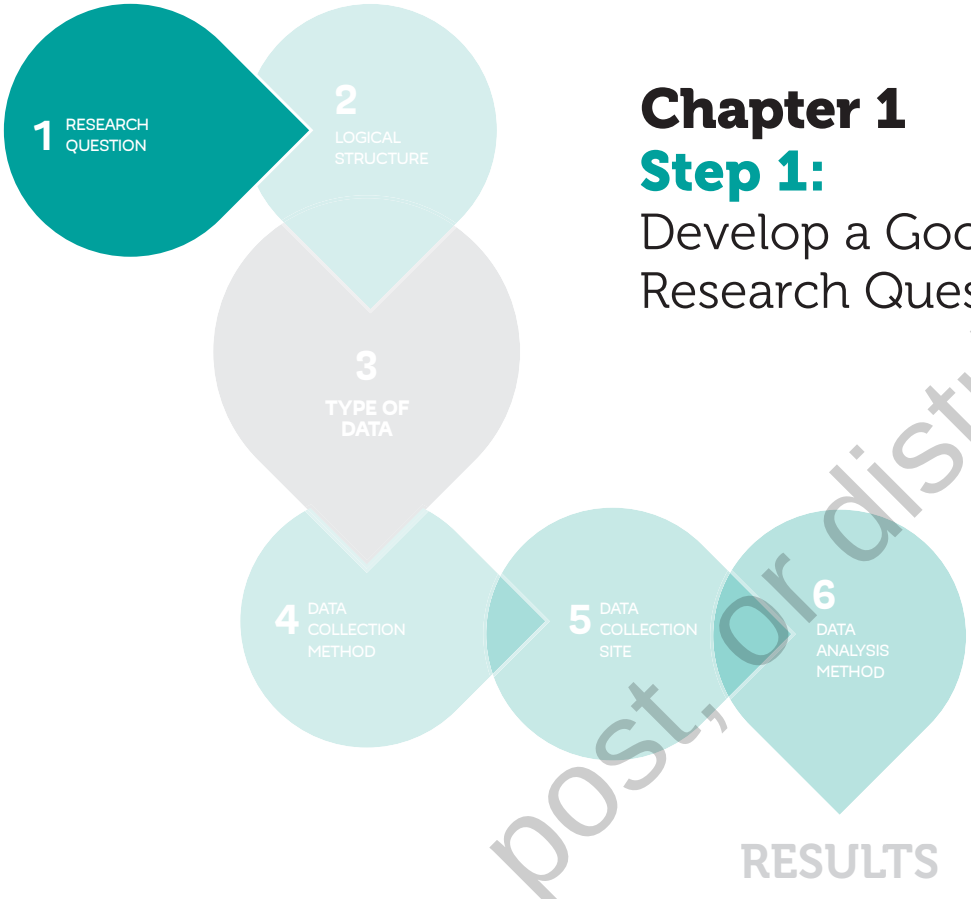

Chapter 1
Step 1:
Develop a Good Research Question

Research is designed to answer questions. We investigate things because we want to find out something about them.

We may, for example, want to know how something works. Biologists wonder how cells metabolize energy. Weather watchers want to know how storm clouds form. Environmental scientists want to understand people's interactions with their environment. Educators want to know how teachers learn to teach well. Urban planners want to know how people can improve their neighborhoods. Both traffic planners and environmentalists want to know how we can get people to drive less. These "how" questions focus on processes. They tell us the steps involved in getting something done.

Alternatively, we may want to know about people's opinions and attitudes. What do people really think of their political leaders? What do they like about their jobs? What do they think would make their cities more livable? These "what" questions ask us to describe people's thoughts. This is not a matter of accomplishing something, but of understanding people. We want to know how they see the world.

Or we may want to know what people actually do. Do men and women use language differently? How much good food do people throw away? Do people lie about how much they recycle? "Do" questions ask about people's behavior. This is different from their opinions and attitudes, because thoughts are not deeds. Both are interesting, however, and are worth investigation.

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Research Question

There's a problem, however. These questions are all pretty general. They cover a lot of territory and aren't specific enough for in-depth research projects. Take the question of what people like about their jobs. What kind of jobs are we talking about? There are several thousand different kinds of occupations, and people can do similar things for wildly different organizations. An elementary school teacher, for example, has a much different set of responsibilities than someone who teaches adults in a corporate setting—even though they share the same profession. Broad questions typically produce shallow research, because they aren't focused enough to be useful. Good research questions are much more specific and take a lot more effort to craft.

