MATT GROSSMANN

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Overcoming Bias with More Evidence, Diversity, and Self-Reflection

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In Memory of Steven J. Kautz

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PREFACE

Social science research is facing mounting criticism, as canonical studies fail to replicate, questionable research practices abound, and researcher political biases come under fire. Unpredicted high-profile events, from the election of Donald Trump to the Great Recession, undermine faith in social science knowledge just as research increasingly becomes fodder for polarized public debates.

Great news lies beneath the headlines. Far from being in crisis, social science is undergoing an unparalleled renaissance of ever-broader and deeper understanding and application—made possible by close attention to criticism of researcher biases and open public engagement. This book tells that story. In a sea of pessimism about academia and public knowledge, it promises an optimistic counternarrative. It documents and explains recent transformations, crediting both internal and public critics for strengthening social science.

Scholarly wars between scientists and their humanist critics, methodological disputes over statistical practice and qualitative research, and disciplinary battles over grand theories of human nature have all quietly died down as new generations of scholars have integrated the insights of all sides. Rather than deny that researcher biases affect results, scholars now closely analyze how our racial, gender, geographic, methodological, and political differences impact our research questions; how the incentives of academia influence our research practices; and how universal human desires to avoid uncomfortable truths and easily solve problems affect our conclusions. Ours is an unprecedented age of theoretical diversity, open and connected data, and interdisciplinary public scholarship. Contemporary social science provokes an informed revisiting of fundamental questions, enables a combination of diverse knowledge to tackle social challenges, and fuels the industries, social arrangements, and technologies of the future.

Ongoing critiques of the capacity of social science reflect the classic challenges raised by its philosophy, sociology, and history. Because humans are both the

subject and object of study, social science is concentrated on currently relevant concerns, driven by our collective assumptions and aspirations, and affected by our many demographic, institutional, and ideological biases. Rather than an unconstrained search for truth, widely accepted answers often reflect idiosyncratic disciplinary histories, scholarly needs for self-justification and career advancement, and plans for immediate application. Scholars who traditionally raised these objections came from outside social science or from its most qualitative and interpretivist corners. Not anymore. Progress in multi-method research, openness to critique in the wake of prominent failures, and advances in science metrics and research availability have all brought these concerns to the center of social scientific debates, stimulating practical awareness and proliferating proposed reforms.

Recent revolutions in social science practice have made data and results more widely available, moved from esoteric theory to fine-tuned social regularities, spread methods of causal inference and generalization, and revisited orthodox findings to ensure reproducibility. Broader and more diverse teams sharing data and honing designs have replaced staid assumptions and elaborate constructions by siloed researchers. Reactions to each revolution have tempered overclaiming victors and pinpointed the contributions of new methods alongside perennial lessons. Social science has emerged less blinded by its biases but more aware of its limitations.

Given the advance of data and more efficient searches for information, progress is inevitable as long as new material is pursued with an acknowledgment of its incompleteness and awareness of our biases in interpretation. We can be made worse off by more knowledge only if we overhype its contribution so much that we lose track of what we still do not know. That does not mean we will fully answer the most important questions, but it does make us well positioned for at least incremental gains.

Further advance will require close attention to the perennial challenges of social science—from individual research practices to collective social and political constraints to the translation of knowledge through popularization and application. We must embrace the importance of these fundamental difficulties, not deny their importance. Myriad research biases, some arising from scholars' distinct social profiles and others endemic to human nature, affect our questions, methods, and conclusions. Although institutional reforms can be helpful, there is no easy way out of our inherently partial view of ourselves. More complete understanding requires researchers to consider knowledge across social science disciplines (as well as from adjacent natural sciences and humanities), both in the joint process of discovery and in research communication through public life. We can neither escape the motivations tied to our temporal, national, and institutional contexts nor assume a disembodied view from nowhere. The only

road forward is understanding our biases to partially remediate and overcome them. Though unheralded thus far, social scientists are successfully following that path.

