too close” to a phenomenon of interest because of the propensity to “overidentify” and the concern that you might be unable to remain “appropriately” detached and analytical, researchers working within a qualitative framework are more likely to recognize that those who have undergone particular life experiences may

bring special insights to their research because of having experienced a phenomenon from the “inside” (e.g., Faulkner & Becker, 2008).

Starting From Where You Are

Consistent with this view, Lofland, Snow, Anderson, and Lofland (2006) suggest that one way to begin research is to “start from where you are”; that is, to begin with your own life situation and the concerns and issues that arise therefrom. Dozens of examples can be cited of researchers who did exactly that:

For example, Gary Alan Fine’s Gifted Tongues (2001), a study of high school debate and adolescent culture, was connected to his son Todd’s distinguished career as a high school debater. In a similar vein, John Irwin’s interest in The Felon (1970), in Prisons in Turmoil (1980), and in The Jail (1985) was intimately related to his own felony conviction at the age of 21 and the five years he spent in a California state prison. And Mary Romero’s study of domestic workers (Maid in the U.S.A. 1992) may be said to have had its origins in the fact that as a teenager she had worked as a domestic, as had her mother, sister, relatives, and neighbors. (p. 10)

Starting from where you are has several advantages. You bring (1) an interest in the research topic, because of its meaningfulness to you, that will help sustain you through the persistence of effort required to actually complete a piece of research; (2) insights into those aspects of the phenomenon with which you are familiar that, ideally, will allow you to ask “good questions” in a manner that is meaningful to people in that milieu; and probably (3) knowledge of at least some others who are in the same position as you, which may help provide access to needed research sites and to an initial sample of people you can approach regarding their experiences.

At the same time, there are also potential potholes in this road that need to be avoided. The first is that, as an insider, you come with baggage—beliefs about “how things work,” or “what the problems are,” that you will have to get past to ensure that people who do not think like you are included and feel free to express their views. Associated with this is the idea that you have to be open-minded about what you will find and ensure this is not just pseudo-research whose answer is a foregone conclusion because you only look at things and talk to those who will confirm your point of view. Less malevolent, but equally problematic, is that you and your participants’ familiarity with the situation may make you less likely to ask questions about things

that “everyone knows” to be true, which may or may not be the case: what you believe “everyone knows” may not in fact be shared by “everyone,” and it is often the case that what “everyone knows” to be true isn’t.

Starting from where you are also can be problematic because of role conflicts that can emerge from making part of your life a research site. Suppose you’re employed as a nurse, for example, and want to do a study regarding doctor–nurse relationships. Information derived from interviews with doctors and nurses in the ward where you work might be problematic when and if your role as a researcher creates role conflicts in relation to your duties as a nurse. For example, as a researcher, you are normally expected to keep the source of everything you hear confidential; as a nurse, there may be reporting requirements associated with your role in which you are supposed to report certain categories of behavior to your union, hospital officials, or supervisor. Even if you *are* able to compartmentalize your role for the duration of the study—something you are ethically obliged to do to ensure your primary interests are those of the research participants—once the study is completed, you go back to your former role. But you now have information you might not otherwise have obtained about certain people, information you can’t simply “forget.”

A third potential problem arises when you are so embedded in a situation that you are unable to rise above it. The trick in starting from where you are is to use the insights to be gained from your own experience, but then to activate your “**sociological imagination**” (as Mills [1959] termed it) and be able to see yourself as one instance of many, thereby helping to contextualize your own experience. This is sometimes easier said than done. There is a saying, “If you want to know what water is, don’t ask the fish” (see Hagan, 1989, p. 157). It’s sometimes very difficult to see what’s “interesting” about our lives, in the social or health science sense, when we are too wrapped up in experiencing them.

Observation as a Source of Ideas

As you might expect, research ideas within the inductive framework emerge through observation coupled with the natural curiosity of the social or health scientist who inevitably asks “Why?” or “How?” You might begin with a particular phenomenon that interests you (e.g., unemployment, criminality, depression, the availability of organic food, people buying memberships in fitness centers, the surge of interest in “designer” dogs) and then try to suggest and test out factors that might influence it. Where does it come from? Who does it? Is there more of it in the summer than the winter? Are the patterns the same or different in the United States and Australia?

