CHAPTER 1

Introduction: An Anthropology of Science Making and Policymaking

A TROUBLING POLICY, A CLUE, AND A BLACK BOX

China’s one-child-per-couple policy is one of the most troubling social policies of modern times.¹ Launched in 1979–1980 to accelerate China’s transformation into a wealthy, modern global power, the policy was out of touch with Chinese reality, especially in the countryside, where at least two children (including one son) were essential to family survival. Carried out in defiance of cultural and political reason, the policy has induced social suffering and human trauma on a vast scale. Although there have been beneficiaries, especially in the cities, from the vantage points of the rural majority and of China’s society as a whole the policy must be judged harshly. In the 1980s and 1990s, coercive enforcement strained relations between the ruling Communist Party and the peasantry, damaged women’s reproductive health, and exacerbated discrimination and violence against infant girls. By the late 1990s, the rapid reduction in fertility to one or two children had greatly accelerated population aging and severely distorted the nation’s sex structure, threatening China’s continued prosperity and global rise. Today the country faces an imminent crisis of aging without social security and a gender gap among infants that, at 120 boys to 100 girls (in 1999), is the highest in the world. Even the fertility effects of the policy are uncertain. Although the number of children per woman has fallen from around 2.7 in the late 1970s to 1.55 today, much of that decline appears to be due to rapid socioeconomic development,
which has lowered childbearing desires to the point that today large and
growing numbers of couples, rural as well as urban, want only one child.
Despite the policy's worrying effects, today China's leaders, fearing fertili-
ity rebound, hold fast to the one-child rule. Indeed, advocacy of one-child
families is now embedded in national law.

How did this sure to be socially damaging and politically costly policy come to seem necessary—or perhaps even good—to the leaders
who embraced it in 1979–1980? Where did the radical idea of restrict-
ing all couples in a country of one billion come from? How does it retain
its grip on the leaders' thinking in the 2000s, given social costs that are
steep and growing steeper? Despite the voluminous literature on the
one-child policy, such questions have rarely been asked, let alone satisfac-
factorily answered.²

“Communist Coercion” or “Western Science”?  

In the absence of sustained scholarly research on these matters, American
understandings of the policy have been shaped by anticommunist strands
in American political culture into a narrative of “communist coercion.”
Throughout the 1980s and 1990s, powerful media images of coerced
abortions, family planning jails, orphanage dying rooms, and much more
created an intense interest in the policy among the general public, while
giving fresh life to cold war notions of China as “totalitarian Other,” the foil
to the “democratic West.” Even after the end of the cold war and the shift
in critical emphasis from anticommunism to human rights, China contin-
ues to be seen through binary East-West lenses that make it intrinsically
different from, and always “less than,” the United States (poor not rich,
backward not modern, unfree not free, superstitious not scientific)
(Madsen 1995; Zhang Longxi 1998). Although China is indeed relatively
poor (although that is fast changing) and its population control pro-
gram has at times been terribly coercive (though the harshness has
diminished since the mid-1990s), these orientalizing discourses impede
understanding. For example, the pervasive discourse on China as intel-
lectually backward and politically repressive has contributed to a view
of the one-child policy as a product of the PRC's (restrictive) politics,
not its (weak) science. This othering discourse also divides the world
into discrete and bounded worlds of we-them, United States–China,
closing off inquiry into connections between the two.

To its makers in China, the one-child policy is not about a strong state
or its coercive practices, it is about Western science. More specifically, it
is about the nation’s dreams for transforming a poor, downtrodden nation into a prosperous, modern, global power through selective absorption of Western science and technology. Could it be that the troubling one-child policy bears the imprint of science, indeed of Western science? This possibility gains tantalizing support from the one significant clue to the policy’s origins that has come to light: the key role of a set of population projections by Song Jian, control theorist at the Seventh Ministry of Machine Building. In Western publications in his field of systems science and control theory, Song has even claimed credit for authoring the policy: “[Our 1980] projections for China’s population growth . . . shocked the scientific circles and politicians, [leading the government to] follow a policy of ‘one child system’” (Song 1999: 1993: 537). Both Chinese insiders and Western scholars have confirmed Song’s account of the centrality of those projections. Yet neither Song nor Western students of Chinese population affairs have shed light on the source of those projections and the larger body of work to which they presumably belonged, the politics by which Song’s policy proposal apparently was transformed into national policy, or the broad significance of the adoption of a control-theoretic solution to China’s population problems. The cybernetic projections are thus a clue that led nowhere.

