

Philosophy of Social Science

A Contemporary Introduction

Mark Risjord

 **Routledge**
Taylor & Francis Group
NEW YORK AND LONDON

Acknowledgments

The philosophy of social science has changed significantly in recent decades, and meetings of the *Philosophy of Social Science Roundtable* have been midwife to many of those trends. Both this book and the field it represents are in debt to the original co-organizers of that annual event: James Bohman, Paul Roth, and Alison Wylie. They have also been mentors to many young scholars, and I hope this text reflects at least some of what they have taught me.

David Henderson, Kareem Khalifa, Harold Kincaid, Frank Lechner, Robert McCauley, Mark Ravina, Martin Paleček, Dan Reiter, Julian Reiss, Norman Risjord, Daniel Steel, Karsten Stueber, David Teira, and Stephen Turner provided invaluable feedback throughout the process. David Henderson was particularly helpful, working through several versions of the manuscript. A wonderful group of colleagues at Emory University have also been influential on my thinking; thank you to Sandra Dunbar, Nicholas Fotion, Ivan Karp, Cory Kratz, Jeffery Lesser, and Devin Stewart. Students in my classes at Emory University and the University of Hradec Králové also helped shape my presentation of the issues.

Research and writing was supported in part by the Fulbright Scholars Program. Special thanks to Hana Rambouskova, the staff at the Czech Fulbright Commission, and to the faculty and staff of the University of Hradec Králové for their generous welcome.

From its initial conceptualization, I intended this text to draw on a rich set of social scientific examples. This aspect of the project received a huge boost from Ian Kirby, who was able to work with me through the support of Emory College's SIRE Fellowship program. Many examples were fleshed out with Ian's research. Revision of the text was aided by Ian's excellent ear for the language. Thank you to Andrea Risjord for creating the illustrations.

A lesson of the philosophy of social science is that social structures are sometimes invisible to those who occupy them. Upon hearing that I was embarking on another book project, my daughter Hannah remarked, "So, will we be sliding food under your office door again?" I am confident that I don't fully comprehend the many ways in which my family has supported this work, but that doesn't prevent me from being deeply grateful for it. Thank you to Barbara, Andrea, Hannah, and the rest of the Risjord and Jacobsen clans.

I Introduction

I.1 What is the Philosophy of Social Science?

Human nature is a social nature. Because the central questions of philosophy concern what it means to be human, philosophers have been thinking about the fundamental characteristics of society since antiquity. In the nineteenth century, anthropology, sociology, economics, and psychology broke away from philosophy. The central questions of the philosophy of social science arise with the birth of these empirical disciplines. While they distinguished themselves with new methods, their theories were continuous with those proposed by philosophers from Plato to Mill. The *philosophy* of social science examines some of the perennial questions of philosophy by engaging with the empirical study of human society.

The questions distinctive of the philosophy of the social sciences are encompassed within three broad themes: normativity, naturalism, and reductionism. The questions of normativity concern the place of values in social scientific inquiry. Social science is closely linked to social policy concerns, so can social science be objective? The social sciences also theorize about the origin and function of values, rules, and norms within human society. They thereby touch the foundation of ethics. The questions of naturalism concern the relationship between the natural and the social sciences. Must the social sciences emulate the successful methods of the natural sciences? Or are there dimensions of human society that require unique methods or kinds of theorizing? The questions of reductionism ask how social structures relate to the individuals who constitute them. Do churches have causal powers over and above those of their members? Or can all social-level correlations be explained in terms of individual beliefs, goals, and choices?

Ultimately, the questions of the philosophy of the social sciences are about our place in the universe. What is the source of value? How is human nature related to non-human nature? What can we know? Reflection on the social sciences therefore contributes to the fundamental inquiries of philosophy. The topics of this book are commonly discussed in theoretical and methodological writing in the social sciences. Therefore, reflection on these philosophical themes also contributes to the fundamental inquiries of the social

sciences. The philosophy of the social sciences is an inherently interdisciplinary activity. When done well, it can advance both philosophy and the social sciences.

Throughout this book, we will tack back and forth between examples of social scientific research and philosophical argumentation. The examples will have two roles in our discussion. First, the examples illustrate how important philosophical questions are built into social scientific research. We will extract these questions and examine answers put forward by philosophers and social scientific theorists. Then—and this is the second role—we will use the examples as a testing ground for the philosophical views. Positions taken by philosophers ought to help us resolve the social scientific puzzles which gave rise to the questions in the first place. Let us begin, then, by looking at some examples of social scientific research. In the next section, we will elaborate on the issues of normativity, naturalism, and reductionism to which they give rise.

The Democratic Peace

Modern democracy emerged in the late eighteenth and early nineteenth century with increasing popular participation in voting and office-holding. The republics in France and the United States put decision-making power into the hands of elected representatives. Theorists postulated that the responsiveness of leaders to the will of the people would bring an end to war. Immanuel Kant, in an essay entitled “Perpetual Peace,” argued this way:

Now the republican constitution apart from the soundness of its origin, since it arose from the pure source of the concept of right, has also the prospect of attaining the desired result, namely, perpetual peace. And the reason is this. If, as must be so under this constitution, the consent of the subjects is required to determine whether there shall be war or not, nothing is more natural than that they should weigh the matter well, before undertaking such a bad business. For in decreeing war, they would of necessity be resolving to bring down the miseries of war upon their country.

(Kant 1903 [1795], 121–2)

Kant’s argument considers the rational course of action for a group of people who govern themselves. Since the costs of war are so high, it would be irrational for the citizens of a state to vote for war unless the situation was dire. Elected governments will, therefore, be reluctant to go to war. As a philosophical argument, the reasoning seems sound. But we know from experience that people are not perfectly rational. So it raises an interesting question: Are democracies less likely to go to war? This question has been at the heart of an extensive social scientific literature. The evidence suggests that while democracies are not less warlike in general, they very rarely go

to war against each other. Indeed the correlation is so strong that some have proposed this “democratic peace” to be a law of the social sciences.

The democratic peace is one of many cases where philosophical positions and arguments have directly inspired social scientific research. You might think that this would permanently fix the philosophical assumptions of social scientific theories, but it doesn’t. Kant’s argument, for example, supposes that the free choices of the citizens determine whether a nation goes to war. If researchers hewed closely to Kant’s presuppositions, they would look at why individuals voted or did not vote for war-mongering politicians. By contrast, many social scientists have examined whether particular kinds of government institutions cause or inhibit war. In other words, their philosophical assumption is the opposite of Kant’s: The causes of war are found at the social level. Scientific research tends to be diverse in its assumptions, even when the question is as focused as the question of why democracies do not go to war with each other. Different answers appeal to distinct philosophical commitments. In this domain, the philosophical differences include disputes about whether human events can be explained by causal laws and whether communities exist over-and-above the individuals who compose them.

Azande Witchcraft

Anthropologists have long been fascinated with beliefs about supernatural agents. It is common for humans to see the world as populated by beings that can pass through solid walls or change from human to animal form. Very often, the beliefs seem to fly in the face of simple common sense. In a famous study of the Azande, an ethnic group of central Africa, E. E. Evans-Pritchard reported practices that seemed rather incoherent to him. Among the Azande, “witches” (Evans-Pritchard’s translation) were people who had the power to cause misfortune. When someone suddenly fell ill and died, a witch might be responsible. When this happened, the family would demand retribution. To determine the identity of the responsible witch, the Azande had a practice of consulting oracles. On the basis of the oracles, they would perform “vengeance magic” to kill the witch. Incoherencies arise when there are multiple deaths and multiple oracles. Evans-Pritchard wrote:

If it were known that the death of a man *X* had been avenged upon a witch *Y* then the whole procedure would be reduced to an absurdity because the death of *Y* is also avenged by his kinsmen upon a witch *Z*.
(Evans-Pritchard 1937, 27)

Was *Y* a witch or not? According to *X*’s kinsmen he was (because the oracle said so), and their vengeance magic killed him. According to *Y*’s kinsmen he was an innocent man who was killed by witch *Z*, as proved by their oracle and vengeance magic. In practice, Evans-Pritchard notes, the oracles

and vengeance magic are family secrets. This kept the contradiction from being exposed, but it hardly resolves the puzzle. We can see that the practice is self-contradictory in principle. Why didn't the Azande notice?

When Evans-Pritchard wrote about the Azande, anthropologists were in the midst of a debate about "primitive rationality." Some anthropologists of the nineteenth and early twentieth centuries proposed that ways of thinking evolved. Groups like the Azande were still at an earlier stage of psychological evolution, where logic had not yet taken hold and magical thinking predominated. Others, including Evans-Pritchard, thought that the variety of human practices and beliefs now observable did not represent holdovers from an earlier period. All humans have the same intellectual abilities. Azande witchcraft looks puzzling to us only because we have not yet understood it. The problem is to properly understand the Azande. If the Azande understood their practice of vengeance magic as Evans-Pritchard did, they couldn't continue to practice it in good faith. If they practice vengeance magic in good faith, Evans-Pritchard must have misunderstood it. How can we come to understand what "witchcraft" means to the Azande? These theoretical and methodological questions of anthropology can be asked in ways that are quite familiar to philosophers: How can I know the contents of another person's mind? Are all humans rational? And what does "rationality" amount to anyway?