It was observation of this sort coupled with asking “Why?” that led Emile Durkheim to formulate his classic work (1951) on suicide. He began by observing that countries differ in their predominant religious affiliation and that they also tend to differ in their suicide rates. This observed covariation ultimately led him to formulate his ideas that suicide is affected by both social regulation (norms) and social integration and group solidarity.

Intensive Case Studies and Experience Surveys

Systematic observation in the context of *intensive case studies* is another useful source of research ideas, still within the inductive framework. Many of Jean Piaget’s theories on child development emerged from observing his own children, for example, while many of Sigmund Freud’s came from his discussions with clients. Similarly, if you’re new to an area of research, an *oral history* or broader *experience survey* may suggest research ideas. If you want to study prejudice and discrimination toward minority groups, for example, you could talk to a Japanese person who lived in the internment camps in California during World War II, a Jew who lived in Germany at the same time, to Muslim women in North America who choose to wear the hijab, or a Maori in New Zealand. Be careful, though, not to let this process steer you away from a review of the relevant literature. Also don’t assume that the first person you talk to is necessarily representative of their group. When doing this sort of exploratory research, talk to and observe as diverse an array of people and situations as possible.

Table 2.5 summarizes the different ways that inductive approaches can be a source of research ideas.

TABLE 2.5 ■ Different Ways Inductive Approaches Can Be a Source of Research Ideas

Inductive Approaches as Sources of Ideas

Starting from where you are

Beginning with your own life situation. The trick here is to see your situation as part of a bigger phenomenon by seeing yourself and your situation as one of many.

Observation/experience

In our daily lives and when engaged in more systematic observation, we come across phenomena that arouse our curiosity and lead us to ask “why?” or “how?” it came about.

Case study/experience survey

Research ideas also can arise when we look at particular cases or people who have undergone life experiences that interest us.

Ideas From the Research Process Itself

A third general place research ideas arise is during the actual process of doing and reading about research.

Replication

Replication of prior research can serve a useful function. Although most professional journals aren't interested in publishing a straight replication for its own sake (e.g., Kelly, 2006; McNeeley & Warner, 2015), situations may arise where the replication provides interesting information. For example, many older studies that looked at sex differences might be interesting to replicate now that the sex roles in our society have supposedly undergone a major transition over the last few decades. Similarly, studies based in Canada or Europe might be replicated in the United States if you had reason to speculate that some aspect of the US social context might yield different results.

When Technologies Open New Doors

A special occasion arises when new technologies open doors that previously were closed and thereby provide new opportunities for replicating earlier research with newly accessible samples or moving into areas that were previously inaccessible. There is a wealth of research that was conducted during the mid to late 20th century that needs to be replicated. This research involves looking at the impact of new technologies on social and health related phenomena and developing a better understanding about how digital technologies have affected the kinds of data available to address our research questions.

Another door that has opened with the advent of digital technologies and the internet is with research methods themselves. There were decades of study that went into advising us on how to design a mail-out questionnaire so that it will be most inviting, for example, or how to make an engaging survey on paper. Digital technologies have fundamentally changed the look, feel, and mode of administration of the traditional paper-and-pencil survey, yet very little research has been done devoted to see which of the old rules still apply.

The internet and the wide array of digital technologies that surround it also have brought together communities of persons, particularly through blogs, podcasts, instant messaging, and social network and media spaces, who otherwise would be very difficult to locate in any significant numbers. Chris does research involving the sex trade, for example; in this field much research has been done on sex trade workers,

but very little had been done regarding their clients because of difficulties in locating and contacting them. With the opportunities afforded by the internet, Chris ended up conducting one of the first large-scale studies of sex worker clients when more than 500 clients responded to his solicitations to participate in an anonymous internet-based survey of persons who had paid for sex (see Atchison, 1998; Atchison, Lowman, & Fraser, 1998). As new technology develops and becomes more integrated into our daily lives, there is no end to the new research possibilities that will arise for members of the social and health science communities to pursue.