That's the topic of this chapter: *how to develop a good research question*. This may be the most important step in the research process. It is certainly the first one. Taking time with your research question will save you lots of time later. It will also make it much more likely that your project succeeds. In this chapter you'll learn

- How to identify a good research topic.
- How to narrow this topic, so that it can become a research question.
- How to search the literature to learn what others have written on your topic.
- How to recraft your research question so that it can guide you through the next steps in the research process.
- How to start writing your research proposal.

Let's go!

Start With a Research Topic

Research begins with a **research topic**. This is just a fancy word for what you want to study. There are lots of choices. For example, you might want to know how to improve people's lives. You might want to figure out how economies create jobs, or what makes nonprofit organizations succeed, or how people can build better neighborhoods. Alternatively, you might be interested in individuals: what makes people happy, why some relationships thrive, or why others go nowhere. Or you might care about people's differences: the ideas, views, and experiences that distinguish one individual from another. There are many such topics, maybe an infinite number of them. Each of them is worth investigating.

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Choosing the right research topic *for you*, however, is a very personal matter. What fascinates one researcher can easily bore another. We've all met people who wax poetic about tree snails, or Star Trek fan groups, or what happened in Wales in the 1840s. Sometimes we understand their enthusiasm, but other times not so much. They, in turn, might not be much interested in the topics that appeal to you. The point is, you need to pick a topic you find exciting—or, to put it more colloquially, for which you have some passion. You want to pick a topic that you find interesting enough to get you through the inevitable dull moments. That's what will keep you going. No passion means no finished project. Nobody can tell you what general topic will work. That's something you have to find on your own.

I, for example, am fascinated by human behavior. I like to understand people, and I want to know what makes them tick. I want to know what they're thinking about, how they think about it, and the ways that they view the world. And I love to encounter differences—the stranger, the better.

My first serious research was an ethnographic study of American converts to one of the new Japanese religions. Did you know there are new religions? There are, and lots of them, particularly in times of major social changes. Mid-20th-century Japan saw more than its share of social change and gave birth to more than 700 new religions between 1920 and 1980.[1] I spent almost two years hanging out with the members of one of these groups in and around San Francisco, California. They told me their beliefs, I observed their healing practices, I saw their method of nature farming, and I listened to their ideas about the coming New Age. I also learned how difficult it was for them to create clear lines of communication between the Japanese "Mother Church" and a congregation made up mainly of American converts.[2] It was a fun project for someone with my interests. I'll tell you about it in Chapter 13, when I show you how do design an **ethnography**.

Not everyone likes such things, however. Some people would rather explore the natural environment. They'd like to know what happens when you dam a river, when chemicals are spilled during transport, or when genetically modified seeds are introduced into particular farming communities. Maybe you want to learn how to develop better water treatment systems. Or maybe you want to figure out how to improve poor people's diets while still protecting wild animals and farmland.

The point is, any topic will do. You just need to choose one that you feel strongly enough about to see through to the finish.

From Topic to Question

An exciting topic, though, isn't enough. Research topics are broad and are typically complex. They can take a lifetime to investigate. You've got only one life, so you need to focus your research on something you can investigate in a reasonable amount of time. Your first step as a researcher, after specifying a general topic, is to whittle that topic down to a manageable size.

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You might think this would be easy to do, but it's not. Even the most seasoned researchers have to spend a lot of time on this step.

An Example: Mass Transit

Let's take an example. Maybe you're interested in mass transit. You know: the buses, streetcars, light rail systems, and commuter trains that move people around cities. Some cities have well-developed transit systems—New York, Boston, and Philadelphia, among others. Other cities don't and are clogged with cars as a result. As I write this passage, officials in San Antonio, Texas, and Tucson, Arizona, among other places, are considering how to move people more efficiently. You can imagine how many issues are involved! Here are just a few of them:

- Where should the most efficient transit system go?
- What kind of transit system reduces traffic congestion and pollution the most?
- What changes does mass transit make in the neighborhoods through which it passes?
- How does mass transit affect people's everyday lives?

Each of these questions is important. Each of them is part of the overall mass transit picture. Each is, however, still too broad to be a good a research question.

Why? None of these questions would take a lifetime to answer—the concern that made us narrow the topic in the first place—but each of them is still too unfocused.

Take that first question: "Where should the most efficient transit system go?" This sounds straightforward, until we ask ourselves what we mean by *efficient.* Do we mean moving people the farthest? If so, we'll spotlight commuter rail projects instead of inner-city buses. Do we mean moving the most people at once? If that's efficiency, then we'll want to improve transit downtown, leaving suburban commuters to their own devices. Do we mean the cheapest? That puts cost-per-person or cost-per-mile front and center. The point is, even the topic of efficient transportation covers a lot of possible research projects. We need to be much more specific before we're ready to investigate.