Freedom Riders and Free Riders

Why did Rosa Parks refuse to give up her bus seat to a White passenger? When the bus driver ordered Rosa Parks and three other Black passengers to move, the others complied. No doubt they too were fed-up with laws that humiliated them. But defying the driver's order carried a high risk of punishment. Each individual therefore had a strong motivation *not* to challenge the system of segregated seating on the buses of Montgomery, Alabama. Yet if all acted together, the laws would change. The Civil Rights Movement of the 1950s and 60s eventually succeeded only because enough people defied the punishments. Social movements and revolutions all face the same problem. From the point of view of each individual, there are substantial costs to participating. At the same time, everybody benefits if the system changes. The rational choice for each individual, then, is to sit on the side and let others pay the costs of participation. If the movement fails, the individual loses nothing; if it succeeds, those who gave up their seats benefit from it just as much as Rosa Parks did. Paradoxically, then, social movements and revolutions should never get started. Problems of the same form—what are sometimes called "free rider" problems—show up in several fields. In economics, it arises as the tragedy of the commons. In anthropology, it is the puzzle of how human cooperation could have evolved.

At least sometimes, revolutions and social moments succeed, people conserve public resources, and we cooperate altruistically. Free rider problems

get solved, but how? Answers to this question encompass two deeply different conceptions of human nature. The classical liberal view treats humans as autonomous choosers, each seeking his or her best interest. Community is possible only when the incentives make actions that are beneficial to the group also beneficial to the individual. Systems of norms and laws can support social coordination, but they raise new questions. Why do people follow norms that are contrary to their self-interest? On the other side of the philosophical divide, communitarians see humans as fundamentally social and oriented toward each other. Identity with a group and its norms is integral to human life. On this side of the issue, questions of agency push to the fore. How can an individual decide that some social norms are *wrong* and act in ways that subvert the dominant cultural ethos? What force does a social norm have, and from where does it arise?

Philosophy in the Social Sciences

In each of these examples, concepts and questions of longstanding interest to philosophers are close to the surface. In pursuing their questions, social scientists take positions on matters that have deep roots: conceptions of human agency, rationality, epistemological justification, value, causation, and community. The philosophical task is to link the social scientific commitments to the larger literature in philosophy. After all, there have been some pretty smart people who have thought about these matters over the last 2,000 years or so. Awareness of the philosophical issues and the ability to critically evaluate the philosophical commitments of a theory or methodology can significantly sharpen social scientific inquiry. The flip side of the deep kinship of philosophy and the social sciences is that contemporary social scientists are developing answers to ancient philosophical problems. The thinkers who we now identify as philosophers drew on the social theories of their time. Today, we have a rich resource of empirical evidence and theory that bears directly on traditional philosophical questions. Just as there is philosophy in the social sciences, there is social theorizing in philosophy. The philosophy of social science tries to hold both up to critical scrutiny.

Before getting too far into our discussion, something needs to be said about the word "science." As we will discuss presently, one of the big issues in the philosophy of the social sciences is whether inquiry into the social world is different from inquiry into the natural world. This issue is often framed as a debate over what counts as a "science." Many disciplines have seen fractious debates over whether the field should be thought of as "scientific." To some ears, speaking of "the philosophy of social *science*" is already to focus on a limited set of theories, methods, and questions. However, the question of how social inquiry is related to natural inquiry is not best approached by demarcating what is and is not science. Our questions are about the form and structure of inquiry into the social world, and it would beg the important questions to limit the possibilities at the outset. In this

book, therefore, “social science” will be understood broadly as including all systematic empirical investigation into the activities of human beings, with a special interest in those things we do together, as part of larger social groups. It explicitly includes methods like interviews and participant observation. And unless otherwise specified, “theory” is not restricted to talk of causes and laws. “Theory” includes all the ways that social scientists formulate and express their results.

The question of what counts as a social science has a practical dimension too. What fields are included within the domain of the philosophy of the social sciences? The examples above draw on anthropology, sociology, economics, and political science, but what about linguistics, psychology, and history? What about medicine, nursing, public health, criminology, educational studies, and business? Here again, we will take a broad and inclusive approach. There is a set of philosophical questions—to be outlined presently—which cut across particular theories and methodologies of all the disciplines we have mentioned and more. To be sure, there are also philosophical issues specific to disciplines. The fields of history, psychology, and economics support well developed philosophical literatures. Indeed, the series of which this book is a part includes texts on the philosophy of economics (Reiss 2013) and the philosophy of psychology (Bermudez 2005). This text will cleave to the issues common among all studies of human behavior and social interaction.

1.2 A Tour of the Philosophical Neighborhood

The discipline of philosophy is commonly divided into the domains of value theory, epistemology, and metaphysics. Value theory concerns issues about the source and justification of values, rules, and norms. What makes an act morally permissible or a painting good? Epistemology concerns human knowledge. What constitutes knowledge and how is knowledge justified? Finally, metaphysics asks about the fundamental characteristics of the world. What are causes? Are humans free? What does it mean to be rational? It should be clear from the three examples introduced in Section 1.1 that the philosophy of social science draws on all three of these sub-fields. What, then, makes the philosophy of social science distinctive as a domain of inquiry within philosophy?

The answer provided so far is that the philosophical questions arise out of the practice of a collection of empirical disciplines called “the social sciences.” So far so good, but is there anything that ties these questions together? I think not, at least, not in any strong sense. Any attempt to strictly demarcate the philosophy of social science is bound to be overwhelmed with counter-examples. More importantly, such strict discipline would stunt our inquiries. As you study philosophy you will find that one question leads to another, sometimes in unexpected ways. The field of philosophy is crisscrossed by intellectual lines of inquiry, and the boundaries among domains must

remain fuzzy if we are to follow where our investigations lead. That said there are some prominent, well-trodden paths to which we will find ourselves returning. Three themes, which are distinctive of the philosophy of social science, will run throughout this book: normativity, naturalism, and reductionism.

Normativity

Issues about norms, values, and rules enter the social sciences in two rather different ways. On one hand, the norms, values, and rules of specific societies are part of what the social sciences study. On the other, there are norms, values, and rules that social scientists recognize and are part of *their own* society. Let us begin with the second.

The idea that democracies do not wage war on other democracies has figured in the rhetoric and practice of American foreign policy. That social science should support social policy in this way is not surprising. Indeed, one might argue that the only way to create effective social programs is to know how the social world works. This line of thought presupposes that social science and social policy are independent. Some critics have argued that the expediencies of American foreign policy influenced the social scientific investigation of the democratic peace hypothesis. As you might imagine, defining “democracy” and “peace” is crucial to the research. Critics argue that these concepts cannot be defined in ways that are completely independent of political values. So commitments to how we ought to be conducting our foreign policy influence the data and theories on which policy is based. In this way social scientists become involved in disputes over social policy, and they have to defend their results as the results of “objective” inquiry.

We will explore several issues surrounding values and objectivity. The primary question concerns *value freedom*, and this will be the topic of Chapter 2. Must social scientific research be conducted without commitment to ethical or political values? Many philosophers of social science think that the answer is “no”; some kind of commitment is always present, even necessary. This answer opens new questions. There are a variety of ways in which moral and political values figure in social scientific research. Selecting data to fit a preconceived agenda obviously constitutes a bias and undermines objectivity. The consequences of other influences are not so obvious. We need to understand the variety of ways in which science can be value-laden. Then we need to ask: If the social sciences are not value-free (in a particular way), can they be objective? This question links the epistemology of the social sciences to the question of value freedom. Because of the epistemological dimension of the question of value freedom, we will touch on it again in Sections 3.4, 6.3, and 10.4.

The question of value freedom is made more complicated by the fact that many projects in the social sciences are explicitly political. Critical theory, feminist research, and various forms of participatory action research aim at

social change. They seek to develop knowledge that will make societies more just and humans more free. Can these projects produce social scientific knowledge? One might be initially reluctant to say so, but if we exclude them, then what are we to think about research that aims to improve student learning or reduce crime? Social science is often used in “engineering” projects that are explicitly in the service of social policy. These projects challenge us to think more deeply about what constitutes objectivity in the social sciences.

Questions about the role of values in the social sciences ultimately ask about the ways in which we conceptualize “fact” and “value.” In the social sciences, these issues arise when theorists try to develop accounts of the values, norms, and rules operative in human societies. In the discussion of free riders, above, we saw some of the ways that the social sciences often invoke norms in their theories. Rosa Parks thought that racial segregation was *wrong*, and this was an important reason for her action. It has been suggested that one of the ways that social movements and revolutions overcome the free-rider problem is that the norms and shared values of social groups obligate their members to act. (We will discuss this theory further in Section 6.1.) From this theoretical point of view, it is relevant that Rosa Parks was secretary of the Montgomery NAACP, and that the NAACP quickly organized the bus boycott in response. Social scientific theorizing often makes appeal to norms, rules, and values when explaining both individual action and social-level events like social movements or revolutions. In so doing, they must make metaphysical commitments about what norms *are* and how they are related to individual and group action. These are fundamental questions of value theory. Chapter 7 is devoted to these issues, and they are also discussed in Sections 6.4 and 8.3.