Challenging Prior Research

You also can generate new research by *challenging prior research*. For example, earlier research into the day-to-day lives of sex workers found that a very high percentage of women who sell sexual services had experienced violence on the job. Tamara O'Doherty (see 2011a, 2011b) did not doubt that result, but wondered whether that finding was true throughout the sex industry. She soon had the opportunity to interview a small sample of women who worked in off-street venues such as massage parlors and escort agencies and found that violence in off-street venues was actually quite rare. This suggested that violence is not something that is integral to the industry, but, rather, varies depending on other ecological and situational factors, which she proceeded to investigate in subsequent research.

Clarifying Underlying Processes

The idea of “clarifying underlying processes” arises because many treatments, therapies, and programs actually comprise multiple interventions. Given an overall finding that a certain treatment, intervention, or program is effective, a useful next step would be to determine *which* aspects of the intervention, treatment, or program actually produced the observed effect. One researcher might find, for example, that a particular group therapy program led to some positive social outcome for the participants. But what *specifically* about the program led to that success? Was it the individualized attention? The opportunity to practice new skills? A change in self-concept? The presence of social support? An overall finding that a new therapy is effective can be followed by research that attempts to analyze the processes involved in an ongoing process of program development. For example, Chris is currently involved in a large-scale evaluation of a population-based screening and monitoring tool used to assess and identify special learning needs of students known as response to intervention (RTI). A central objective of the evaluation is to obtain an in-depth understanding of RTI processes in diverse contexts as they unfold over time and to examine diffusion of the RTI model within

school systems. By better understanding the processes underlying RTI, the research team hopes to be able to inform the development of RTI policies and practices that can effectively address adoption and implementation inequalities.

Resolving Conflicting Results

Occasionally the literature contains conflicting results, and you may want to do research that attempts to *resolve the conflict*. For example, the business literature that deals with the effects of job enrichment shows mixed results from study to study; sometimes job enrichment leads to more positive job satisfaction, while other times job enrichment either has no effect or sometimes even has a negative effect on job satisfaction. Malka and Chatman (2003), and Saari and Judge (2004) are among those who have tried to account for these conflicting results by focusing on the needs and interests of the employees whose jobs were being enriched. They found it useful to distinguish between employees for whom the job or career itself is intrinsically rewarding versus those for whom their job is simply a job and valued only to the extent it gives them the time and/or money to be able to indulge in other domains of life they value more highly.

Employees who looked to the job itself as a source of satisfaction became more satisfied with their jobs the more enriched the job became—greater responsibility, more autonomy, and so forth—while increasing extrinsic rewards such as income on its own tended to have little or no effect on their job satisfaction. The prototype here would be the workaholic, i.e., someone who loves what they do and is happy to do more because of the satisfaction it affords. In contrast, employees for whom jobs were instrumental to satisfaction in other domains responded positively to extrinsic rewards such as more income or longer holidays, while showing reduced job satisfaction in response to job enrichment. If a job is important only because it provides a source of income that allows a person to do the things that are really important to them—spending time with family and friends, traveling, or acquiring material possessions of one sort or another—then greater responsibility only gets in the way, while greater income is the key to their heart.

Analogy

Research also may be generated on the basis of *analogy* to other domains. William McGuire (1973), for example, took the immunization model from biology and tried to apply it to the realm of attitude change. In biology, organisms are immunized against various diseases by giving them vaccines that actually contain weak strains of the disease. When McGuire tested out this same logic in the attitude area, he found

similarly that people who were first “immunized” by hearing samples of arguments that might be used against their own position were much less likely to change their attitudes than were those who had not been “immunized” when both were exposed to arguments in opposition to their own opinion.