Okay, so let's narrow this down. For the sake of argument, we'll define *efficient* as the ability to minimize the total time a city's residents spend commuting to work. We'll say that a transit system is efficient if it gets the most people to work in the shortest amount of time. My own commute might be longer, but the sum total of everyone's commute time, added together, will be as small as we can make it.

We could, of course, focus on getting shoppers to market; partiers to a city's nightclubs, theaters, and bars; and so on. That's okay. Focusing our research on how to shorten commute time doesn't mean that the other ideas are unimportant. It just means that they are different research projects. We need to concentrate on one project at a time.

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The Rule: A good research question tells you immediately what type of data you need to produce an answer.

So our question becomes: "How should we route a transit system that minimizes the total time that commuters spend getting to work?" Clearly, we've narrowed our topic. But is this good enough? How do we know that we are no longer dealing with a research topic but with a **research question**?

Here's the rule: *A good research question tells you immediately what type of data you need to produce an answer.* It tells you exactly what to look for. It may ask you to observe people's behavior. It may ask you to collect their attitudes and opinions. It may ask you to weigh air molecules. You'll know what data to gather because the research question will tell you. If it doesn't, then it's still a topic and you have to narrow it further.

For our mass transit question, once we define *efficiency* as a matter of minimizing the total amount of time that a city's residents spend commuting to work, we know exactly what data to collect. We need to collect commute times. How much time does it take people to get to work, using various means of transportation? How long does it take them on city buses? How long do they have to drive? Can people walk? Ultimately, we'll be seeking the ideal transit mix that will lower the aggregate time that people spend getting to work. Some people's times might increase, but others' commute times should decrease by more than enough to make the system as a whole more efficient.

Again, we could have defined *efficiency* in a different way. That would produce a different research question. The point is to find a question that tells you exactly what data you need.

Once you know what you need to look for, research design is actually quite simple. Identifying the **type of data** lets you choose a **data collection method** to use for collecting it. It lets you choose a **data collection site** from which to gather that data. It also helps you choose how to analyze that data, because different types of data call for different **data analysis methods**. These are Steps 3, 4, 5, and 6 in our six-step design process. They flow directly from a properly designed research question. (So does Step 2, **logical structure**, which we'll meet in the next chapter.)

In short, framing your research question properly sets you on the road to drawing good conclusions. It makes successful research possible.

THINK ABOUT IT
Why is the data type your key to good research design?

Making Decisions

Here's another example, taken from one of the other questions related to mass transit: "What changes does mass transit make in the neighborhoods through which it passes?" This question is still too general and is therefore best thought of as a research topic. Are we talking about physical changes? Changes to the length of people's commutes? Changes in pollution levels? Changes to people's perceived quality of

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life? Or something else? A research topic includes many such questions, each of which collects a different type of data; a research question includes just one. By identifying a single data type, a research question makes it easy to see exactly how the research is to proceed.

Of course, we can undertake a **research project** to investigate several related research questions, especially if we have a team among whom to divide the labor. Susan can investigate pollution levels, Ralph can gather people's ideas about quality of life, and Ginny can measure people's commutes. Each will have her or his own research question, even while sharing ideas, resources, and so on. The key is that each question tells us exactly what we want to find.

Let's pursue for a moment the fourth question related to mass transit: "How does mass transit affect people's everyday lives?" What do we have to do to move this from being a research topic to being a research question?

The short answer is that we have to narrow it further, until we reach a question that makes clear the kind of data we need. In this case, first, we have to decide what kind of mass transit we're talking about. For example, bus lines affect nonriders differently than do light rail and commuter trains. Buses use regular roadways, stop frequently, and can cause as much local congestion as they cure. But people can board them in more places, and they can easily shift their routes to cope with snow or street repairs. A city might even use them to evacuate people in case of a major emergency. So we can't just talk about "mass transit" in the abstract; we have to specify which kind.

Second, we have to decide which people we are going to consider. Some people use mass transit, but others do not; we should probably include both, but we may wish to focus on just one group, not forgetting the other's existence. Do we want to poll residents or tourists? Mass transit affects both of them, but differently. Home owners or renters? They often have different stakes in their communities, so mass transit may affect them differently as well.

Here are a few other decisions to make: Do we want to study people from all over the city or just those who live near the transit lines? Young people? People who work? People who don't work? The elderly? Mass transit likely affects them all.

Third, we have to decide what kind of effects to look for. Are we interested in economic effects (e.g., cost of living, property values, savings in commute times and costs)? Are we interested in quality-of-life issues (e.g., how pleasant or unpleasant it is to be in the neighborhoods that mass transit serves, changes in the availability of grocery stores and restaurants, the growth or absence of street crime)? Are we interested in social effects (e.g., changes in how people spend their time, an increase or a decrease in their sense of community)? These are just a few of the possible effects that mass transit might bring. We have to decide which of them is worth reviewing.