This seems surprising because it was a provocative clue. Song’s home institution, the Seventh Machine Building Ministry, was a defense sector ministry in charge of missiles. This readily accessible fact immediately provokes a stream of questions. Why was a missile scientist studying population? How did a natural scientist specializing in cybernetics—the science of control and communication in complex machine systems—outcompete the social scientists who were the bona fide experts on this topic? Strangely, no one has pursued even these first-order leads. The cybernetic clue has remained cold.

Access Denied: Science Black Boxed

To discover the origins of the one-child policy, we need to follow that science clue and look into the cybernetics of population done by Song Jian. Yet if we attempt to do that—as I have for many years—we find ourselves blocked on all sides. The cybernetic science of population that was made public in 1980 has been black boxed, both by Chinese officials, for whom it is too political, and by Western scholars of Chinese politics, for whom it is too technical.
Long before the international furor erupted over its one-child-per-couple policy, the Chinese Communist Party (CCP) had already black boxed the science—and almost everything else—that went into the policy’s making. The reason is not hard to find: the party’s 1980 decision to limit virtually all couples to one child has been one of the most sensitive decisions of the post-Mao era. That decision generated huge conflict and controversy, within the country as well as outside. Precisely because of the policy’s controversial nature, the party has had to work especially hard to restrict public discussion of it. In 1982, two years after the one-child rule became national policy, the Twelfth Party Congress designated birth planning and, by implication, the one-child policy as a “basic state policy” (jiben guoce)—off-limits to criticism on fundamentals. To preserve the myths of the party’s infallibility and the policy’s “correctness,” over the years, as ever more problems have cropped up, top birth officials have found it necessary to mark out specific forbidden zones that are off-limits to discussion. One such zone of unspeakability is how the one-child policy was born. When, in the late 1980s, a new minister-in-charge of the State Birth Planning Commission discovered that the science behind the policy had been flawed, she quickly forbade the population field from further discussing that matter. When I, knowing nothing of this politics, asked Chinese population specialists about this history, they replied: “What’s done is done. We cannot look backward, we can only look forward. Besides, it’s not safe to talk about this.” The written record is equally silent about the origins of the one-child rule. Perhaps because the process that produced it veered perilously close to violating the myth that party policy is made by wise party leaders, the work of population scientists in creating and promoting the one-child-for-all policy has been largely erased from the official histories of the birth program. Despite the recent relaxation of tensions over the one-child policy, today as in the past the foundational science that lay behind it remains largely unquestioned and unquestionable.

It is not only the Chinese government that has black boxed the entanglements of science and scientists with policy and policy makers. So too have scholars of Chinese politics. As in other modern societies, in contemporary China science and technology are fundamental to the exercise of power and to practices of governing and state making. Embraced as the first of the post-Mao regime’s “Four Modernizations”—of agriculture, industry, science and technology, and national defense—since the late 1970s, modern science and technology have been embedded in the legitimating ideologies and governing structures of the regime. An important
body of work on Chinese science illuminates some of the new science-politics connections that emerged under Deng Xiaoping, China’s paramount leader after the 1976 death of Mao. Political scientists have traced the development of science policy, exploring the political roots, organization, and application of Chinese science, as well as the implications of the rise of Chinese science for the nation’s fragile democratization (monograph-length works include Baum 1980; Saich 1989; Simon and Goldman 1989; Suttmeier 1980; Y. Wang 1993; and Miller 1996; on science-state relations, Hamrin and Cheek 1986; Goldman 1994, 1999; Goldman with Cheek and Hamrin 1987; and Goldman and MacFarquhar 1999; on particular sciences, Orleans 1980; and Schneider 2003). Some have explored the consequences of the rise of S&T for the regime, revealing how, over the last two decades, the PRC has become a virtual technocracy run largely by engineers (Li and White 1991; Li Cheng 2001). Although they have not studied it in depth, students of the early Deng years have also described the rise of a new mode of “scientific policymaking” in which social scientists and cyberneticists were brought into policymaking for the first time in many years (Hamrin 1990; Halpern 1986, 1988, 1989). This work is highly illuminating, yet the larger implications of the scientization and technocratization of the regime—for how it reasons, makes policy, and governs China—have been little probed. Put another way, existing work has carefully examined the political context for the rise of Chinese science but left its cognitive core essentially untouched. How is scientific knowledge in China constructed? How do PRC scientists rework the methods and ideas of Western science to fit the context of a Chinese and a late-communist society? How does this sinified science shape public policy and, in turn, society in the PRC?