How Social Science Got Better offers an overview of these trends and strategies for addressing the biases of social science. It is aimed at scholars across the social sciences, outsiders with broad research interests, and general readers following social science controversies and wishing for insights on contemporary problems. Although the book mentions many methods and details some research literatures, it can serve neither as a guide to implementing statistical procedures nor as a compendium of research findings. It offers brief definitions, but fuller explanations are often relegated to footnotes and references. Readers unfamiliar with a term or a research topic can choose to follow up or just continue in hopes of later reaching more familiar examples. The key lessons should be accessible, beginning with the importance of self-evaluation of our perspective.

Miles's Law for Social Science

Rufus Miles, a federal administrator under three presidents, created the aphoristic "law" that states: "where you stand depends on where you sit."[1] After one of his subordinates changed jobs from the Bureau of the Budget to a programmatic agency, his views also shifted dramatically, moving from a vocal opponent of funding for that agency to its biggest proponent. Miles was unsurprised. Whether or not it was a conscious reevaluation, being surrounded by new people and information—and acquiring different motivations—had produced a 180-degree turn. One's aspirations, favored understandings, sense of importance, and core beliefs all can shift with one's institutional position. Fully characterizing someone's point of view, incorporating their evidence but acknowledging its biases, requires attention to their position.

The idea has since been generalized and widely applied. Human social views (and behavior) arise from the institutions in which people live and work, especially when those settings create incentives for particular beliefs, priorities, or justifications. Even in the budgetary context where it developed, that hardly means that known-to-be-biased views cannot be solicited. It certainly does not imply that no resources can be more efficiently allocated because all views are suspect. Instead, it suggests that awareness of likely biases (and the built-in incentives producing them) is a critical step in evaluating information and advice. Where institutions can correct or re-incentivize these biases, reforms are welcome. Yet there is no substitute for articulating and managing the biases, including those specific to particular individuals and those that arise within each domain of social life.

Humans can understand their own biases in part by taking other perspectives, whether or not they choose to correct for them. For example, I recognize that when I am a driver on my university campus, I am more likely to complain about rules violations and impoliteness by the walkers and the bikers; then as a walker, I complain more about the drivers and bikers threatening my safety; and then later as a biker, I am annoyed more by those on foot and in cars. We cannot always take on three different roles as in this illustration, but we can work to recognize that our perspective changes with our circumstances—and perhaps give the walkers, bikers, and drivers more benefit of the doubt. This view is usually called perspectivism; it analogizes differences in visual perspectives based on our physical position with variation in our go-to explanations based on our social position.

Like everyone else, I lack an unbiased view of social science and draw from my position. I am hopeful that my particular mix of biases and experiences can offer a useful perspective on the state of social science. As the author, I owe the reader an account of my particular biases and where they might lead me to focus. This preface will serve the role of a positionality statement (sometimes called a reflexivity statement) that outlines how my own social position may affect the research I undertake here. These statements are commonly used in qualitative research but could be more widely adopted. In addition to highlighting my personal characteristics and my setting, I focus on the large role of my discipline and research focus in defining my point of view.

A Political Science Take on Social Research

I write as a practitioner of social science who is attempting to apply the insights of its history, philosophy, and sociology to contemporary research practices. I am by no means an authority on these meta-scientific concerns, instead coming out of the long tradition of social scientists commenting on trends in their field—and seeing the need to return to fundamental questions about the goals and structures of academia and the social scientific enterprise.

My own discipline, political science, is a useful vantage point for the work because it relies on the other social science disciplines and combines their stronger priors on human nature. It studies politics and government, but is open to the important roles played by individual psychology, social institutions, economic markets, and human cultures. Each discipline has specific biases, but I see it as better to understand and attempt to correct for them through integration, rather than to lose the advantages of communities in critical conversation, including incentives for self-policing.[2]

Political science occupies a moderate position in the social sciences between emphasizing individual agency and social structure; we see a voter, for example, being affected by both her own beliefs and the party system she inhabits. The discipline recognizes humans responding to universal human impulses, mental predispositions, market incentives, and social structures. It is attentive to developments in psychology, sociology, and economics (drawing less from anthropology) and is both a basic science and tied to many applied fields. It also has long combined qualitative history, normative and empirical theory, policy-relevant analysis, and empirical hypothesis testing. It is united mainly by its dependent variables: what kinds of behavior (political) and institutions (government) to study. Like much of social science, it is also infected by the motivations of practice: the desire to do something to change the world, rather than merely understand it. Political scientists seek better governance and attend to current policy and social problems, but our motivations are diverse.