Naturalism

Perhaps *the* distinctive question of the philosophy of social science is whether and how the social sciences differ from the natural sciences. The sciences are paradigms of empirical knowledge, both of what can be known and how it should be established. Not all sciences are equal. Alchemy and astrology were once proclaimed “sciences,” but nobody now takes their theories as knowledge. On the other hand, physics, particularly Newtonian mechanics, is widely taken as a model for scientific knowledge. The question of whether social science is like natural science has therefore been central to the legitimacy of the social sciences since their inception. “Naturalism” is the name for a variety of views holding that the social sciences should be like the natural sciences in some important way. Those who think that the social sciences need a distinctive method, form of theorizing, or ontology are—you guessed it—anti-naturalists. Unfortunately, the term is used in a variety of ways. It will therefore be useful to engage in a little bit of stipulative definition.

Since the issues debated cover a wide variety of topics, it will be useful at the outset to distinguish epistemological naturalism from metaphysical

naturalism. Epistemological forms of naturalism concern issues about theory, explanation, and method. In literature on social scientific methodology one often encounters a distinction between “qualitative” and “quantitative” research. Qualitative research uses interviews, participant observation, focus groups, and similar methods. It expresses its research results in narrative form, often relying on illustrative cases and analyzing long passages of text. Quantitative research relies on methods that measure in some way, perhaps through surveys or experiments. It aims to uncover correlations and causes, and it may rely on mathematically formulated models. When this distinction is introduced in the methodology literature, it is usually insisted that qualitative research is deeply different from quantitative research. Authors who take this position are therefore adopting some form of epistemological anti-naturalism.

Metaphysical naturalists hold that humans are part of the natural world, and therefore they must be understood in terms of the same causes and mechanisms that animate all other creatures. Those who oppose metaphysical naturalism argue that humans or human societies are distinctive in some deep way. The arch anti-naturalist of a metaphysical stripe would be René Descartes, since he held that human minds were a non-physical sort of substance. What makes us human is literally not part of the natural world. In contemporary social science, evolutionary and psychological approaches have recently taken on a new importance. These are typically naturalistic in the metaphysical sense. Evolutionary explanations of how cooperation could arise, for example, treat human beings as sharing most traits with other animals. The challenge is to explain how our specific traits, like altruistic cooperation, could arise through selection. At the deepest level, the dispute over metaphysical naturalism is about whether human nature is part of the natural world or outside of it.

Naturalism is best understood as a nexus of closely related philosophical debates. The real work of answering the question—should social scientific theories/methods/ontologies be like the natural sciences?—is carried out at a much lower level of abstraction. Several issues to be discussed in later chapters thus fall within the theme of naturalism.

A pair of questions forms the core of the debate over epistemic naturalism. Does understanding human behavior require special *methods*? And does it require forms of *theory* different from those in the natural sciences? In the discussion of Rosa Parks and the civil rights movement, above, the problem was framed in terms of “free riders.” Given this perspective, the social scientist may use the resources of game theory to analyze and explain social movements. Formalizing the preferences of abstract actors in a social movement, the main claims of the theory can be mathematically expressed. Some people think that because it abstracts away from the historical individuals, this sort of theory misses important issues. The real question is how Rosa Parks and other civil rights leaders were thinking about the challenges they faced. This cannot be expressed in terms of correlations or game-theoretical analyses. This debate will be the main topic of Chapter 3, and it will arise

again in Chapter 5. The “qualitative” methods, mentioned above, were developed to find out how historical agents like Rosa Parks were thinking about their situation. In Chapter 4, we will look closely at the epistemology of these methods.

Questions about causality are staples of both epistemology and metaphysics. They arise across the sciences, but in the social sciences they have particular resonance. The question of free will asks whether human action is causally determined. In the social sciences, this question turns into one about explanation: Can human action be causally explained? Anti-naturalists argue that it cannot because humans act for reasons, and reasons are not causes. This issue will be explored in Section 5.1, and Section 7.3 will touch on it again. The empiricist analysis of causation, handed down from Hume, holds that causes require laws. Are there laws of the social world? The democratic peace is sometimes put forward as a law, but this is debated. Many have thought that the creativity and complexity of human behavior precludes the kind of lawfulness found in the natural sciences. In the last several decades, analyses of causation that do not tie causes to laws so tightly have become popular. In Chapter 9, we will examine these different analyses of causation and their consequences for social scientific theorizing.

Law or not, the democratic peace hypothesis asserts a causal relationship between democracy and peace. How could such a causal hypothesis be tested in the social sciences? The problem, as readers of Hume well know, is that the evidence for a hypothesis like the democratic peace is a correlation: no observed democracies have gone to war with each other. The theory asserts an unobserved cause. The social sciences have developed several methodologies that purport to solve this epistemological problem. Chapter 10 will evaluate formal techniques of causal modeling, case studies, and experimentation.

A final broad issue that invokes the theme of naturalism is the role of rationality and rules in social scientific understanding. This issue intersects with the theme of normativity; but here we are concerned with the place of rules in social scientific theory. Social scientists often appeal to rules, but one might wonder whether rules really explain anything. Does the fact that Hannah *ought* to do something explain why she does it? Naturalists of a metaphysical stripe often argue that it does not, but this depends to some extent on how norms, rules, and values are conceptualized. Chapter 7 will be primarily devoted to this issue, though it will arise in Chapter 4, Section 5.1, and Section 8.3 as well.

Reductionism

Philosophers have often envisioned the sciences as arranged in a hierarchy. Physics is the foundation on which chemistry is built, followed in turn by biology, psychology, and then the social sciences. Having built such a house of cards, one wonders how much it would take to flatten it. Can the social sciences be reduced to psychology, which in turn reduces to biology? Does

everything ultimately reduce to physics? These are the questions of reductionism. Like naturalism, reductionism is a theme that encompasses several issues, and like naturalism it comes in both epistemological and metaphysical varieties. The difference between the varieties depends on how “reduce” is to be understood. Some have held that reduction is a relationship between theories. Epistemological reductionism holds that theories at one level can be replaced by theories at a lower level. Everything explicable by sociology, for example, is ultimately explicable in terms of psychology. (One need not continue, of course; there may be reasons why psychology does not reduce to biology.) Metaphysical claims about reduction, on the other hand, contend that entities, properties, processes, or events at one level are nothing but objects at another. Minds do not exist, the reductionist might say, only brains. Like the distinction between epistemological and metaphysical naturalism, it is possible to adopt (anti-)reductionism of both flavors. It is also possible to be one sort of reductionist without being the other. We will encounter a number of philosophers and social scientists who accept a metaphysical reductionism but do *not* think that theories of the social sciences could be replaced by psychology.

The themes of reductionism and naturalism overlap, but they are not coextensive. Many who argue for reductionism (either epistemological or metaphysical) are motivated by naturalistic commitments. That is, one might argue that because there is one, causally connected world and humans are part of it (metaphysical naturalism), social and psychological properties must reduce to physical properties. As a rough generalization, it is probably fair to say that all reductionists are naturalists. But the converse is not true: not all naturalists are reductionists. It could be that the natural world contains a variety of fundamental kinds of things which are not all reducible to some substrate, and at the same time the social and natural sciences need to use the same theory structures and methodologies. Once again, it is difficult to resolve the issues when they are considered at this abstract level. The broad theme of reductionism gets substance from several specific issues in the philosophy of social science.

Students of the social sciences are likely to encounter the phrase “methodological individualism” in the course of their studies. It is the requirement that social theories must explain social events in terms of the choices, beliefs, and attitudes of individual people. Expressed this way, it is an epistemologically reductionist thesis. However, arguments for methodological individualism are often a mix of metaphysical and epistemological considerations, and Chapter 6 will be devoted to sorting out these issues. The metaphysical question is whether churches, schools, armies, and so on are things that exist over and above the individuals. The reductionist regards a social movement or a democratic nation as nothing more than patterns of individual actions. Game theory has been a particularly powerful tool for analyzing the way that group properties could emerge from individual choices. Section 5.2 will present a very brief primer on decision theory and game theory, and we will

examine these tools and their application throughout the sections that invoke reductionist themes.

Methodological individualism reduces social-level objects to individual choice and action. Most who advocate this sort of reductionism do not go on to explain individual choices in terms of psychological or biological properties. This raises the question of whether agency and individual action have a kind of explanatory priority. A number of recent research programs in the social sciences have added new dimensions to this question. Game theory is a paradigmatic form of individualism insofar as it assumes that individuals rationally pursue actions with the greatest utility. Recent work in behavioral economics has revealed striking ways in which humans fail to satisfy this assumption. We will consider how these results affect game theory in Section 5.3. These experiments are consonant with much work in cognitive psychology which seems to explain large-scale features of human behavior in terms of sub-conscious, or better, sub-personal processes. (The mechanisms discovered by contemporary cognitive psychology and neuroscience would be examples of “sub-personal” processes or properties.) In Section 6.4 we will discuss theories of the evolution of human cooperation that appeal to cultural evolution by selective forces acting on human groups. This family of empirical theories suggests a picture where the level of agency (belief, intention, choice) is eliminated and replaced by sub-personal cognitive capacities and super-personal social patterns. Not exactly your father’s reductionism, but spooky nonetheless.