These limitations of the China literature are symptomatic of a larger conceptual problem that afflicts the social sciences generally. As the political scientist and science studies scholar Sheila Jasanoff has observed, despite the centrality of science and technology to modern governance, the mainstream disciplines lack the conceptual language (and, one might add, analytic constructs and theoretical frameworks) needed to understand the messy intertanglings of science and technology with politics, policy, and power (Jasanoff 2004b:2). This lack of enabling constructs helps explain why the cybernetic clue remained a clue that went nowhere, inspiring few questions and generating few insights. How might we link the science to the politics? How might we bring the cybernetic clue to life and make it illuminate the hidden origins
of the one-child policy, the politics by which it was made, and the wider effects of a cybernetic science of population on political reasoning and state making?

AN EPISTEMIC APPROACH TO POLICYMAKING: THEORETICAL RESOURCES FOR OPENING THE BLACK BOX

In this book I bring together two bodies of research that can help us forge these conceptual links: governmentality studies and science and technology studies. Governmentality approaches emphasize the fundamental role of knowledges (systematic bodies of thought) in the making of the political. STS highlights the political nature of knowledge making and the porous boundary between science and politics. Both draw inspiration from the influential work of the French social theorist Michel Foucault—who conjoined the two in the term “knowledge/power” (Gordon 1980)—while moving his ideas in fresh directions. The governmentality work also offers a powerful mode of political critique. By drawing attention to neglected elements of political life, these bodies of work expand the domain of the political and allow us to ask new questions about science, politics, and policy. I begin with a broad theoretical overview of the two fields, and then introduce the specific concepts that will guide my analysis of science making and policymaking.

Governmentality and Science Studies Perspectives: Conceptual Foundations

In recent years students of politics in the human sciences have been elaborating fresh ways to understand modern governance and power that move beyond the traditional preoccupation with the state. In his seminal essay on Western modernity, History of Sexuality, vol. 1, and in later lectures, Foucault proposed that the modern political era (in Western Europe from the eighteenth century) has seen the rise of a new form of power that is no longer concentrated in governmental institutions of the state but is increasingly dispersed throughout society in disciplinary institutions of medicine, education, and the law (Foucault 1978, 1980, 1997a–c, 2003). Grounded in modern science and technology, whose claims to authority rest on their apprehension of and mastery over “nature,” this modern power focuses on and works through the biological body. It operates at two interconnected poles, the regulations of the population as a whole and the disciplines of the individual body.
Modern power is thus largely power over life—biopower—and modern governance is the governance of human life.

Understanding governance broadly as “the conduct of conduct,” this work focuses on governmental projects, understood here as more or less rationalized schemes and programs undertaken by a multiplicity of authorities, employing a variety of techniques and forms of knowledge, that seek to shape conduct according to specific norms so as to achieve particular ends, with diverse and mostly unpredicted effects (key theoretical texts are Foucault 1991; Burchell, Gordon, and Miller 1991; Rose 1999; and Dean 1999). This definition seems unduly unwieldy, but every one of its parts (especially “rationalized,” “authorities,” “knowledge,” “norms,” “ends,” and “effects”) will be important to our understanding of policy. Governmentality—a combination of governing and political rationality—is the particular regime of modern government that takes population, its size, health, welfare, security, and prosperity, as its primary end. Historically the rise of such governmental regimes followed the birth of the new science of political economy and “the development of a whole complex of [related] savoirs” (Foucault 1991: 103). Projects to govern human life are not concentrated in the state but instead involve a triad of governing authorities: state bureaucracies, professional (knowledge-based) disciplines, and self-governing individuals. Over time, power over life has gradually shifted from the state to these other domains.