There is not even full agreement on the discipline's name. Reflecting the common nonchalant dismissal of the field's rigor, the "science" part is often put in scare quotes. At the Claremont Colleges, where I was an undergraduate, the major is known as "government" at the more conservative Claremont McKenna College, "politics" at Pomona and Scripps colleges, and "political studies" at the child-of-the-1960s Pitzer College. Political science was long taught to undergraduates primarily as civics, with some history, legal rules, and geography, while being taught to graduate students as a field made up of economic modeling and applied statistics. It is familiar with a variety of approaches and the often wide gaps between research, teaching, and practice.

Political science has never been more important to the human endeavor. But its applications are inherently politicized. The technologies that it enables are institutions, social strategies, and policies, rather than the physical tools that the public more readily accepts as innovations. Implementation of expert consensus in political systems may also conflict with other democratic values, so our goal cannot always be quick adoption of reforms suggested by our findings. We are (correctly) seen as offering a biased perspective based on incomplete evidence and particular points of view, but that does not make us unique as scholars. Astronomers know that they are studying universes from the vantage point of a particular planet surrounding an insignificant star. Anthropologists know that they are analyzing human history based on a few distinctive groups, incomplete physical remains, and analogies to distantly related species. Medical researchers conduct studies on mice and fruit flies as human models, without knowing how applicable they will be.

Political science has not generated the same public acclaim as the natural sciences. But that is not due to lack of popularity; the public often became aware

of and interested in political science findings before other types of statistics, for example, from public opinion polling to government social indicators.[3] The rise of social science in the public mind was not about the acceptance of its objectivity, but due to the public's interest in self-understanding, especially the symbolic value of the "average" person and deviations from it.[4] As social statistics and social science explanations were immediately injected in public debates and political questions, they were also subject to public disputation and conflict.[5] Political science is not a failed or impossible project, even in the public mind, but it is definitely a politicized one from the beginning, with reaction to its latest products (such as presidential election forecasting models) part of the ambivalent public response to our increasingly information-driven age.[6]

In the last few decades, political science has advanced with a proliferation of data and methods and integration of diverse views. Political science conferences and journals have gone from reviewing the same election surveys and governing institution data, using many of the same concepts and tools (often borrowed from economics), to an endless variety in data sources, methods, theoretical views, and subjects. The data compilations, theoretical specificity, and causal identification strategies grow with each new round of graduate students and junior faculty.[7] Compared to a discipline like economics (where scholars agree more on questions, methods, and journals), political science remains more diverse and less oriented toward consensus. That can look messy, but also means political science has fewer collective blind spots that escape anyone's attention. But compared to sociology, political science has far more agreement on the topics of shared interest. That means different perspectives are often brought into conversation about the same historical events or even used to analyze the same agreed-upon data.

Political science was historically a compilation of many research traditions, with moral, applied, and scientific motivations.[8] Political science is dependent on all the other disciplines, but that does not mean it was last historically: it was often the first impulse in social science, as scientific tools were developed to administer early states, justify competing social aims, and optimize policy. Political science has ordered our subfields differently over time, but has consistently been interested in political ideas, comparisons across societies, and institutional development. There have been various shifts in intellectual effort—simplified as a (too-neat) historical trajectory from institutional analysis to behavioralism to rational choice theory—but we are well into a period with many different overlapping theoretical frameworks rather than one dominant paradigm.[9]

A majority of work published in top journals has long been empirical, with a smaller share oriented toward normative scholarship; the main trends in journals are the rise and decline of purely theoretical models and the long decline of scholarship framed as policy recommendations.[10] Empiricism has thus

advanced over both theoretical construction and normative application. Most recently, major political science journals have begun to accept short (mostly empirical) articles more similar to those from the natural sciences, while several have added requirements for sharing data and replication materials. The dominant form of political science remains empirical research to assess theories of moderate scope, but we have never lost minority interests in normative philosophy, broad theoretical modeling, applied work, or qualitative history.