Anti-reductionists, or “holists” as they are often called, can point to at least two social phenomena that seem to be impossible to explain or analyze in individualistic terms: normativity and joint action. It is a philosophical commonplace to say that “ought” cannot be reduced to “is”; a norm or rule cannot be identified with a pattern of behavior. In Chapter 7, we will examine some social scientific and philosophical attempts to do so. Joint actions are things that a single person cannot do alone, such as sing a duet or defeat Napoleon’s army. In the last two decades, there has been a flurry of work in philosophy on the question of whether joint actions can be explained or understood as an aggregate of individual intentional actions, or whether there is some sort of joint intentionality. This issue of social ontology will be the topic of Chapter 8.

Excelsior!

This book is oriented toward both students of the social sciences and students of philosophy. When teaching courses to such diverse audiences, I have found that the course benefits from the knowledge that students can contribute. As you read this, I encourage you to use your philosophical or social scientific expertise. If you are a social science major, use examples from your field to test the views being presented. While it may not always be obvious to you, the philosophical issues discussed here are embedded in the

theoretical and methodological literature of your discipline. Ask: What is at stake for my field when this question is answered one way or another? If you are a philosophy major, you will hear echoes from your other courses and readings. Use these arguments, concepts, and positions to critique, elaborate, and nuance the arguments in the text. Listen also for reverberations back from the social sciences. As argued above, the social sciences have something to contribute to philosophy’s ancient questions about the human condition.

While this text is self-sufficient, I have assumed that you will read it along with some of the primary literature in the field. Writing a philosophy textbook is a bit like being a tour guide, and I want you to get off the bus and explore on your own. Wittgenstein once likened language to “an ancient city: a maze of little streets and squares, of old and new houses, and of houses with additions from various periods” (Wittgenstein 1953, Section 18). Intellectual domains are like cities too, and in giving you a tour I have tried to find a path that both explores the important monuments and makes the whole city plan intelligible. The text will outline some of the important arguments and debates, and thereby provide some context as you read contemporary contributions and historically important literature.

Each chapter will include some advice about further reading. In addition, a number of general collections on the philosophy of social sciences have been published in the last decade. The following collections include synoptic essays that go into more detail on the topics of this text: Jarvie and Zamora-Bonilla, *The SAGE Handbook of The Philosophy of the Social Sciences* (2011), Kaldis, *The Encyclopedia of Philosophy and the Social Sciences* (2013), Kincaid, *The Oxford Handbook of Philosophy of Social Science* (2012), Outhwaite and Turner, *The SAGE Handbook of Social Science Methodology* (2007), Turner and Risjord, *Philosophy of Anthropology and Sociology* (2006), and Turner and Roth, *The Blackwell Guide to the Philosophy of the Social Sciences* (2003).

2 Objectivity, Values, and the Possibility of a Social Science

When governments make decisions about social policy, they need to answer difficult questions. Does raising taxes hurt or help economic growth? Will providing a social safety net improve the lives of everyone, or will it decrease motivation to work? If we fix the broken windows and clear the trash from the streets of our neighborhoods, will it lower the crime rate? The *objectivity* of scientific evidence recommends it as a basis for policy decisions. “Objectivity” in the sense of freedom from pre-existing value commitments seems necessary for sound social policy making. At the same time, we know that governments support social scientific projects. Development of many statistical methods and concepts, for example, were prompted by needs of policy makers. When social policy drives social scientific research, one might become concerned that the interests of the politicians are influencing the results. Is it possible to separate politics from social science?

The question of whether the social sciences are *value-laden* or *value-free* has both practical and conceptual dimensions. Practically, value-laden research would presumably undermine the usefulness of social scientific results for social policy purposes. Value freedom means that scientific results cannot be contested by those with different political interests. If the social sciences are value-laden, we need to rethink their relationship to social policy. Conceptually, the issue of value freedom is about the character of science itself. If the sciences are value-laden, then how can we distinguish between good science and poor science? Can we give any sense to the notion of objectivity in science? And are the social and natural sciences different on this score? Perhaps the social sciences are deeply different from the natural sciences precisely because the social sciences cannot be value-free. Indeed, some philosophers have gone so far as to suggest that because they are value-laden, the social sciences should not be counted as “sciences” at all.

2.1 The Ideal of Value Freedom

In thinking about cases where political or moral considerations figure in a scientific dispute, there are two questions to ask:

- How are the values influencing the science?
- What values are involved?

One way that values could influence scientific research, for instance, would be when they directly motivate the choice of conclusions. For example, suppose a journal editor refused to publish results that went against his or her political views. This sort of behavior is an obvious epistemic failure. Not all real-life examples look like this, however. How, for instance, should we think about social scientists who receive grants from governmental sources? In this sort of case, the values of the government influence whether the research gets done, but it might not influence the research practice or conclusions. Is this an epistemic failure too? We need, therefore, to ask what sort of values are in play and how they are influencing the research, and then examine the epistemic consequences. With this understanding, we might be able to find an appropriate ideal of value freedom for the social sciences.

The United States Census

The United States has a constitutional mandate to count the population once every ten years. The census determines the number of Representatives each state sends to the House of Representatives, as well as the allocation of federal funding for education, law enforcement, and similar enterprises. A census has been conducted every decade since 1790. While it seems a straightforward enough problem, it turns out that counting people is a tricky business. There are several issues.

First, people do not simply line up to be counted. According to the Center for Disease Control, in 2009 there were approximately 2,400,000 deaths in the U.S. and more than 4,000,000 births. In the time it has taken you to read this paragraph, then, it is likely that more than seven babies have been born and four people have died. Since conducting the census takes time, we cannot think of it as capturing the exact number of people in the country at a particular time. It is more like measuring acceleration than counting the beans in a jar. Moreover, those who are alive keep moving about. The census relies on addresses, but people change addresses. College students typically have multiple addresses, and the homeless have no address at all.

Second, there is a problem of criteria: Who is to be counted? Obviously, citizens should be counted, but since citizenship is a legal status, there are interesting borderline cases to be adjudicated. How do we count dual citizens, legal immigrants seeking citizenship status, non-citizens serving in the military? What about patients in persistent vegetative states, or third-trimester fetuses?

Third, how are they counted? Two methods have been used traditionally: either go door-to-door and count people or mail questionnaires to each household. Both methods have predictable inaccuracies. The door-to-door method requires that respondents are willing to talk to the government representative who has knocked on their door. An advantage of the door-to-door method is

that the census agents can track down people who are hard to reach, like the homeless. However, with a population in the hundreds of millions, making contact with every citizen is expensive. For this reason, mailed questionnaires have come to predominate. However, this method depends on respondents who will make the effort to fill out the form and send it back. Those with multiple addresses or without an address at all are difficult to count by mail.

No census is perfectly accurate; a census may *undercount* or *overcount* the population. In the 1990 census, the undercount was approximately 4 million, or about 1.6 percent of the population (U.S. Department of Commerce 2013). But this didn't break down evenly across social groups. The undercount rate for Whites was 0.9 percent, while the rate for Blacks was 4.4 percent and Hispanics was 5 percent. How do we know that this many people were missed? Through a *second* survey sent to the same households. The method counts the difference between the first and second samples. Of those who receive the second questionnaire, some will have filled out the first census, some will not. The fraction of those in the second survey who answered the first census is then inferred to be the fraction of the whole population who filled out the survey. Note that this too is subject to both bias (someone reluctant to fill out the first will be reluctant to fill out the second) and random error.

As you might imagine, none of this is free from politics. In response to the 1990 undercount estimate, the U.S. Census Bureau recommended supplementing the direct mail census with a sampling method to estimate the under (or over) count. Selected areas would be canvassed by door-to-door census takers, and these results would be combined with the mailed forms to generate the "true" number. This happened at a time when a Democrat (President Clinton) was in office, and some Republicans objected. Those opposed to the Census Bureau's plan argued that it was prone to new errors and bias, and that it didn't really count the population, it just made educated guesses about it. Those who supported it argued that sophisticated sampling techniques were likely to generate a more accurate number than either a simple mailing or an attempt to contact every individual in the USA.

At first look, this seems like a simple issue of scientific methodology. Sampling methods and the associated statistics are quite sophisticated, and we rely on them for the safety of everything from automobiles to power plants. However, there are different biases and sources of error (both known and suspected) in each method that might be used. The debate over which method is the best turns partly on our willingness to tolerate particular risks of error. The politicians got interested because they saw that the different methods might generate different results. Since it was presumed that those groups who were undercounted were more likely to vote Democratic, Republicans tended to favor direct methods (which had a risk of undercounting minorities). Democrats tended to support the sampling methods that might increase the estimate of the number of Black and Hispanic constituents in their districts.