You get the point. Designing good research is a matter of winnowing down our interests until we can produce a research question that is specific enough to accomplish two things. First, we need it to be focused enough for us to finish given our available time and resources. Second, that question needs to tell us exactly what we should be looking for. Otherwise, it's still too general.

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To summarize the ground we've just covered: A *research topic* describes an area you want to investigate; a *research question* identifies exactly what you want to find out about a small piece of that topic. It's something you can answer given the time and resources you have available. It also identifies the type of data you need to find. What's next?

Search the Literature

Before you can proceed, you need to take two additional steps. First you have to find out what other people have discovered about your topic. Then you have to fine-tune your research question. Using mass transit as an example, I'll demonstrate the first step in this section and the second in the section that follows.

You have to learn what other people have already found out about your topic, so that you can build on their work. No one likes to duplicate effort, and in the research business, you don't get paid unless you do something new. Doctoral and master's-level students clearly have to do original work, so they'd better know what others have done before them. Contract researchers also get paid more for new work, though they can sometimes make money by summarizing what others have already found. In neither case do you want to start a project and invest lots of time and effort in it, only to discover that you could have easily found the answers in a library or online. So search the literature! It will make your life much easier.

Let's see how this works concretely. Let's imagine we've chosen to explore a narrow subtopic of our transit study: "What effects does mass transit have on the lives of people who *don't* use it?" What might existing research tell us about this issue? Speaking broadly, existing studies demonstrate four areas of benefit, which vary according to the kind of transit and the geography of the transit system:

- Mass transit systems either lower traffic congestion, compared with highway construction, or they lower the rate at which that congestion increases, compared with highway construction.
- They decrease pollution and save fuel; this improves air quality and lowers the price of gasoline for everyone.
- They reduce car expenses, especially for families with school-age children and those who need cars only occasionally.
- They raise residential property values in areas they serve.

Let's start with traffic congestion. Here's the problem: The number of registered vehicles in the United States more than quadrupled in the 50 years between 1960 and 2010, while the number of available miles of highway increased by only 14%. That's more cars per square foot of roadway than we had before.[3] Taking only urban and suburban areas (there's not much traffic in the countryside), we find that total lane-miles (the number of miles multiplied by the number of available lanes) increased by 77%. That's still a lot less than the growing number of vehicles. Roads are definitely getting more crowded.

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Does building more highways help? Quite the opposite. Reviewing the situation in California, Mark Hansen reported that "adding lane-miles does induce substantial new traffic."[4] Norman Marshall found a similar pattern in Texas.[5] As far as roads are concerned, it seems that if you build it, they will come. Mass transit, by contrast, seems either to reduce vehicle traffic or at least to reduce its increase. Mobility Planning Associates, for example, reported that traffic congestion in large and very large urban areas without rail systems increased nearly twice as much (59%) as in similar areas with such systems (32%).[6] Lyndon Henry reported that Denver rail ridership during peak commute hours on a major corridor was just under a third of the total load.[7] These and other studies show that light rail systems, at least, benefit nonriders by lowering traffic congestion—if not absolutely, then at least below what it would have been otherwise. That makes it easier for nonriders to drive.

We do not, however, know exactly how this works in particular cities, and we cannot yet predict what specific mass transit mix works best in which kinds of settings. These topics are open for further investigation.

We do know, however, that all forms of mass transit use less energy and pollute less than cars. Electric railways, for example—both light rail and commuter rail—use about one sixth of the energy as cars per passenger-mile.[8] A 2005 flyer put out by Portland, Oregon's TriMet transportation agency claimed that the city's transit system saves 65 million car trips a year for a net reduction of 4.2 tons of air pollution per day.[9] This improves everyone's air quality, including nonriders'. It would be worthwhile investigating other cities' savings, especially in regions that receive less hydropower than northwestern Oregon. Mass transit increases electricity use while lowering gasoline consumption. Especially when it comes to coal-powered electricity, a researcher would need to take into account the pollution produced by electrical generators before he or she could gauge just how much a particular mass transit system would clean up the air.