The globalization and expansion of political science have also increased topical diversity. Proliferating organized sections of political science associations have faced scorn but are now mostly celebrated as signs of diversity.[11] Many subfields within the discipline report feelings of marginalization or balkanization, but these complaints are often due to the disappearance of any shared disciplinary center (given increasing topical diversity). Theory, methods, and applications are now more interconnected, with multi-method research rising and more interdisciplinary reviews. The discipline now shows more attention to the relationship between theoretical schemes and empirical designs, to the validation and reliability of measures, to cross-sectional and time series variation at once, to replication, to causal inference, and to its relevance to contemporary concerns.

A recent relitigating of the debates over political science's relevance, concentrated in international relations and American foreign policy, was mostly met with derision.[12] The examples of the supposed Golden Era—with Henry Kissinger at the president's ear—had not changed since the same concerns were raised in the 1990s, but the complaints were now much further off the mark. Political science now speaks to popular, media, and policymaker audiences, with scholarly training opportunities, organizations and networks to serve as intermediaries, and many scholars prioritizing public engagement.

But we still lack a shared sense of our craft. A recent philosophy of social science book had entries for each discipline, but the political science chapter was called "Why Is There No Philosophy of Political Science?"[13] The discipline considers many philosophical ideas, the authors reasoned, but it does not have much interest in disciplinary history or the philosophy of its methods (despite having—or perhaps because it has—traditional philosophers). This choice might be born of a healthy skepticism of the discipline's potential and the many contested implications of our findings. Another analysis found that the philosophy of political science has always been vague because the subjects of research change over time and there is nothing that distinguishes political science other than what differentiates social science overall.[14]

The social sciences as a whole can thus learn from political science. A primary task of scholars, Max Weber thought, was to recognize inconvenient facts for their own political positions (advice he did not consistently follow).[15] Scholarship

was organized into special disciplines in the service of self-clarification and the assumption of interrelated knowledge in each field; but views of our motives and the assumed connections among ideas were born of our historical context. One inclination was to try to divorce scholars from what they studied, emulating natural science. Another was to incorporate various standpoints, using critical reflection to "identify social desires, interests, and values that have shaped the agendas, contents, and results of the sciences."[16]

But political science has mostly followed a middle ground between skepticism and scientism, assuming that scholars are collectively on a biased search for truth. Much of the objectivity pretense in our methodological development is based on an earnest recognition that our biases creep into our research and that we seek and observe confirmation, making us reliant on the precision of claims as well as hard tests policed via community standards. We can be simultaneously committed to scientific virtues of clarity, empiricism, and reasoning; realist about our ability to achieve full explanations; and open to contingency and heterogeneity in views of the same data.[17] An effort to be objective, even if failed, can help the discipline collectively advance knowledge. Integrating micro-, meso-, and macro-level influences and short- and long-term causal mechanisms is also a strength of the discipline, as is its intent to reconcile these theories at different levels of analysis and time scales.

The many political scientists I interviewed for the book shared this view of the discipline's position.[18] Harvard political scientist Gary King, who oversees an interdisciplinary social science institute, told me that political science was the most intellectually diverse discipline. We have repeatedly "hedged our bets," he pointed out, integrating the latest theoretical and empirical approaches from other disciplines without fully committing to any of them. Columbia political scientist Andrew Gelman, who is also active in statistical debates throughout the social sciences, said political scientists were much more aware of disputes and tools in other social science fields. Both said we adopt reforms and trends more slowly than elsewhere, after deliberation.