The problem is tricky because choice of a census method requires deciding what kinds of errors are acceptable. Politics sneaks in because the possible

errors have different political consequences, and thus the choice of method has political motivation. In light of all this, can we say that there is a scientifically best, or objective, way to take a census? Or is our estimate of the number of people in the United States always going to be a function of the political party who happens to be in power during the census year?

The issues in census taking make clear the motivations for seeking a value-free social science. If social science is tainted by politics, one might think it could not provide the kind of neutral support policy makers seek. One might conclude that the ideal of value freedom requires that values must be completely eliminated from methodological decisions. An initial gloss on the ideal of value freedom might be this:

Strong Thesis of Value Freedom: Science is objective insofar as values play no role in scientific research.

The Strong Thesis is an ideal for science, not a description of how it is actually conducted. Proponents of the Strong Thesis can recognize that much social science fails to live up to this standard. It is therefore no criticism of the thesis that scientists are often influenced by moral or political concerns. To get a critical grip on the Strong Thesis, we need to ask whether it is truly necessary for scientific objectivity.

Dimensions of Value Freedom

To evaluate the Strong Thesis of Value Freedom, let us ask: What values are playing a role in the decisions about how to conduct the U.S. census, and what role are they playing? Notice that the dispute is about the best method for determining the number of citizens living in the United States. The politicians were not cherry-picking the results; their dispute was about the process. So, the considerations of what was best for each political party were influencing *methodology*. This is a point about the role of the values in this example. The character of the values in play is apparent. Since each party wants to increase its number of Representatives, it prefers an overcount of people likely to vote in their favor and an undercount of those likely to vote against them. This is a clear example of a political value influencing a decision about scientific methodology.

Political values are not the only kind of values to influence the census. Different methods for taking the census have different virtues. Both a house-to-house census and a mailed survey are prone to undercounting (though, as we have seen, the sources of these errors are slightly different). Sampling methodologies correct for these errors, but they raise the risk of overcounting. This is a particular example of a general problem in methodology. If you've taken a statistics class, this problem has probably been described in terms of "Type I" and "Type II" errors, or perhaps "false positive" and "false negative" results of a test. (We will discuss these a bit more in Section 2.2.) As

a general matter, we cannot simultaneously reduce both the chances of undercounting and the chances of overcounting. This means that scientists are faced with a choice when determining the best method for their study. Which risk is more acceptable for the research, the risk of overcounting or the risk of undercounting? The decision about how to make trade-offs between types of error must be based on some kind of value. In the absence of any values, there would be no grounds for deciding that one method was *better* than another. One can easily imagine cases where this decision did not involve any political considerations. In the absence of a political context, the decision depends on what is best for the research at hand. Which sort of error would most diminish confidence in the results?

You might think that the values involved in the dispute about undercounting and overcounting seem to be of a different kind than disputes over ethics or politics. A dispute over the virtues of different methodologies is a matter of choosing among different ways to achieve the best science. For this reason, many philosophers have distinguished *epistemic values* from moral or political values. Something is an epistemic value when it contributes to good science. Epistemic values are part of the norms and standards of good scientific reasoning. A dispute over which method is best, then, must invoke values in the judgment that one method is better than another, but these values contribute to objectivity. When moral or political values enter into the discussion, one might argue, they bias the results and detract from objectivity. The ideal of value freedom, then, must not be understood as excluding all values from science. Rather, value freedom requires the exclusion of moral and political values—what we will call *non-epistemic values*—from science. In the dispute over the census, we see both epistemic and non-epistemic values playing a role in choosing the census methodology.

The distinction between epistemic and non-epistemic values is a distinction in the kind or character of the values involved. As we have already seen, how the values influence the decision makes a difference as well. Choosing results that fit a preferred conclusion is an epistemically poor practice, no matter what values are motivating it. On the other hand, while choosing a methodology may require values, objectivity seems to be preserved if those values are internal to science. The problem with the census, one might then say, is that the political values got mixed up in decisions that should have been properly scientific. Generalizing this idea, some philosophers of science have distinguished a *constitutive* role for values from a *contextual* role (Longino 1990). Constitutive values are necessary for an activity. They shape the activity from the inside, so to speak, and the activity cannot go on without commitment to constitutive values. Contextual values are part of the environment. They may shape the activity, but they are not necessary to conducting it.

For a non-scientific example of the distinction between constitutive and contextual values, one might think of the different roles of aesthetic values and money in the performing arts. Judgments about aesthetic virtues are crucial to determining the genre of the performance. A distorted guitar

might be a good sound for rock music but be awful for folk music. These values are thus constitutive of the performance. When the performance comes to serve other ends, such as making a living for the artists, other values come into play. The fact that audiences are more likely to come to performances if certain songs are played, for example, might influence the performer's choices. In this way, the values that are part of the context come to influence the activity, even if they are not necessary for it.

Whether non-epistemic values undermine the objectivity of social scientific research depends on whether they are contextual or constitutive. One might argue that contextual values do not always undermine the reliability of scientific results. Science, even social science, is expensive. Researchers must be paid salaries, surveys must be copied and distributed, subjects must be given incentives, and so on. Throughout the history of the social sciences, political interest in measurement, prediction, and control of people has led to funding for specific research projects. Political values determine which research projects get funded and which are not (or, in some cases, even forbidden). Does this fact undermine the objectivity of the social sciences? One might argue that it does not, as long as the political values remain contextual. Funding science is a little bit like shining a flashlight into the dark: Interests determine the direction of the beam, but not what we see when we look. To preserve objectivity, once the decision has been made to investigate a particular topic, only scientific considerations (epistemic values) should govern the research.

These considerations show that the Strong Thesis of Value Freedom is too demanding a requirement. If values played no role whatsoever in science, then scientists could not make decisions at all. There must be some norm that makes one method *better* than another. It does not seem to threaten objectivity if the values invoked are epistemic. A more moderate thesis of value freedom, then, could admit that epistemic values play a role in scientific research and forbid non-epistemic values.

A Moderate Thesis of Value Freedom

The distinction between epistemic and non-epistemic values and between constitutive and contextual value roles permits a more nuanced conception of value freedom. We might formulate it this way:

Moderate Thesis of Value Freedom: Science is objective when only epistemic values are constitutive of scientific practice; moral and political considerations must always remain contextual.

The Moderate Thesis of Value Freedom has not been universally accepted. An initial criticism might be aimed at the attempt to separate contextual and constitutive roles for values. In the example of the census, the political considerations were used to support methodological virtues. The Democrats preferred the risk of an overcount, while the Republicans preferred the risk of an

undercount. It is therefore misleading to say that the trade-off between false positives and false negatives is strictly a scientific matter. The politics was determining the relative importance of under- and overcounting citizens. Since all science occurs in some social context, one might argue, contextual values will always have some influence on the core workings of scientific decision making. In response, the defender of value freedom might agree that, as a practical matter, moral and political values are always present. Value freedom is an ideal toward which we should strive. Moral and political values are not necessary for science, and the goal of objectivity requires minimizing their influence.

Can moral and political values ever become constitutive of a kind of scientific practice? Philosophers have focused on two potential constitutive roles for values in scientific practice. First, moral and political values might influence the justification of theories or the confirmation of hypotheses. This is the role that political values apparently had in the arguments over U.S. census methodology. Some philosophers have used the term "impartial" to describe science that is value-free in this sense. Science can fail to be impartial when moral or political values are used to directly support preference for one conclusion or another. Or again, politics might preclude consideration of alternative explanations, narrowing the field of possible hypotheses to be tested. In these cases, failures of impartiality would be grounds for criticizing the research. But do all failures of partiality lead to bad science? And is it really possible to eliminate moral or political values from decisions about which hypotheses are best supported by the data? These questions will be addressed in Section 2.2.

A second way in which moral and political values might appear in scientific practice is as part of the content of a theory. This is the form of value freedom advocated by Max Weber: "it can never be the task of an empirical science to provide binding norms and ideals from which directives for immediate practical activity can be derived" (Weber 1949 [1904], 52). In the case of the U.S. census, the *results* of the census were purely descriptive. They purported to say how many people lived in various parts of the U.S. The census says nothing about how many people *ought* to live in a certain region. "Oughts" are policy matters; they are Weber's "binding norms and ideals." The census is neutral with respect to them, and value freedom in this second sense has been called value *neutrality*. Since scientific research can tell us something about how the world is, but not how it ought to be, one might think that science should be value-free in the sense of being value-neutral. However, philosophers have challenged this version of value freedom too, and we will consider those arguments in Section 2.3.

2.2 Impartiality and Theory Choice

Risk and Error

In an essay provocatively titled "The Scientist *Qua* Scientist Makes Value Judgments," Richard Rudner argued that non-epistemic values are a necessary part of hypothesis testing and theory choice (Rudner 1953). Rudner

begins by pointing out that hypotheses are never proven definitively by any kind of test; they are only more or less probable. It is always possible that the test was mistaken. A standard way to express such possibilities of error in statistics is the use of a "p-value." A p-value is a mathematical construct that expresses the probability that the result could have come about by chance. A p-value of 0.01 means that there is a 1 in 100 chance that the result could have come about by luck or random variation. In other words, if the hypothesis is false, the test would mistakenly show that it was true 1 in 100 tries. A p-value of 0.05 means that there is a 5 in 100 (1 in 20) chance of the test showing that the hypothesis was true when it was not.