Calculating costs also requires balancing both sides of the equation. Mass transit provides both costs and savings, even for nonusers. Unfortunately, most of the efforts to measure such things for nonriders rely on anecdotes, not evidence. We know, for example, that nonriders have to pay the increased sales (and other) taxes used to fund transit systems, but we also know that those same nonriders use mass transit while their cars are being fixed or when they want to attend special events and leave their cars at home. We just don't know how much, except in special cases. San Diego's light rail system, for instance, carries 9% to 10% of the fans to Padres (baseball) games, saving a measureable number of car trips.[10]

Here's another anecdotal situation: Mom and dad may need cars for work, but the $30 they spend each month on the kids' transit passes saves the $250 it costs to maintain a third car for Tommy or Terri Teen. How many families actually do this? We have anecdotes because we don't (yet) have clear studies. This, too, is fertile ground for empirical research.

Finally, there's the matter of property values. Several studies point to increased property values around mass transit stations—in part because easy access to transportation

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makes homes and businesses more attractive. A study of "gentrification" in Chicago found that "properties closest to transit stations increased in value much more than those farther away."[11] A study of the San Francisco area's Bay Area Rapid Transit (BART) system reported that the average home in two East Bay counties was worth $3,200 to $3,700 more for each additional mile it was closer to a BART station.[12] Robert Cervero found increased single- and multiple-family housing values near commuter and light rail stations in San Diego County, California, accompanied by slight drops in the value of commercial property along the tracks between stations.[13] Again, the effect of increased property values on nonriders will vary depending on the kind of transit system in question, where nonriders live, and whether they are selling or buying property. Research can usefully uncover the patterns that affect different areas.

So much for the positive effects; what about negative ones? There's not as much empirical research on this question as one might think, in part because the opposition to mass transit is often ideological. Some people think driving cars is a human right or a central part of the American way. Others, as a matter of principle, don't want the government to organize mass transit systems. Still others don't want to be taxed to pay for transit, even if it ends up benefiting everyone, including themselves.

This isn't to say that all (or just) those on the center-right of the political spectrum oppose mass transit. Paul Weyrich and William Lind, both prominent political activists, have written several policy papers favoring mass transit on conservative political grounds.[14] These papers make good reading, in part because they cite empirical data and in part because they take conservative arguments seriously.

Transit critic Wendell Cox did produce some empirical research on this topic, however. He used commute-to-work data from the 2000 U.S. Census to question official mass transit ridership figures.[15] It turns out that fewer people reported on the census that they used mass transit than transit authorities had claimed. Cox thus concluded that official figures were wrong.

In a study I cited earlier, Lyndon Henry took issue with Cox's method. He pointed out some major flaws in the way that opinions were surveyed on the census and argued that one cannot deduce people's actual behavior from what they report they do. Weighing the evidence, he concluded that one can't rely on people's reports of their own behavior. Memories fail, people want to appear more virtuous than they are, and so on. Henry argued that actual passenger counts are the only way to go.[16]

THINK ABOUT IT
When do *you* use public transportation? What might encourage you to use it more?

Literature searches often produce such conflicts. One of your jobs, as a researcher, is to examine the evidence each side brings to the table and to draw conclusions about what is and is not correct. That's the only way you can learn what's known and unknown about your topic. You are particularly interested in the latter—what is *not* known—because it opens the door to your own work.

I'll say a bit more about literature searches in a moment, but I have another point to make first. I've heard too many beginning scholars try to justify their research by saying, "Nothing's been written about my topic." That's hogwash. There's *always* something that's been written about your topic. If you haven't found anything, then

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you aren't looking hard enough. The real question is whether so much has been written about it that there's no point in investigating the topic any more. That's for you to decide. But don't cop out by claiming that your ideas are so unique that nothing relevant has been written about them before.

The fact is, a good literature search always turns up something useful. You may end up taking ideas from several previous studies, combining them in new ways. You may be able to replicate an old study with a new, more suitable population. You may even fix a badly designed study, making sense out of nonsense. The point is this: What you find in the literature tells you what is and isn't known about your topic. Once you know that, you're ready to move forward.

Recraft Your Research Question

I've spent a lot of time on literature searches because it's such an important part of the research process. Now let's move on. Consider our first research subtopic: "What effects does mass transit have on the lives of people who *don't* use it?" How do we turn this subtopic into a good research question?

First, remember what typifies a research question: *A good research question tells you immediately what type of data you need.* We need a question that specifies the type of data we'll need to collect, which sets us on the road to collecting it.

Questions Based on the Literature

Remember what we found in the literature. We know that mass transit reduces congestion, but we also know that the reduction varies from place to place. It also depends on the kind of mass transit involved. That suggests several research options, including these two:

1. We could compare traffic before and after a particular transit system is built, asking, "How much did this transit project reduce congestion on nearby highways?" We would measure the amount of congestion after the project and compare it with previous records, adjusting our results to allow for the growth or decline in regional traffic overall.
2. If we couldn't get before-and-after figures, we could compare congestion along transit and nontransit corridors, asking, "How much lower (or higher) is congestion in one corridor than in another?" We would have to pick corridors that are similar, to be sure that transit made the difference.