My Vantage Point

I approach this book as a close observer and applier of disciplinary trends in progress, not as a committed reformer. My institution, Michigan State University, is a large land-grant state school in the Midwest. Political science has long been practiced here in a data-intensive and practical mode, but it has lately become more pluralist in interests and research strategies. I serve as director of a policy institute with a long applied history, aiding state government and all of the social science disciplines. I am more interdisciplinary in interests and views than

most social scientists. I am a mid-career scholar, who has observed significant change in the two decades since I began graduate school. This book grew out of the generational change I observed. Over a short period, for example, colleagues who began as rational choice adherents with constrained views of the scope of the discipline became far more pluralist in their theories and wide-ranging in their research.

As I review recent trends in data availability, theoretical and methodological pluralism, and public engagement in the pages that follow, I do it from the perspective of one scholar observing change first in his own discipline. My optimism was first born of my positive view of trends in my discipline and across the social sciences at my university. My scholarship has long drawn from qualitative history as well as quantitative analysis, using theories from sociology, psychology, and economics. I am hardly making advances at the methodological frontier, but I am attentive to developments throughout the spectrum: from state-of-the-art methods of causal inference to generalizable global data to qualitative narratives. Part of my optimism is seeing progress in acknowledging and alleviating bias in all of these areas, even by those without ideal data.

I am also a very public scholar, having taken on roles in state and national politics and media. I am one of the most active promoters of social science research on podcasts, to reporters, and on Twitter. Others raise legitimate complaints about popularization (addressed in Chapter 10), but I have seen this as a tremendous boon to social science research and its application.

These are not my only biases that should be considered. I primarily study contemporary politics in my own country, the United States, and I am a well-off white man. Although I have tried to draw from diverse examples, I inevitably draw more from the unrepresentative topics I know best. This book reviews the biases in social science research that arise from our unrepresentative racial and gender makeup (in Chapter 4) and our American national focus (in Chapter 5). One of the inspirations for this book is watching how growing diversity in the social sciences is changing the questions we ask, the assumptions we make, and the interpretations of our results. Racial, gender, and global geographic diversity of researchers and research audiences have helped us understand where our theories and findings were more limited than we thought.

Scholars' political views have also gained research attention. Social scientists are overwhelmingly ideologically liberal and politically affiliated with parties to the left of center (see Chapter 8). But we are also economically and socially successful professionals reliant on government and philanthropy, giving us some conservatizing incentives to maintain existing institutions. I am personally now liberal in many ways, but I grew up in conservative politics and remain to the right of most social scientists in ideological predispositions (if not policy positions). I have studied and criticized the conservative movement's long-running attack

on scholars as ideologues, but also joined efforts to increase political diversity and attentiveness to conservative critiques in academia.

I am thus no less biased than other human beings, including scholars, and my comments should be contextualized through my history, institutional and cultural position, and prior views. But I do have some atypical biases from those of other scholars and a willingness to delve deeply into the philosophy, history, and sociology of science to understand how they affect my understanding and our collective enterprise. Although our view of ourselves is forever incomplete, we understand more about how and why our focus narrows and how to discover and counteract our biases.

Rather than assume a disinterested posture or a disembodied view, I wanted the reader to know where I sit. But the trends and concerns I document here are widespread in the social sciences. They require engagement with diverse communities to evaluate and refine. That is the journey this book begins. There is danger in taking on too much, but it has to be weighed against the lack of integration in most of academic research. The opening I see is linking the innovation taking place among practicing social scientists with the big-picture interests of meta-scientific fields.

Although I do report the results of an original survey of social scientists, interviews, and institutional data, my primary goal is to synthesize and apply existing research findings. I draw from history, philosophy, and sociology of science, as well as Science and Technology Studies (STS) and higher education research, to understand the long-standing dilemmas of social science and to update social scientists on recent advances. But I apply these fundamental topics to recent research trends in five large disciplines: economics, political science, sociology, psychology, and anthropology. I cannot hope to be comprehensive in these reviews, of course, but I privilege breadth, including understanding the links between these core social sciences and other fields. I seek to be responsive to proposals for reform and change, in the scientific process and in academic institutions, but I do not presume that wholesale revision is forthcoming.