To decide whether to accept a hypothesis, the social scientist will have to choose a level for the p-value. This will be a threshold for acceptability: If the p-value is lower than the specified level, it will be accepted. Rudner points out that the choice of level for the p-value depends on the costs of being mistaken. Suppose a social scientist is asked to test the efficacy of training about how to identify songbirds. If students do not really learn how to correctly identify a sparrow, then very little is lost. In such a case, it might be OK that the hypothesis has a 1 in 20 chance of being unsupported. On the other hand, suppose the training was for medical personnel in the use of a piece of lifesaving equipment. Since lives are at stake, 1 in 20 might be too much of a risk. So the "cost" of a mistake—whether in lives, pain, or cold, hard cash—influences (and ought to influence) the decision to demand higher levels of probability. If deciding whether a hypothesis should be accepted or rejected is a core activity of science, then the values that determine whether the hypothesis is acceptable are playing a constitutive role. If Rudner's argument is correct, then even the Moderate Thesis of Value Freedom is an unattainable goal.

In response to Rudner's argument, one might contend that relaxing our standards when there is little at stake is just sloppy research. It may be true that we can never eliminate the possibility of error, but we can always minimize it. If we really want to get at the *truth*, we should always demand maximum probability before accepting a hypothesis. This response will not serve, because there is no simple "maximum probability." A hypothesis might be mistaken in more than one way. The hypothesis might be false, but confirmed by the test, or it may be true, yet not confirmed by the test. These two kinds of mistake are often called "Type I" and "Type II" errors, or "false positives" and "false negatives." Figure 2.1 shows the relationship. Unfortunately, we cannot devise a test that will simultaneously reduce the probability of false positives and the probability of false negatives. They tend to be inversely related. An airport metal detector, for example, may be set to be very sensitive, sounding the alarm even if the person has a tiny piece of metal on their shoe. This setting will ensure that no one carrying a firearm walks through the scanner. That is, it will have a low rate of false negatives. On the other hand, many who are not carrying weapons will trigger the alarm: there will be more false positives.

	Hypothesis is true	Hypothesis is false
Test confirms the hypothesis	True Positive (No error)	False Positive (Type I error)
Test disconfirms the hypothesis	False Negative (Type II error)	True Negative (No error)

Figure 2.1 Type I and Type II Errors

The Moderate Thesis of Value Freedom tries to preserve scientific objectivity by isolating moral and political values outside of the constitutive activities of science. Rudner's argument seems to show that they seep through anyway. Since we cannot (in general) reduce both Type I and Type II errors, when devising a test we must choose which kind of error is more dangerous, costly, politically contentious, or morally problematic. The dispute over the U.S. census was precisely about the acceptability of false positives (overcounting) and false negatives (undercounting). Since choice of the kind of error to minimize determines whether the hypothesis will be judged true or false, and since moral and political considerations are relevant to such choices, it seems like considerations of moral and political values are necessary for the justification of scientific theories. If this is correct, then it would be impossible to be impartial in some scientific fields.

What About Objectivity?

Suppose that the argument above is sound and science cannot be impartial. What should our attitude be toward the sciences? Should we conclude that science is just another battleground for political differences? Is there any way to distinguish between better and worse empirical research? Is there any sense in which the social sciences are objective? The foregoing arguments thus invite us to reconsider what "objectivity" might mean in the context of value-laden inquiry.

Objectivity is not a univocal idea. Like many heavily burdened philosophical ideas, it is used to defend against a number of different philosophical dangers, and each of these contrasts shows a different side to the idea. Following Sharon Crasnow's analysis (2006), we might distinguish three different senses of objectivity:

1. Objectivity as freedom from bias.
2. Objectivity as intersubjectivity.
3. Objectivity as reliability.

We use the first sense when we say that an advertising claim is not objective. An advertiser's interest in selling the goods makes us suspicious that their claims are biased. One of the primary concerns about the appearance of moral or political values in scientific practice is that these values seem to bias the results. That is, they make us suspicious about whether the scientific claims are true. Moral and political values can certainly have this effect. So, if social science cannot be impartial, the challenge is to control or limit the biasing effects of non-epistemic values.

In the second sense, objectivity is contrasted with subjectivity (which is itself a complex and multifaceted idea). My feeling of hunger is subjective while the fact that I am eating a sandwich is objective. Hunger is a state that bears a special relationship to the hungry person (the *subject* of the hunger). It is subjective insofar as the subject of hunger is in a unique position to recognize it. The fact that I am eating a sandwich is objective insofar as it is easily available to anyone in a position to see, and in this sense objectivity means "intersubjectivity." Something is intersubjective to the degree that it is open for critical scrutiny by more than one person. Science is taken to be objective because it cultivates methods that are public: reproducible experiments, survey data that can be counted and re-counted, or interview texts that can be re-read and re-interpreted. Objectivity in the intersubjectivity sense is thought to be desirable because it is the basis for reasoned engagement over scientific results and processes. Since the theories and the evidence are intersubjective, we can (it might be argued) reach agreement about them, at least in principle.

Finally, the third sense of scientific objectivity derives from the reliability of scientific methods. A method is reliable insofar as it provides results that are likely to be true. Notice that a method might be intersubjective, but unreliable. A defective recording device, for example, produces data that is available to anyone, but it may reproduce speech at some times and gibberish at others. In the reliability sense, objectivity has to do with how well we trust our methods to be free from error. In the social sciences, the use of methods that involve measurement, such as surveys, is often said to be more objective than the use of, say, interviews. One ground for this (but not the only grounds—this critique typically invokes the second sense of objectivity too) is that interview subjects are often chosen in non-random ways and the number of interviews is typically small. The purported results from a set of interviews, then, might be an accident of the choice of interviewees and not be reflective of the larger population.

If social science cannot be impartial, must it fail to be objective in any of these three senses? The third sense seems the least threatened. One might argue that whether a method is reliable does not depend on the political or moral commitments of either the inquirers or the subjects. Judgments of reliability do not need to be politically or morally motivated. To preserve objectivity, we might demand that judgments of reliability should not be based on non-epistemic values. Intersubjectivity can also be preserved even if social science is not impartial. Decisions about acceptable types of error should be open to criticism and discussion, even if non-epistemic values are

required. Arguably, then, social science can be objective in the reliability and intersubjectivity senses, even if it is value-laden.

Deeper concerns arise when moral and political values bias decisions about methodology or otherwise color the results. The problem is that biases can be difficult to detect. Background beliefs that encompass value commitments are often invisible to those who hold them. They can take the form of deep presuppositions and assumptions that are taken as obvious and rarely articulated.

In *Science as Social Knowledge*, Helen Longino argued that the social character of science can protect against bias (Longino 1990). Public criticism can enhance objectivity in the intersubjectivity sense, and by doing so, it can limit bias. Objectivity thus requires mechanisms for public critique from a diverse range of voices. Critiques from those who do not share the presuppositions can bring the value commitments to light. Peer review can have this kind of corrective function, but only if several conditions are met. The critical voices must be heard and the community must be responsive to them. This requires that there be shared authority, and that the community has ways to rationally debate about the different positions. In the end, even if some inquiries cannot be impartial, objectivity can be maintained by a properly organized scientific community.

National censuses and other kinds of government-sponsored data gathering can be intractably partisan. Decisions about acceptable kinds of error are inevitable, and different parties will invoke different political values. If the foregoing arguments are correct, then such value-laden science can still be unbiased. Public debate over the political values at stake makes the decisions intersubjectively evaluable, and the reliability of the methods can be determined in a value-free way. While it is hard to imagine in these partisan times, such arguments project optimism about the possibility of objective, yet value-laden, social scientific inquiry.

2.3 Essentially Contested Ideas

Value-Neutrality and Emancipatory Research

Value-neutrality is the thesis that social scientific theories should describe facts, not make policy recommendations. Where impartiality focuses on the *process* of justification and theory choice, neutrality concerns the *products* of scientific inquiry. Value-neutrality forbids scientific theories from including statements about what *ought* to be done or not done. For example, to say that “murder is wrong” is an evaluation, for it says that one ought not to commit murder. Value-neutrality would demand that “murder is wrong” not appear as a part of a social scientific theory. Social scientists could, of course, report a murder rate or that a certain percentage of the population agrees with the statement “murder is wrong.” Value-neutrality seems to be supported by a simple argument. Evaluations—like “murder is wrong”—cannot be supported by empirical research. No number of opinion surveys

will establish the moral correctness of murder. So, one might conclude, whenever a social scientific theory includes a statement about what ought to be done, it must be over-reaching its empirical support.