Both of these questions tell us what we're looking for: traffic congestion, which we would probably define as traffic above a certain number of vehicles per hour. Most states keep traffic logs for their most congested roads, so we could use this already-collected data for our study. If our area of interest doesn't keep such data, we would have to use automated traffic monitors or count the cars ourselves. Both techniques work, which is one reason these two research questions are relatively straightforward.

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THINK ABOUT IT
Do these questions tell you what kind of data you need to gather? Why does that make things easier for you?

What if we can't or don't want to count cars? Are there other ways to manage things? Here's a third question that involves asking commuters to count for us.

3. We could give commuters logbooks and ask them to record their commute times. Pairing transit with nontransit neighborhoods, we would compare their figures. We would have to make sure to match our neighborhoods on commute distances, times of day, and so on, because these differences could really mess up the results. Our research question then is, "How many hours do people report commuting in paired mass transit and non–mass transit neighborhoods?"

Note that this question asks people to report their behaviors. That's a bit different from observing those people's behaviors directly. Both are legitimate and possible, but behaviors and reports of behaviors are different types of data and thus call for different research methods. We'll see in Step 3 how important this is.

Enough on congestion; how about pollution? We could easily turn questions 1 and 2, above, into questions about pollution:

4. "How much less (or more) pollution do we find after the construction of mass transit systems, compared with before?" (We would also have to factor in changes to overall pollution levels from other sources.)
5. "How much lower (or higher) is air pollution in a transit area than in a nontransit area?"

Again, both of these questions tell us exactly what we're looking for: levels of air pollution, most likely measured with standard instruments. The questions themselves make the data type clear.

Note, however, that we can't create an exact parallel to our third question about traffic congestion—the one about reported commuting hours and mass transit. The problem is, people don't typically know how much pollution they encounter each day. You can't, for example, see ozone. Yes, we could collect people's impressions, but impressions about pollution and actual pollution levels are two different things. Measuring pollution calls for special equipment; measuring mileage, by contrast, needs only a working odometer in the commuter's car. There's little point in asking people to share knowledge that they aren't likely to have.

Moving on to some other possibilities, we could ask nonriders in transit and nontransit neighborhoods to record their transportation costs:

6. "How much do people in each of these neighborhoods spend on transportation in a typical month?" We would have to make sure to include all

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costs, because insurance payments, car repairs, and registration fees often come up just once or twice a year.

To get a real comparison, though, we need to modify this question a bit: "How much do *families* in each of these neighborhoods spend on transportation in a typical month?" This will catch the amounts that teenagers spend on bus passes, for example—something the previous question might miss. These are transportation costs, after all, so we need to count them.

7. Alternatively, we could ask non-transit-riding car owners in both neighborhoods, "How much do you use your car during a typical month?" and "For what kinds of events?" We should specifically ask what they do for transportation when their car(s) are being repaired. This wouldn't capture all of their transport costs, but it would let us see whether people who *could* ride transit do so when they have no other way to get around. They benefit from its availability, even if they don't use it much. That was our starting subtopic, after all: "What effects does mass transit have on the lives of people who *don't* use it?" Being able to get around without a car is one of those benefits, so we need to see how much they actually do so.

Again, both of these questions ask people to report their behavior—something different from actually measuring congestion and pollution. A good research question is clear about this: It lets us know exactly what kind of data we need. A research topic doesn't. That's one of the differences between the two.

Finally, we could track property values:

8. "How do property values change after the construction of mass transit?" This research would compare real estate prices before and after, to show which areas and types of buildings increased in value and which decreased. We would have to allow for the overall trend of prices during the period, weighing whether the prices in transit areas increased (or decreased) faster or slower than in the overall region. (This replicates the research mentioned earlier, but in different cities; each city is likely to be unique, despite overall similarities.)
9. "Are there systematic differences in property values between similar neighborhoods with and without access to mass transit?" This research question parallels the other neighborhood comparisons that cover congestion, pollution, and transportation costs. Like the congestion and pollution questions, it calls for externally measured data. We would search public records to compare sales prices, property assessments, and so on.[17] This approach can be both time-consuming and complex, but it gives a relatively firm sense of the effects that mass transit can bring.

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THINK ABOUT IT
What kinds of things can we learn from observing street life?

Either of these questions would produce interesting research. Depending on the answers, communities might decide to invest in mass transit projects, in the hope that they would improve local wealth.

Three More Possibilities

So far, we've stayed pretty close to the research we found in the literature. Now let's look at a few alternatives. The following projects highlight additional effects that mass transit may or may not have on neighborhoods. They also highlight different research techniques than the ones we've used so far.