Like social science as a whole, this book requires a balance between universal and eternal interests and specific tools and trajectories. Philosophy of social science points us toward fundamental concerns but can get lost in difficult-to-apply ideal notions. History of social science reminds us of our initial aspirations and repeated blind spots but can be diverted from everyday progress by the largest controversies. Sociology of social science (and related STS) reveals how real-world research programs evolve in their surroundings but can privilege critique over understanding the slow development of partial and specific truths. Research on the American university system and the core social science disciplines provides the context for contemporary research but can divert us from the frontier of globalized and interdisciplinary research. The path trod here

tries to combine their broad insights for researchers working to advance our understanding of human social life in particular arenas.

The COVID-19 pandemic has reminded us again of the importance of getting social science right. Studies of politics, administration, markets, cultures, social norms, and beliefs have all been important in understanding the spread and effects of the disease and in guiding policy and practice. Attention to social variables, such as partisanship and inequality, has been critical. Social science will remain important as we vaccinate the world and rebuild. Its subjects are critical, as are its methods of combining disparate data and incomplete theory on trends in progress. The pandemic did also stimulate studies of lower quality by those with limited expertise, but they also stimulated effective pushback. Critics often confuse dissensus on applications of social science knowledge for limited knowledge itself. But applications are often in policy or messaging, not technology, and thus require public and elite assent. Documenting polarization in pandemic responses is an advance, even if it does not lead policymakers to correct it. Social science is even useful for learning when knowledge is applied and when it is ignored (from masking advice to vaccine prioritization).

Improvements in social science and its applications likely require changes in scholarly behavior alongside improved understanding. I embrace reforms that increase the credibility of research and inference and improve the diversity of theoretical ideas and the sophistication of methodological tools available to social scientists. Not all changes yield fruit, but even incremental gains should be celebrated. Sometimes scholars learn that they only know a little more than previous generations (or that what they thought they knew turned out to describe only particular circumstances). By both recognizing the endemic challenges social scientists face and taking advantage of our newest tools of self-understanding and knowledge cumulation, social science can learn more and better inform collective decisions.

Plan of the Book

How Social Science Got Better pursues a broad look at social science advancement through the lens of efforts to recognize and address researcher biases. The structure moves from classic critiques of the possibility of social science to the particular institutions and disciplines where it currently operates, next to thinking through explanations for social life across time and place, and finally to considering how social science enters public consciousness and practical affairs. It does therefore sacrifice some depth for breadth in the service of synthesizing across the dominant concerns about social science. But I concentrate on the effects of trends in social science and academia on knowledge generation, rather than

career outcomes or education. The intent is to study the scientific process, rather than navel-gazing about professional constraints.

Chapter 1 argues that understanding, investigating, and adapting to the biases inherent in social science research is the best path toward accumulating and advancing social science knowledge. It reviews many categories of bias facing social science, from those stemming from unrepresentative researcher demographics to those based on research practices and incentives. Each bias has implications for research practices, but none makes social science impossible. Scholars face inherent challenges larger than those of natural scientists, with more disagreement on the most important biases to address and the kinds of research necessary to do so. But there are important advances in scholars' self-understanding that can serve as the basis for our future progress.

Chapter 2 addresses the role of social science reform, focusing on research documenting problems of replication and proposed open science practices. The associated debates have drawn attention to the biases involved in research and to the misaligned professional incentives that perpetuate them. The reform efforts have made considerable progress quickly, in self-understanding and even in changing research practices. Where it has gone too far in emphasizing experimental methodologies for testing of causal hypotheses, reformers and critics alike have promoted procedures that reflect social science diversity and acknowledge the importance of self-conscious exploratory work. In the process, several social science revolutions have made shared progress more likely: middle-range empiricism has risen over grand theory; open and big data have stimulated new work while enabling cross-checking; new causal identification strategies have enabled observational work to speak to experimental concerns; and the rise of team science has forced us to reconcile theoretical perspectives and build on individual strengths.