Perhaps because of their interest in governance beyond the state, few students of governmentality have systematically addressed the question of policy, a concept closely associated with the state (some who have are Shore and Wright 1997; Shore 2000; Greenhalgh 2003; and Feldman 2005). Yet policies are fundamental elements of modern power and instruments of modern governance. If modern society is a normalizing society, dominated by the modern, science-based norm, then policy can be understood as the crystallization of authoritative norms. Public policies—those created and carried out by public entities at multiple levels—are ubiquitous if often invisible elements of modern governance. From birth to death, work to play, virtually every domain of modern life is regulated by the norms and dictates of public policy. Since human life itself is a central object of modern power, population policies—specifying the authoritative norms on family size, child education, worker health, and so on—are the characteristic policies of the modern era. An understanding of the politics of these policies—who makes them, with what techniques and logics, through what negotiations and contests, and with
what intended and unintended effects—is thus central to an understanding of modern governance.

The governmentality perspective emphasizes the importance of mentalities or rationalities of governance, especially knowledge- or science-based ones. Science is the core logic in modern systems of governance and power. A literature far too large to cite suggests that it is central to the making, workings, and effects of public policy. Science and its language of numbers often provide the rationale behind policy and the authoritative norms that policy specifies and promotes. In policies aimed at governing population, science-based logics play an especially critical role because population is a biological entity (displaying “vital events” such as fertility and mortality) and science claims to be the sole authority on “nature,” to which biology belongs. It would be difficult to govern population—or to govern it well—without a science of population. Because of their status as authoritative knowledge producers, scientists (social and natural) are often active participants in the policymaking process. In democratic societies, formally independent experts serve on a host of advisory boards, committees, and panels. In authoritarian systems, too, although scientists may be subordinate to the state, they are often called on to lend their expertise to the making of public policy. Science has broader political effects on the policy process as well. As the authoritative knowledge in modernity, science serves to legitimize both the exercise of power through policy and the authority of the policy makers. Science has powerful depoliticizing effects too. Science is the ultimate arbiter of “truth” in modern societies; when science speaks in the name of nature, it depoliticizes beliefs and practices that are often eminently political, removing them from the arena of contestation.

Despite the extraordinary power of scientific logics and techniques in the policymaking arena, few have studied the intimate links between science and modern politics, policy, and power. Most theories of modern politics and policymaking simply leave out the science. The field of science and technology studies offers a wealth of concepts, theoretical insights, and research methods that might guide the study of science in the making of public policy. A small but now rapidly growing body of work in STS has examined the relationships among science, technology, and political power in Western democratic societies. This work has illuminated the role of science in policymaking, state-science relations, science and democracy, and the politics of technology (influential early works include Polanyi 1962; and Shapin and Schaffer 1985; more recent studies are Ezrahi 1990; Jasanoff 1990, 1995, 2004d, 2005; Guston
Another smaller body of work has traced the rise of “big science” and its connections to defense research and the state (Galison and Hevly 1992). This important research offers penetrating insight into the science-politics connections in (mostly) Western democracies, but those connections play out very differently in the authoritarian context of China, especially in the early post-Mao years that are the focus here. Also, STS students of the science-politics link have not taken much advantage of the insights provided by the governmentality framework. In this book I build on some of this work, especially that of Jasanoff, but I borrow more heavily from research on Chinese politics and science, which illuminates the larger context in which the one-child policy was born.

In this book I draw together these two bodies of work to develop a new kind of epistemic, or knowledge-centered, approach to the making and effects of policy within and beyond the state. In this approach, the governmentality perspective provides the broad framework for understanding power, policy, and politics and the constitutive role of knowledge in those domains. STS illuminates the micropolitics by which policy-relevant knowledge is formed and politically advanced. The epistemic approach that I develop places particular emphasis on the cognitive and discursive grids through which reality is framed and represented. Yet it also attends to the actors and institutions that produce and advance those grids, for both leave their imprint on the knowledges and policies that get made. Seeing policies as products of particular histories, the approach acknowledges the specificity and contingency, as well as the complexity and messiness, of policy processes, seeing these as fundamental to, and indeed constitutive of, modern policies and politics. This theoretical effort should be seen as a somewhat experimental endeavor, since the two frameworks have been developed largely to understand science and governance in Western liberal societies. Yet, suitably adapted, they are remarkably illuminating of the Chinese case as well.

I begin by introducing three interrelated concepts that will guide our inquiry into the making of the one-child policy and the broader effects of the way it was made. Policy problematization refers to the three-part policy construct (problem, solution, assessment of costs and benefits) that is the center of attention. Policy assemblage names the heterogeneous association of elements—actors, institutions, knowledges, and so forth—that come together for a time to produce a particular policy problematization. The term micropolitics of science making
and policymaking labels a set of knowledge-making and knowledge-advancing processes by which the elements of an assemblage are brought together to form a public policy.