While value-neutrality might seem to be necessary, there have been important programs of research with explicit political goals. In the nineteenth century, August Comte, Karl Marx, and Herbert Spencer all understood themselves to be engaged in research that was simultaneously political and empirical. In the early twentieth century, the Frankfurt School’s analysis of modern capitalist social structures had the explicit goal of “emancipation from slavery” (Horkheimer 2002 [1968], 246). Modern students of the social sciences are likely to encounter a wide variety of approaches, including feminism, post-colonialism, Marxism, and a variety of “critical theories,” such as critical pedagogy, critical race theory, critical realism, and so on. All of these programs explicitly disavow value freedom, typically rejecting both impartiality and neutrality. They are often criticized by social scientists (and philosophers) who are suspicious of the role that political commitments play in this sort of research. It is impractical to evaluate, here, all of the specific research programs. Nonetheless, there are some widely shared general themes which can shed some light on the challenge that emancipatory research programs present to the ideal of value freedom.

Many programs of emancipatory social science begin with a critique of ideology. “Ideology” here is understood as the relationship between knowledge, oppression, and systems of power and authority. In human societies, power and authority are unevenly distributed. In complex, modern societies, the distribution of power depends on various social groupings, typically combinations of gender (including sexual identities), race (including ethnicity or national identification), and socio-economic status (including caste, class, or profession). These differences in power are associated with oppressive practices, such as limiting access by persons of a particular race/gender/class to education, economic resources, or participation in the political process. The first step of an ideology critique is to recognize that the social scientists participate in the very same material conditions that create differences of power in the larger society. Western academics and researchers in the public or private sectors tend to be male, White, and have professional family backgrounds. Social scientists have the authority to set the research agenda, identify acceptable methodologies, and evaluate the results. What counts as a legitimate question for social scientific inquiry and what counts as a good answer—what counts as social scientific knowledge at all—is thus determined by a group of people with a position of power.

The alignment of social scientific authority with social power and status arguably has consequences for the way that social scientific research is conducted. Certain questions will be important or pressing, while others will be marginal, and what counts as interesting or uninteresting depends on the social position of the inquirer. Moreover, it is argued, people in different social positions do not all have the same understanding of their social world. When I stay in a

hotel, for example, there is a complex social and technological mechanism that makes that stay possible. It is largely invisible to me as a guest. I do not know (and do not need to know) how the bed sheets are kept clean, how the mini-bar is stocked, or how the duties of the front desk differ from those of the bell-captain. My position thus makes certain parts of the social world invisible to me. Of course, they are not literally invisible; if we turn the social scientific gaze upon them they could be studied. However, because of the social position of professional social scientists, the fact that certain parts of the social world are not easily accessible means that questions about those aspects of society will not be important. Some social phenomena will appear as problems to be solved, and whether a phenomenon is a "social problem" depends on the position of the inquirer. As the basis for policy, the identification of problems, and development of solutions, the knowledge of the dominant group thus helps maintain the different social positions within that social system.

The argument concludes that there is both an epistemological and a power asymmetry between the dominant and oppressed groups in a society. Those in the dominant group produce and maintain a particular view of social reality. As already noted, however, their privileged position means that they do not have to understand many of the social processes that make their position possible (e.g. the work of hospital nurses or hotel maids). Their view is incomplete, but they are not likely to see the parts of the social world that it excludes. Those who are in the oppressed group have a different relationship both to the social arrangements and to the social theory that is taken for knowledge. To survive under conditions of oppression, they have to understand the social world from both the dominant perspective and their own. They are in a position to simultaneously see why the dominant view of society is persuasive and why it fails to represent the full picture. Feminists and critical theorists argue that the social sciences are unable to recognize crucial aspects of social life and human experience that arise for particular social positions, particularly in the dimensions of gender, race, and class.

Emancipatory research programs thus argue that the assertion of the ideal of value freedom serves to hide the ways that power and position shape the social sciences and their results. It is better to make the value-orientation of all social science explicit so that the values can be criticized. As a political stance, social scientists should seek to improve the human lot, to work for justice and freedom from oppression. From this perspective, a new set of questions becomes interesting and a new set of issues becomes the social problems needing solutions. Value-neutrality is therefore an inappropriate ideal for the social sciences.

Objection: Values and the Logic of Discovery

One might respond that, even if it were accepted, the argument for emancipatory research has only shown that people who occupy particular social locations are in a better position to discover certain aspects of society than

others. It is analogous to different perspectives on a single landscape. Some features may be difficult or impossible to see from certain vantage points. It might be an argument for diversity within the social sciences, but it does not show that the social sciences should not be value-neutral. Given what has been said so far, this would be a fair critique. However, the presentation above has left a crucial idea implicit: Proper understanding of the system of power and oppression requires recognizing its injustices. To say that a particular social arrangement is "oppressive" is to say that it creates conditions for the unjust treatment of members of a group (women, racial or ethnic minorities, etc.) on the basis of their group membership. The knowledge that is available through the recognition of such oppression thus requires value judgments. In the varieties of critical theory and feminism, the practitioner must recognize certain practices as unjust, and be committed to changing them. The knowledge is generated so as to raise awareness, challenge the injustices, and eliminate oppression. Value judgments are thus *constitutive* of the practice of critical theory and feminist social science.

One might still insist that while the recognition of injustices is an important motivation for some kinds of social scientific inquiry, it remains outside of the domain of the strictly scientific part of a social scientist's mandate. The practical goal of eliminating injustice is laudable, one might argue, but it is a mistake to suppose that it is part of the content of the social scientific knowledge produced by feminist or critical theoretic research. At most, the political commitments orient the inquirer toward specific phenomena, make certain kinds of problems salient, and perhaps guide the choice of method in the ways discussed in Section 2.2. To take this line about emancipatory research, however, would be to suppose that the statement of fact contained in their research results could be strictly separated from the political values motivating the inquiry. Proponents of this sort of research deny that a meaningful separation of fact and value could be maintained. It would require, for example, that their research reports contain no mention of oppression. After all, oppression requires injustice, and to say that a practice is unjust is clearly an evaluation, not just a description. We thus encounter a deep philosophical question: How are facts and values related, and can they be clearly separated?

Value Presuppositions and Implications

A strict fact-value distinction would require that descriptions (statements of fact) have no evaluative consequences on their own. One way to make clear the distinction between descriptions and evaluations is to say that evaluative statements include explicitly evaluative predicates like "ought," "good," and their cognates. To make science value-neutral, we would thus simply forbid sentences containing evaluative predicates from appearing in scientific theories. Then scientific theories would have no evaluative consequences, at least not without the addition of extra-scientific evaluations. Separating descriptions from evaluations, however, is a tricky business. Consider the sentence, "Jones

murdered Smith.” This sentence seems like a description. It can be true or false, and it is made true or false by a state of affairs. But, contrast it with the sentence, “Jones killed Smith.” There is much contained in the first that is not contained in the second. In particular, the first entails that Jones intended, or at the very least foresaw, Smith’s death. More to the point, to say that Jones murdered Smith implies that Jones did something morally wrong.

When we think of moral statements, we tend to think of very abstract predicates like “good,” “right,” and “obligatory,” not about “bicycle theft,” “a rude gesture,” or “jumping the queue.” The latter are as much evaluations as the former, even if they are not so lofty. Notice that the latter examples have a substantial descriptive component to their meaning along with the evaluative. I cannot steal a bicycle unless: (1) I took possession of the bicycle without permission; (2) I was aware of the lack of permission; and (3) by doing so, I open myself to appropriate moral sanction. Their correct application depends on both the facts (the bicycle, my behavior) and the values (permission, moral sanction). Concepts that have both descriptive and evaluative components have sometimes been called “thick moral concepts” (Williams 1985). If social science is to be value-neutral, then, it must exclude not only all explicit evaluations (which use words like “good”), but all that use thick moral concepts as well.

Some have argued that the social sciences must deploy concepts with moral or political presuppositions, on pain of being empty and pointless. The social sciences study phenomena like unemployment and poverty because these things are bad and we want to prevent them. The interests are thus not just helping to point the flashlight, so to speak; they are coloring the character of what is studied. The emancipatory programs in the social sciences take this argument one step farther. A social scientific study of rape that somehow managed to forget the violence and suffering would not be good science because it was objective; it would be morally abhorrent. The very aspiration to be value-neutral is therefore itself a political or moral commitment. There are value presuppositions in many social scientific statements because those statements employ thick moral concepts. To ignore these presuppositions or pretend that they do not exist is to implicitly affirm the values already implicit in contemporary social science. But, the argument goes, these values should be up for debate, and the debate is not just philosophical. Since the concepts involve a mixture of descriptive and evaluative commitments, the debate must be partly empirical. By making oppressive practices the object of study, critical social science is not really doing something different from ordinary social science, it is simply doing it in a more self-conscious and explicit way.

If value-neutrality is abandoned and values become part of the content of social scientific theories, then it may seem as if objectivity has just flown out of the window. Again, one might worry that social science would become nothing more than a battleground for political conflict. It is not difficult to find examples that support such concerns. Political parties of all ideologies

seek to support their views with empirical evidence, and if science need not be value-neutral, then it legitimates the dubious practice of treating industry representatives or political activists as scientific experts. To make this objection, however, is to focus solely on the differences over values and assume that value conflicts will exclude evidential, conceptual, and other theoretical considerations. The conceptual link between descriptions and evaluations changes the character of both. One might say: “When theories are value-laden, values become theory-laden” (Risjord 2007, 20).