Chapter 3 reviews the "science wars" and their surprisingly quiet resolution. Throughout the 1980s and 1990s, critics of science from humanities disciplines fought with scientists over the extent to which science is a social and biased process or a path to truth. Today, there are few absolute relativists or adherents of scientific purity and far more acknowledgment that science involves biased truth-seeking. Continuing (but less vicious) wars over Bayesian and frequentist statistics likewise ignore some key agreements: tests of scientific claims require clarifying assumptions and some way to account for confirmation bias, either by building it into the model or by establishing more severe tests for the sufficiency of evidence. This sedation was accompanied by shifts within social science disciplines. Debates over both simplistic models of human nature (especially over rational choice theory) and what constituted proper quantitative and qualitative methods died down as nearly everyone became theoretically and methodologically pluralist in practice. I herald this evolution, pointing to its benefits

in the topics we cover, the ideas we consider, the evidence we generate, and how we evaluate and integrate our knowledge.

Chapter 4 assesses the most commonly cited distinct difficulty of social science compared to science in general: we are studying ourselves. Problems associated with focusing on our own species inside its social institutions have long animated philosophy of social science, but most thinkers have evolved toward a contemporary scientific realism on this point: there are biases, but they can be managed with close attention. Beyond perennial difficulties of self-knowledge, scholars tend to study their own time period, countries, and social groups, introducing additional biases while enabling research on how they affect our questions, methods, and interpretations. This often leads to accusations of "me-search," especially by underrepresented minorities. But many of the same considerations that drive those critiques and their responses apply to scholars studying their own countries and time periods, and to all of us studying our own species. I argue that the successful history of racial and gender studies (and the responses to them within traditional social science disciplines) shows that progress requires acknowledgment of biases and diversification of viewpoints.

Chapter 5 moves to the specific institution where social science is practiced: academia—especially in the United States. Social science is slowly internationalizing, with more cross-national collaboration. Yet the American university system still accounts for a large share of social science and is the primary home for debates about its future. Despite constant claims of crisis, US universities are a stable and competitive global industry. Social science is doing well within American universities and expanding globally, but often doing so by enlarging applied rather than basic fields. Most research takes place in the current academic context, requiring attention to the recent history and incentives of universities. Chapter 5 uses Cold War social science as a window into related biases and successful efforts to overcome them. It then considers how new academic challenges, such as the declining market for tenure-track faculty positions and increasing grant-chasing incentives, are liable to influence contemporary work.

Chapter 6 then reviews the effects of our disciplinary structure, including the constraints it places on research and the challenges of interdisciplinarity. The basic social science disciplines—political science, economics, sociology, psychology, and anthropology—each tend toward a particular view of human nature and have disciplinary prejudices regarding topics and methods. Interdisciplinary work has identified these differences and worked toward integration, especially in common applied fields, such as education and public policy. Chapter 6 reviews each discipline's historical inheritance and how it shapes contemporary practice. Rather than advocating a dismantling or reformulation of disciplines, I argue

that strong and self-aware disciplines with scholarly exchange among them have advanced theory and empirical analysis.

Chapter 7 moves the discussion to human agency and social structure. I argue that explanations for human behavior often involve factors operating at multiple levels of analysis (from individuals to organizations to nations) across different time scales (immediate, developmental, and evolutionary). Continuing debates over methodological individualism within the social sciences ignore the growing consensus within philosophy of social science that influences on social life are present across individual and collective units, each with influential histories. Even if models of individual interaction offer useful templates, they do not imply that any social process started anew at any particular point in time or that individuals created social structures without also being influenced by prior groups and institutions. Using a comparison of traffic and weather, I argue that these difficulties are no worse for social than for natural science, once we welcome both simple patterns and complex multilevel processes. In both cases, lots of progress is made simply through observational generalization and many complaints involve our ability to change the world, not understand it.