10. Existing research (not cited above) demonstrates that some mass transit stations—especially well-maintained light rail lines, subways, and so on—often attract restaurants, bookstores, movie houses, and similar businesses. Increased foot traffic brings them customers. They, in turn, become destinations in themselves, as nonriders seek out the entertainment they provide. Other stations, however, are not well maintained and can attract crime and vagrants, driving away customers and businesses. A research project could pose this question: "What is the observable character of street life in places with and without mass transit hubs?" It could look for patterns that differentiate these two kinds of stations, and also find patterns that differentiate transit-served areas from those without transit at all. Unlike the congestion and pollution projects, this would not involve mere counting. It would involve a more holistic system of observation that captures qualitative differences as well.
11. The previous projects have looked at things that are relatively easy to measure: congestion, pollution, travel time, and so on. What about people's subjective sense of things? Do people have a different sense of neighborliness in areas served by mass transit? Or do they feel estranged from their neighbors, perhaps because it's so easy to get away from them? We could interview people living in neighborhoods with and without mass transit, asking them to describe what it's like to live there. The research question would be, "Are there any systematic differences in the ways that residents of transit-served and transit-less neighborhoods describe the quality of life in their area?" This question requires a different kind of data than we have seen before: people's reflections on their lives.
12. Finally, we could interview long-term residents of neighborhoods recently served by mass transit, asking them to reflect on the changes they have experienced. Our research question would be, "What changes do people report that mass transit has brought to their lives?" We would have to be careful to get a range of views, as different people will have different experiences. We would also have to be careful to interview

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people long enough after a transit system was put in place, so that our responses would not be colored by the inevitable construction problems. In essence, we want people to compare the "new normal" with the "old normal." We should not expect shallow answers. If we do our interviews right, though, we should expect rich ones.

These last three projects call for a different kind of data than do most of our previous ones: They ask us to collect people's deeply held opinions and attitudes. I explore this type of data in Step 3 and then again in Chapter 9. First, though, I need to address one last step on the path to a good research question: writing a research proposal.

Start Your Research Proposal

You've chosen a research topic. You've read the existing literature on that topic. You've created a good, solid research question. Now you have to make the case that this research is worth doing. There are three main reasons for doing so:

- You need research funding.
- You need to convince people to participate in your study.
- You need to demonstrate that the research is ethical.

The first of these reasons ought to be obvious. Research costs money, and most researchers (especially students) don't have any! You need to find someone to pay for your research, and then you need to convince them that your project is worth doing. The second reason also should be obvious. You can't carry out a survey, an interview study, or any other project involving people unless you can convince those people to cooperate.

The third reason may be less obvious, unless you remember some history. A lot of unethical research has been carried out over the years. Nazi pain experiments, the Tuskegee syphilis study, the Milgram obedience studies, and the like have made people very concerned about harming research participants—physically, psychologically, or socially, or by involving them in research against their will. The United States now prohibits unethical research, as do most other countries. Research proposals must now be approved by **Institutional Review Boards (IRBs)**, which examine them to make sure that researchers treat participants properly. (We'll learn more about this in Step 4.)

A good research proposal accomplishes all of these tasks. It helps you get money, by showing funders what you are planning to do. It helps you get participants, by showing them what you are asking of them. And it helps you convince an IRB that you will protect your participants. It shows all of them why your research is important.

Learning how to craft a research proposal is an important skill.

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The Parts of a Proposal

What goes into a proposal? Different schools and funding agencies require different degrees of detail, but they all follow the same logic. Six points are central—three of which you are ready to finish as soon as you have your research question in hand. They are as follows:

1. A clear description of the research topic, including a summary of what is already known about that topic.
2. A one-sentence statement of the research question that the project will seek to answer. (This is almost always something that is not known.) The proposal should connect this question to the existing literature, something that almost always takes more than one sentence to accomplish.
3. A demonstration of why it is important to answer this research question: What good comes of this answer? Why is this project worth anybody's time?

These three parts focus on the research question—the topic of the present chapter. The rest of this book will help you to write the rest of your proposal, which covers the remaining three parts:

4. A description of how the researcher plans to answer the research question. This includes
    a. An outline of how the proposed project will be logically structured to answer the research question. (*This is Step 2 in our six-step method.*)
    b. A description of the type of data that the researcher plans to collect or use (*Step 3*)
    c. A description of how the researcher will collect these data (*Step 4*)
    d. A description of where the researcher will collect these data (*Step 5*)
    e. A description of how the researcher will analyze these data (*Step 6*)

Chapters 2 through 6 will show you how to complete these steps, in great detail. A typical research proposal also addresses two other matters:

5. A statement of the **limitations** of this research, specifically the things that it cannot discover (and why).
6. A summary of any ethical issues that may arise in the research process.