If thickly evaluative concepts are integrated into the claims of a theory—that is, when the values become theory-laden—then changes to the theory can motivate changes in the values. Value-laden theories have observable consequences and therefore they can be tested in ordinary ways. When theories are disconfirmed by evidence, scientists adjust the theory. If the adjustments to the theory involve the statements involving thickly evaluative concepts, then changing the theory entails changing the implicit values too. In other words, contrary to first appearances, a non-neutral social science might provide *objective* grounds for value change. As an example, consider the eighteenth- and nineteenth-century theories of physiognomy. According to these theories, some people were “born criminals.” Their natural tendencies toward crime were correlated with specific physical characteristics, such as a receding forehead or protruding bones. The theory has long been discredited, and with it has gone the evaluation of some facial types as being naturally wicked. The matter is complicated, of course, since biological theories of criminality have continued to emerge along with their own embedded values. At the same time, inquiry into the causes of crime is not purely political. A better understanding of how empirical evidence can serve to undermine non-neutral theory might go some way toward meeting the concern about the politicization of the social sciences.

It has also been argued that the kind of non-neutrality found in emancipatory projects can make science *more* objective. By making the values explicit, critical theorists and feminists take on the project of identifying and criticizing the moral and political values that are implicit in existing theories. Alison Wylie and Lynn Hankinson Nelson, for example, survey a number of cases,

in which a standpoint of gender sensitivity—a commitment to ensure that gender (and women) are not disappeared—has provoked a reexamination of disciplinary conventions about what can or should be studied archaeologically. This, in turn, directs attention to new ranges of data and new possibilities for interpreting (or reinterpreting) archaeological data that shifts the evidential horizons of the discipline as a whole. Sometimes the result is a reassessment of androcentric models that inverts gender conventions, so that women are recognized to have played a central role in domains of cultural life, and in processes of cultural change, that had typically been attributed to men.

(Wylie and Nelson 2007, 67)

In these kinds of critical projects, the critique of background assumptions shows how evaluative commitments have led scientists to ignore some kinds of data or possible interpretations. The search for new data then yields evidence that undermines the established theories. The theories that result from problematic value commitments are overturned on empirical grounds, and not only because of the values critique. This way of conceptualizing objectivity has been called “strong objectivity” by Sandra Harding (1993). On this view, epistemic and non-epistemic values work together to produce better science than epistemic values alone could produce. As Wylie and Nelson put the point, “science is objective *because* of the values with which it is infused” (Wylie and Nelson 2007, 58).

2.4 Chapter Summary

Without some sort of evaluative commitment, social science would be impossible. When thinking about the influence of values on scientific research, the key questions are: (1) *What* values are playing a role? and (2) *How* are they influencing scientific practice? To help sort out answers to these questions, Section 2.1 introduced a pair of distinctions. The distinction between epistemic and non-epistemic values helps answer question (1). The distinction identifies two kinds of values with different consequences for objectivity. Epistemic values are not threatening to objectivity, while moral and political (non-epistemic) values can be potentially troublesome. The distinction between contextual and constitutive values shows two different ways in which values can influence scientific research, thereby addressing question (2). This pair of distinctions is the basis for the Moderate Thesis of Value Freedom, discussed in Section 2.1: Science is objective when only epistemic values are constitutive of scientific practice; moral and political considerations must always remain contextual.

The main debate over values in science today concerns whether moral and political values can be constitutive of scientific research in a way that preserves objectivity. Moral and political values might figure in the justification of social scientific theories (partiality/impartiality) or they might figure in the content (neutrality/non-neutrality). Section 2.2 presented the argument that in a large variety of cases, non-epistemic values must play a role in deciding the evidential support of a hypothesis. In Section 2.3, we examined arguments that questioned the strict separation of facts and values. Social scientific theories are always partly political, and therefore the evaluation of theory should take the political dimensions of the theory into account.

If either neutrality or impartiality is rejected on the basis of the arguments in this chapter, then we need to inquire into the possibility of social scientific *objectivity*. Is it possible for social scientific research to be value-laden in either of these ways without being biased or unreliable? Objectivity is a multi-faceted concept, and a research program may fail to be objective in one way while

remaining objective in others. As we come to understand these different senses of objectivity, two interesting avenues of philosophical inquiry arise. First, are there ways to organize science as a social practice which help preserve or enhance its objectivity? Second, are there ways in which non-epistemic values can make a scientific research project *more* objective? These are important open questions in the philosophy of the social sciences.

Teasing apart the issues of objectivity requires understanding how values might play a role in theory construction, concept formation, and hypothesis testing. How do concepts of social scientific theories get their content? Why should we theorize social phenomena in one way rather than another? The problem of objectivity thus reaches to epistemological questions about social scientific theorizing. In the next chapter, we turn to those questions. But don't think that we are done discussing value freedom and objectivity. As we move into other issues, we will discover more ways in which values are tangled up with social scientific research.

Discussion Questions

1. Think of some recent examples of controversial research into human behavior or social problems. What values appear in this research and what roles are they playing? Do they undermine the objectivity of the research?
2. Is it possible for moral or political values to play *only* a contextual role in social science?
3. Evaluate Rudner's argument against value freedom. Does it show that scientists must always make value judgments as part of their inquiry? How might a defender of the Strong Thesis of Value Freedom respond?
4. What are some thickly evaluative concepts that show up in social scientific research? Can social science use these concepts in empirical study without introducing bias?
5. Consider the three senses of objectivity presented in Section 2.2. Can an inquiry that is not impartial be objective in any of these senses? What about an inquiry that is not neutral? If the inquiry fails to be objective in a particular sense, what are the consequences?
6. The idea of “evidence-based” social policy has been prominent recently. What problems arise if the evidence is either not neutral or not impartial? Could there be evidence-based social policy which was entirely value-free?

Further Reading

Tommy Wright was the Chief of the Statistical Research Division of the U.S. Bureau of the Census during the late 1990s. His essay "Sampling and Census 2000: The Concepts" gives a non-technical articulation and defense of the Bureau's plan (Wright 1998). See also Wright (1999) for a brief overview of the history of estimation in the census. Kastenbaum, "Census 2000: Where Science and Politics Count Equally" (1998), shows what the political landscape looked like at the time. Freedman and Wachter (2007) provide an accessible discussion of the methodological complexities.

Classic discussions which try to isolate the social sciences from moral or political values include Weber, "Objectivity in Social Science and Social Policy" (1949 [1904]), and Nagel, "The Value-Oriented Bias of Social Inquiry" in *The Structure of Science* (1961b). While they concern both the social and the natural sciences, Hempel, "Valuation and Objectivity in Science" (1983), Rudner, "The Scientist *Qua* Scientist Makes Value Judgments" (1953), and Kuhn, "Objectivity, Value Judgment, and Theory Choice" (1977), are important essays. Root's *Philosophy of Social Science* (1993) has a number of arguments against value freedom in the social sciences. More recently, in *Is Science Value Free?*, Lacey (1999) has defended value freedom.

The concept of objectivity relates questions of value freedom to questions about the character of scientific theory. Works which link the issues in this chapter with the epistemological questions of Chapters 3 and 4 are Taylor, "Neutrality in Political Science" (1973 [1967]), Harding, "Four Contributions Values Can Make to the Objectivity of Social Science" (1978), and most of the essays collected in *Feminism and Methodology: Social Science Issues* (Harding 1987a).

Critical theory encompasses a broad range of social scientific projects that are neither neutral nor impartial. Bohman's entry on critical theory in the *Stanford Encyclopaedia of Philosophy* (2005) is a very clear overview, which draws out the social scientific dimensions of critical theory. See also Bohman, "Theories, Practices, and Pluralism: A Pragmatic Interpretation of Critical Social Science" (1999), and Flyvbjerg, *Making Social Science Matter* (2001). A wide-ranging exploration of recent debates is found in Van Bouwel (ed.), *The Social Sciences and Democracy* (2009). For a good overview of feminist contributions to these questions, see Crasnow (2006). Longino's *Science as Social Knowledge* (1990) is a classic, as is Harding's *The Science Question in Feminism* (1986). See also Anderson, "Knowledge, Human Interests, and Objectivity in Feminist Epistemology" (1995), Wylie, "The Feminist Question in Science: What Does it Mean to 'Do Social Science as a Feminist?'" (2006), and Wylie, "Rethinking Objectivity: Nozick's Neglected Third Option" (2000). Fricker's concept of "hermeneutic injustice" is an important contribution that deserves close attention from students of the social sciences; see her *Epistemic Injustice* (2007).

Essays which take detailed looks at specific social scientific research programs include Porter, "Speaking Precision to Power" (2006). Wylie and

Nelson, "Coming to Terms with the Values of Science: Insights from Feminist Science Scholarship" (2007), Wylie, "The Interplay of Evidential Constraints and Political Interests" (1992), Risjord, "Scientific Change as Political Action: Franz Boas and the Anthropology of Race" (2007), Gouldner, "The Sociologist as Partisan: Sociology and the Welfare State" (1968), and Smith, "Women's Perspective as a Radical Critique of Sociology" (1974).