Chapter 8 returns to the origins of social science to think through its relationships to other methods of generating social knowledge. Social science originated in the study of history and the desire to inform collective decisions, with often contentious efforts by budding social scientists to separate themselves in organization and status from historians and social reformers. Despite active distancing from this inheritance, social scientists are still limited by both the variation available from human history and the usefulness of our findings in policy. We are all searching for patterns across the times we can observe and subject to the goals of our societies (and our own unrepresentative political goals). Since the contemporary context affects our questions and interpretations, we can acknowledge our reformist impulses as well as learn from historians' approaches to counteracting presentism. I argue that we erred in thinking of our enterprise as fundamentally distinct: social scientists should accept our role in systematizing history and informing policy debate, rather than seeking to replace either.

Chapter 9 discusses the difficulties of conducting research with inevitable considerations for practice. The basic social sciences did not develop independently and later seek application; the practical motivations that animate scholarly chronologies in many subjects are inescapable. Historical investigations also show plenty of distasteful origins, including the consistent role of American social science in promoting eugenics. That matters not just for how we interpret the past, but also how we address the motivations driving us today. It is easier to see how the racist impulses of the past drove misinterpretations of evidence and poor design—but that epiphany enables a review of how our own motivations (new and perennial) continue to bias research. From finance to information

technology, the rising industries of today are built on social science but tempted by triumphalism. Scholars are driven by proving our studies useful—in ways that can both uphold existing institutions and transform them. An acknowledgment of our evolving social, economic, and political goals can help address scholarly biases.

Chapter 10 addresses how social science makes its way into public debate, with worries about publicity-seeking scholarship but also potential benefits for engagement across disciplines and society. Social science debates are no longer, if they ever were, confined to universities and obscure journals; they are now central parts of popular media and political debate. Associated scholarly motivations for public influence drive research; then popular discussion of research findings feeds back into scholarship. I review the increasing role of media attention, popular nonfiction, and think tanks in academic debates and how they have changed the incentives and the practices of social scientists. Popularized scholarship not only (mis)informs the public and policymakers, but also shapes interdisciplinary debates. I argue that this enables integration by concentrating diverse minds on public concerns. I focus on the example of sociobiology studies, where scholars with very different views of human nature have put forward popular accounts, responded to one another, and created an ongoing space for advancing knowledge within and beyond social science.

Chapter 11 reviews my optimistic findings and addresses more pessimistic accounts. The explosion of data collection and availability, the expansion of academia and the spread of ideas, and innovations in theory and method all suggest bright days ahead for social science. Addressing human collective challenges such as climate change, poverty, and public health depends on the advance of social science. I revisit the benefits of accounting for human bias in advancing these efforts and for the further understanding of ourselves. I embrace reforms, but as pieces of a pluralist landscape rather than strictures. Descriptive inferences of generalized patterns, causal inference, and qualitative explorations will all remain important to the advance of social knowledge.

Social scientists have improved their abilities to credibly describe human social life, assess claims about human history and practice, and evaluate behavioral and policy prescriptions. They have developed more effective communities and procedures to debate and cumulate their findings from multiple viewpoints. Both gains have come despite inherent limits to understanding ourselves, fundamental uncertainties in matching theory and evidence, and incentives for dissensus and biased accounts. The steady progress does not enable the generalization of a small number of fundamental social laws or effective simplified models, but we should allow ourselves to learn that our difficulty is partially due to the state of the world. Even where we do build useful knowledge, we cannot expect society or government to automatically enact allied new procedures to

solve social problems. But the limited ties between human knowledge and social action are also an aspect of the world we have discovered, rather than a failure of social science.

Like all research, this project has biases. In addition to standardized hypothesis generation and testing, I am open to ethnographic accounts purposely highlighting the perspectives of their subjects as well as popularized scholarship that steps beyond specific data to offer a broader point in public debate. In fact, I view books as an opportunity for scholars to describe what they see (and how they see it), with the goal of compensating for other perspectives that have already received more airtime. Academia in general and social science in particular have recently lost public esteem and come under criticism for failing to live up to their promise. This book is meant to correct the undue pessimism, emphasizing where advancement is happening and on the horizon.