Your choice of logical structure (Step 2) will identify your study's limitations. Your reflections on your data collection technique (Step 4) will help you to identify ethical issues. We'll visit these topics in their appropriate chapters in Part I of this book. Each chapter in Part II also has a section on research ethics, geared specifically to the kind of methods the chapter addresses.

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A Proposal in Brief: The Concept Paper

An abbreviated version of a research proposal is known as a concept paper. A concept paper is a short, easily readable proposal, used for settings in which a full proposal is too long. You'll want to write both. The longer version is useful when you need the details, and the shorter version is valuable when you need to leave them out. Once you have mastered the six-step method to design your research, you will find both versions easy to write. You can find a one-page handout summarizing this material in the "Research Guides and Handouts" section at the back of the book.

That's it for this chapter. Congratulations! You now know much more about how to craft a good research question than you did when you began.

Review Questions

1. What are the differences between a research topic and a research question?
2. Why do you need to search the existing literature on a topic before choosing your research question?
3. How do you know when you've narrowed your topic enough?
4. What should your research question tell you about the kind of data that you need to answer it?
5. Why is choosing a research question the first step in designing research?

The open-access Student Study Site at study.sagepub.com/spickard has a variety of useful study tools, including SAGE journal articles, video & web resources, eFlashcards, and quizzes.

Notes

1. For details, see Horace Neill McFarland, *Rush Hour of the Gods: A Study of the New Religious Movements in Japan*. Harper & Row, 1970.
2. See James Spickard, "Globalization and Religious Organizations: Rethinking the Relationship Between Church, Culture, and Market," *International Journal of*

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3. Bureau of Transportation Statistics, *National Transportation Statistics*. Retrieved from http://www.bts.gov/publications/national_transportation_statistics/
4. Mark Hansen, "Do New Highways Generate Traffic?" *Access* 7 (Fall 1995). See M. Hansen and Y. Huang, "Road Supply and Traffic in California Urban Areas," *Transportation Research Part A: Policy and Practice* 31 (1997): 205–218.
5. Norman L. Marshall, "Evidence of Induced Demand in the Texas Transportation Institute's Urban Roadway Congestion Study Data Set." Paper presented at the Transportation Research Board 79th annual meeting, January 9–13, 2000.
6. Mobility Planning Associates (using data compiled from the Texas Transportation Institute), "Study: Rail Transit May Slow Growth in Traffic Congestion," October 2000. Retrieved from http://www.lightrailnow.org/facts/fa_00017.htm
7. Lyndon Henry, "Light Rail and Urban Mobility," Transportation Research Circular E-C058: 9th National Light Rail Transit Conference, 2003, p. 383.
8. Robert J. Shapiro et al., *Conserving Energy and Preserving the Environment: The Role of Public Transportation*. American Public Transportation Association, 2002. Based on actual ridership, not capacity.
9. "Facts About TriMet," October 2005. Retrieved from http://www.cts.pdx.edu/prof_courses/LRT_Policy/trimetfactsheet.pdf
10. Judith Leitner, "Event Ridership Helps Trolly Grow," *San Diego Sun/Sentinel*, June 6, 2002.
11. Jeffrey Lin, "Gentrification and Transit in Northwest Chicago," *Transportation Quarterly* 56 (2002): 175.
12. The Sedway Group, "BART's Contributions to the Bay Area." Report prepared for the Bay Area Rapid Transit District, July 1999, p. iv.
13. Robert Cervero, "Effects of Light and Commuter Rail Transit on Land Prices: Experiences in San Diego County," 2003. Retrieved from http://www.uctc.net/research/papers/769.pdf
14. See, for example, Paul M. Weyrich and William S. Lind, *How Transit Benefits People Who Do Not Ride It: A Conservative Inquiry*. Free Congress Foundation, 2003; and *Twelve Anti-Transit Myths*. Free Congress Foundation, 2001.
15. Wendell Cox, "Mass Transit Rider Increase Largely an Illusion," *Cincinnati Business Courier*, August 16, 2002. For a more ideological view, see Cox, *Why Light Rail Doesn't Work*. Texas Policy Foundation, 2000.
16. Henry, "Light Rail and Urban Mobility," 371. See p. 45ff for a different example of this phenomenon.
17. We have to be careful about property assessments, because different states have different laws about how assessments are carried out. In some states, for example, assessments for tax purposes bear little relationship to actual property values. Public records research is seldom as straightforward as it seems.

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