Policy Problematizations

As noted earlier, governmentality approaches shed light on the crucial role of governmental rationalities in the making of policies and programs. In the study of policy, the most important rationalities are problematizations, understood here as particular formulations of the problem at hand, together with the policy solution and an assessment of that solution’s costs and benefits (on problematizations, see Dean 1999: 27–28; and Rabinow 2003: 44–56). Problematizations of the population issue are familiar elements of our political landscape. In a well-known formulation, in the late twentieth century the demographic problem that garnered most attention was located in the third world and framed as high fertility that hampers economic growth. Its solution was the spread of state-managed family planning programs. In the early twenty-first century, the problem of population numbers is increasingly located in parts of the industrialized world (much of Europe, Japan, and Russia, for example), where extremely low fertility is accelerating aging and threatening economic prosperity and social cohesion. The solution, now much debated, often involves a mix of state policies to encourage childbearing, reconcile family life with work, and manage the negative consequences. Population problematizations such as these are powerful things because they do not simply reflect a reality that exists in nature; instead, they may actively constitute a new reality by shaping what is thinkable in the domain of population. A fresh and compelling problematization can radically reorient thinking about the nature and scope of a social problem, making people see the matter in completely new ways. If it gets embedded in public policy and bureaucratically enacted, a powerful problematization can remake the world we live in.

This work urges us to pay serious attention to the “upstream” framings of the policy constructs that reach top policy makers for a decision. “Reality” does not exist unproblematically “out there,” but becomes known to us through language and linguistic framings. Such framings can present a single reality in multiple ways. For example, Americans’ growing girth might be construed as a problem of a gluttonous public, a lazy populace, a greedy fast-food industry, or a built environment designed for inactivity. The governmentality work takes language and
its constructions of social reality extremely seriously, encouraging attention to the cognitive content, discursive structure, and rhetorical exposition of governmental problematizations. As noted earlier, in modern societies such policy constructs are most often crafted with the assistance of scientific experts on the social and natural world. Students of Chinese communist politics have long attended to the epistemic content, discursive structure, and linguistic features of Chinese Marxism, illuminating the profound impact of Marxist constructs on the making of Chinese policy and politics (e.g., Schoenhals 1992; Apter and Saich 1994; Kluver 1996; Ji 2004). Perhaps reflecting the pervasive view of science as not-politics, Chinese science has not been subject to similar scrutiny. In the post-Mao era, when science has supplemented Marxism as the official discourse in which many policy problems and solutions are framed, the scientific formulation of social problems and their policy solutions needs to receive the same critical attention that Chinese Marxism has received. This new work on governmentality urges us to unpack the knowledges and languages of China’s policy sciences, suggesting that in the facts, narratives, and rhetorical products of these sciences we will find clues to the making, working, and effects of the nation’s post-Mao policies.

Policy Assemblages

How do such problematizations, or policy constructs, get made? What elements go into the process and how do they come together? Let us return to the problem of the cybernetic clue that went nowhere. For perhaps two decades, specialists on contemporary China have known that the population projections of Song Jian lay behind the one-child policy. Yet no one has been able or even motivated to do anything with that knowledge. In the absence of a conceptual structure tying it to the policy apparatus, the information has sat there as a lifeless factoid, a curiosity with no evident political significance. The cybernetic clue is indeed an awkward thing: it belongs neither to “the political system” nor even to the realm of the human. How can we connect those projections to the other elements that went into the making of the one-child policy—the leaders, institutions, values, and so on—and then show how all those things interacted to produce the policy?