Surprises: Anomaly and Serendipity

The terms **anomaly** and **serendipity** refer to research that begins or is redirected because an unexpected and surprising state of affairs arises. Anomalies are situations that should *not* exist according to the theory that’s guiding the research. An anomaly is “a fact that doesn’t fit” and hence requires explanation for the deviation.

In his classic *The Structure of Scientific Revolutions*, Kuhn (1970/2012) argues that anomaly is a significant contributor to scientific innovation, although a state of affairs must first be *recognized* as an anomaly before the real process of discovery begins. He provides several examples of anomaly in the natural sciences but also notes a number of instances where the same state of affairs clearly existed prior to someone’s “discovery” of the anomaly. Yet the anomalous situation had been ignored, rationalized away, or otherwise not appreciated by the earlier researchers.

Similar to anomaly is serendipity. While anomaly refers to unearthing disconfirming evidence in the process of an ongoing inquiry, serendipity refers to unexpected findings that are virtually stumbled upon while looking for something else, such as the prospector who digs for gold and strikes oil. Once again, Kuhn (1970/2012) notes that recognition of the event precedes “discovery” and that the history of science is replete with examples of individuals who ignored outcomes or considered them a mistake instead of taking the inferential leap required for discovery.

In sum, it helps to be in the right place when puzzling anomalies and surprising outcomes occur, but you also need to be open enough to recognize their significance. A comprehensive understanding of the relevant literature makes both more likely.

The Supplied Problem

Many studies come about because someone *gives* you a problem. Such is particularly the case in applied settings, where myriad questions require systematic, empirical answers: Is our program effective? How can we better meet our objectives? What will happen if we change our intake criteria? How can we decide who has the best chance to benefit from our program?

For example, the two of us were approached a few years ago by a corporation that publishes magazines in the health and fitness area and was interested in gaining a

better understanding of the production, marketing, and consumption of health food products—anything “organic” or “green” and including assorted vitamins and supplements. They envisioned doing a series of studies with health food producers, retail store owners, and consumers and asked us to design, implement, and analyze the Web-based survey that retailers from across the country who distributed their magazines would be asked to complete, as well as to advise them on the interview research their employees would be doing with retailers and manufacturers. We agreed to do so in large part because of our interest in how digital technologies can be incorporated into research processes more so than in their marketing objectives per se. It was actually an interesting example of two different groups—the corporation and us—coming in with different focal interests, but with sufficient common ground that the process and product benefitted both groups.

Cultural Folklore, the Common Wisdom, and “Common Sense”

Much of what we feel we “know” is based on traditional, speculative, or polemical belief that has never been verified empirically. A valuable role of research is to help refute or confirm our beliefs, assuming we believe that truth is a priority and that important decisions should be based on evidence rather than on speculation or stereotyping.

Immigration policies, for example, have often been the subject of heated debate, and this has particularly been the case recently with the Trump administration in the United States as well as in Canada and many other countries in Europe. Politicians who favor limited immigration often point to one or two isolated examples of immigrants who get in trouble and wonder aloud whether their country can really “afford” as many immigrants as it takes, given all the social costs and problems allegedly associated with them. But *are* immigrants a burden on a country? In Canada, the decision was made to address the question empirically. A study undertaken by Statistics Canada entitled *Canada’s Changing Immigrant Population* (Badets & Chui, 1994) examined census data, addressed that very issue, and concluded that, at least at that time, such fears were unfounded. As the press reportage of the time explained:

Amid widespread fears that Canada’s immigration system lets in criminals and layabouts, Statistics Canada has published a study showing immigrants are more hard-working, better educated, and more stable than people born here. (Mitchell, 1994, p. A1)

TABLE 2.6 ● Different Ways the Research Process Can Be a Source of Research Ideas