In a series of remarkable intellectual interventions over some twenty years, the French science and technology studies scholar Bruno Latour has broken up the familiar ontologies of modernity—including the great
divide between “science” and “politics”—and reassembled them into new associations or “assemblages” that mix things up in novel but productive ways. To understand the importance of Latour’s ideas for our thinking about science and policy, we need to review, if only briefly, how those ideas have developed. In his early work on laboratory science, Latour introduced the notion of Actor-Network-Theory to suggest that not only humans, but also nonhumans—microbes, scallops, rocks, and ships, for example—belong to networks of things that have agency, that is, that do something and have visible effects on other agents (Latour 1987; Law and Hassard 1999). A few years later, in the pathbreaking essay We Have Never Been Modern (1993), he pushed the argument further by suggesting that the conceptual distinctions that have marked modernity—especially nature/culture and science/politics—cannot hold. These separations, he claimed, are artificial, so much so that we moderns have never actually been modern. More recently Latour has extended these ideas to the realm of society. In Reassembling the Social (2005), he argues that the familiar terrain we know as “society” does not exist. There is no distinctive domain of reality to which the label “social” or “society” can be attributed. Instead, the social is an assemblage of heterogeneous elements, human and nonhuman, that come together for a period of time. The task of the social scientist is to trace the shifting ties that connect the elements into assemblages that matter.

In political science much effort has gone into identifying the fundamental features of “the political system” that interact to produce public policy. As a recent handbook in the field puts it: “Public policy is to a very large extent a political phenomenon and, as such, a field of expertise for political scientists” (Pierre 2006: 483). By drawing the boundary too narrowly, however, such efforts may miss essential elements of the policy process. For if there is no “society,” then by the same logic there is no “polity,” no “political system” whose constituent parts are distinctively “political.” Instead, the domain of politics is made up of elements that in modernist discourse are allocated to “economics” (think: money, taxes), “culture” (Islam, evangelicals), and “society” (immigrants, baby boomers). It includes, too, nonhuman elements such as, say, hurricanes or homemade bombs. The notion of assemblage captures this real-world heterogeneity of the things that actually go into the making of public policy.

In this book I will use the concept of policy assemblage to identify the diverse elements—actors, institutions, knowledges, values, facts, practices, and so forth—that go into the making of policies. More formally,
by *policy assemblage* I mean the collection of heterogeneous, often incommensurate elements that come together for a period of time, sometimes quite fleeting, to produce a policy construct that, through micropolitical processes such as those described in the next section, may become the core of an official policy. Following Latour, to be in the assemblage, items must be connected to other elements and they must be active: they must do things, affect other actors, produce effects (Latour 2005: 63–86). A hurricane, for example, becomes an element in a policy assemblage only when it destroys a city, forcing governments at all levels to respond. A homemade bomb joins a policy assemblage only when it explodes, kills countless civilians, and persuades the government to develop counterterrorism measures.

The elements that form a policy assemblage will always include familiar “political” things: elected officials, government agencies, routinized practices of governance, and so forth. The research of political scientists can help us identify such elements and illuminate how they work. But policy assemblages also include “nonpolitical” things that influence policy outcomes. Of particular interest here is the political work performed by policy scientists, usually as advisors or consultants to formal government agencies, the bodies of knowledge they create, and the specific findings they generate. The assemblage concept readily admits these into consideration and directs us to trace their connections to other elements. Because the components of these assemblages vary from place to place, time to time, and policy to policy, they can be identified only through ethnographic research with participants in the process. Yet there are some general classes of elements that will be found in most assemblages. The most important are political actors and configurations of power, formal and informal institutions, routinized policymaking procedures and practices, knowledges and discourses, and ethics and values. A study of policy assemblages should include all these things.

**THE MICROPOLITICS OF SCIENCE MAKING AND POLICYMAKING**

How do the elements of policy assemblages work together to produce policies? In particular, how do scientists and their knowledges and writings find their way into policy problematizations? Work in science and technology studies helps us understand how, in modern scientific societies, particular nominally “scientific” problematizations of social issues are created, contested, promoted, and eventually adopted by political elites.
Despite the rapid growth of science studies, however, the human sciences that are usually the source of such problematizations have rarely been studied as sciences (some exceptions are Rose 1990, 1996; Hacking 1995; Porter 1995; Daston 2000). Next to the large literature in demography, for example, research on demography and its role in the government of population and the making of modern life remains minuscule. Yet population science—my preferred term for this field because it acccents the field’s scienteness—is an intriguing arena of study. What makes population science intriguing is its location in the interstices between the natural and the social sciences. Like the natural sciences, its language is mathematics and its object, the population, with its birth, death, and other “vital” rates, is seen as part of nature. Yet, like the social sciences, the field is eminently social and political. Because it concerns human beings, the discipline inevitably has a social character. Population science is also political, for everywhere it emerged the field was born not to understand population in its own right, but to serve the interests of states or other governing authorities in administering and optimizing their subject populations. Because of its dual identity as a natural/social science, many quite different projects can proceed under the label “population science.”