Research as a Source of Ideas		
<p><i>Replication</i> Can a previous finding be reproduced?</p>	<p><i>Clarifying underlying processes</i> What part of this process is most responsible for the changes we have observed?</p>	<p><i>Anomaly and serendipity</i> Why are these strange or unexpected things happening?</p>
<p><i>New technologies</i> Have things changed since this new technology or social development came along?</p>	<p><i>Resolving conflicting results</i> Why do two different studies show opposing results? Can they be reconciled?</p>	<p><i>Supplied problems</i> What is the answer to this person or group's question or problem?</p>
<p><i>Challenging prior research</i> Do the findings from previous research still apply in this context?</p>	<p><i>Analogy</i> Can research done in one field or domain produce similar results or be extended to another domain or field?</p>	<p><i>The common wisdom</i> Is what we think we know about this phenomenon really true?</p>

Clearly, therefore, research has a significant role to play in going beyond stereotype. Gathering data and thereby providing systematic evidence about what “everyone knows” to be true—and often isn’t—is an important role for research that attempts to facilitate the development of social policy and/or simply sets out to better inform us about ourselves.

A summary of the different ways that the research process itself can be a source of research ideas is illustrated in Table 2.6.

SUMMING UP AND LOOKING AHEAD

In this chapter we have outlined some of the issues that you must address even before beginning the research process. One of the first involves getting an idea of what to research. Three different approaches to reasoning—inductive, deductive, and abductive—were introduced not only to explain in more detail a concept introduced in Chapter 1 as one on which researchers’ preferences often differ but also to show the various ways that different perspectives contribute to achieving general scientific goals and the role that each can play in generating research possibilities.

We then discussed the usefulness of connecting with the literature—both in the library and through internet-based sources—and encouraged researchers to avoid conceptualizing their research too narrowly. The “Bernie Beck trick” offered a way to think

about your research to take you beyond its concrete specifics to a more conceptual understanding of the phenomena you are investigating. Subsequent sections of the chapter outlined various ways that more inductive approaches can generate research ideas, as well as how the research process itself can generate many research ideas.

It's pretty tough to do any research if you don't even have a topic. The emphasis on this chapter was on how to get those creative juices flowing in identifying viable topics for research. In the next chapter we discuss the first steps that are required to now turn those ideas into a specific feasible project.

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Key Concepts

Abduction 33	Google Scholar 42	Serendipity 61
Anomaly 61	Keyword search 47	Sociological imagination 56
Bernie Beck trick 46	Real and virtual libraries 41	Starting from where you are 55
Boolean operators 48	Replication 58	Wildcards 49

STUDY QUESTIONS

1. Differentiate between *inductive*, *deductive*, and *abductive* approaches to reasoning in your own words.
2. What role do *theories* play in empirical research, and in what sense are they both *uplifting* and *constraining*?
3. What do practitioners of the inductive and deductive approaches agree on and disagree on with respect to the role of theory?
4. From the deductive perspective, one begins with a theory, generates hypotheses that are implied by the theory, and then gathers data to test the hypothesis (and hence the theory). If the data do *not* support the hypothesis, we say that the theory has been refuted or disproved. If the data are consistent with the theory, we can say that the theory has been “supported,” but we do *not* say that it has been “proved.” Why?
5. Some researchers suggest that “starting from where you are” is a good place to begin doing research. What are some of the advantages and disadvantages of “starting from where you are”?
6. Social scientists argue that a good place to begin your research is by *reviewing the literature* in the relevant area. What benefits are gained by doing so?
7. What are some of the strengths and limitations of using Google Scholar for your search of the literature?
8. A researcher is interested in getting information about different types of interviews, and particularly regarding focus group and oral history interviews. How can the researcher make sure that their search will include the exact phrases “focus group” and “oral history” rather than those individual words? What effect would using the words AND, OR, or NOT between those two phrases have on the results that are produced?
9. What is “the Bernie Beck trick” and how is it useful?
10. Locate three empirical articles from refereed journals that relate to the research topic or question you have developed and briefly discuss how each of these articles relates to your research topic and provide a short justification for why you selected these particular articles.

11. Go to your favorite news website (e.g., BBC News at <http://www.bbc.co.uk/news/>) and identify three social or health-related stories that interest you, and how each of the three stories you have identified could be made into a researchable topic.
12. Identify five social and/or health science databases (other than Google Scholar) that you could use to locate refereed journal articles and other academic literature.

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