The science of population is also an important arena of study because its subject matter, population, is a central object of power in the modern era. In the West, the emergence of population science has been crucial to the rise and spread of that politics of life (an engaging account is Foucault 1978: 91–108). Population science has not only constructed population as an object of science and created a field of knowledge detailing its regularities. It has also created the problematizations sought by states eager to govern population processes (of fertility, mortality, migration, family life, social security, and so on) so as to enhance human welfare, order, and utility for the capitalist economy. In the last few decades, China too has seen the rise of this politics of life. Governing China’s Population documents how, since around 1980, when the PRC began its reentry into global capitalist circuits, population has become a focal object of governance and a vast terrain of biopolitics. In China as in the West, population science has played a crucial role in bringing population within the orbit of state management by, among other things, providing problematizations to guide its governance. GCP documents science’s importance, but provides few details on how it developed, got inserted into the policy process, or shaped policymaking. That is the task I undertake here.

How can we understand the policy work of this social/natural science of population? Let us begin with some basics: What is science? Students of STS long ago set aside the conventional view of science as an autonomous sphere with universal norms constituted independent of other modes of social activity. Instead they see science as a sphere of knowledge that is humanly constructed by particular actors operating in historically specific cultural and political contexts. Clearly, science is no one thing; instead, there are different practices labeled "science," each reflecting the characteristics of its makers and of the historical context in which it is made.\(^{10}\)

Observational studies of laboratory science conducted in the 1970s and 1980s illuminated the microprocesses and micropractices by which science produces and advances its knowledges (Latour 1987; Latour and Woolgar 1979; Lynch and Woolgar 1990; Knorr-Cetina 1981, 1999). In an ideal fact-making sequence, scientists first constitute a domain of nature as an object of scientific inquiry. Using technical practices, they proceed to construct scientific facts about that new object. Because those facts are humanly made, the personal and historical circumstances of their making shape the facts that get made. But then, through rhetorical and other practices, the circumstances of the fact's production are removed from view, leaving the fact to appear "natural," a reflection of nature that is untouched by human hands. After the fact is created, networks of allies are enrolled as believers and supporters; the number and influence of these allies determine whether a statement becomes an enduring fact—an indisputable assertion about the world. Although this early microsociological work gave little attention to the place of culture and politics in the making of scientific truths, it remains useful, especially if paired with other approaches that address these issues (Hess 1997: esp. 100–111; Martin 1998). By studying these micropractices of science making and fact making we can trace the political careers of scientific "truths" and discover how science has gained its incredible power in the political realm. We can see, too, how science comes to seem politics- and culture-free, yet is anything but.

In this book, I draw on the insights generated by this work, adapting them to the office science of population studies. I pay particular attention to the facts and narratives (sets of facts composed into scientific stories) that make up population problematizations (the nature of the
population problem, its necessary solution, and the costs and benefits of that solution). In studying the constitution of population as a scientific object and the making of scientific knowledges and problematizations more generally, I highlight the crucial role of numbers, numerical inscriptions (tables, figures, charts, and so forth), and calculative technologies (equations, projections, and the like). Although, as Ian Hacking has lamented, “the numerical manipulations of the body politic are . . . dusty [and] replete with dried up old books,” when studied closely such quantitative practices are both fascinating and illuminating (Hacking 1982: 279). Numbers are interesting and important not only because they are the language of science in general and of population science in particular, but also because, despite their apparent status as neutral and objective facts, they are human products that, historians of statistics have shown, have been endowed with facticity (Porter 1995; Poovey 1998). A science studies approach thus suggests that “the population,” “population problems,” and “population policy solutions” are not so much natural categories as categories made natural and taken for granted by the work of population scientists (cf. Horn 1994; Clarke 1998).

Credibility Contests and Boundary Work

Newer work in STS brings in the cultural and political dimensions of science making, helping us link science directly to politics and policymaking. Science studies views science as agonistic, made up of competing groups who vie to get their scientific ideas accepted as “the truth.” In the case of a policy science such as population science, different groups contend to get their scientific formulations of the policy problem and solution adopted by political elites. How might we understand these contests and struggles for political influence?

In his trenchant study Cultural Boundaries of Science: Credibility on the Line, sociologist and STS scholar Thomas F. Gieryn (1999) suggests that the struggles of scientists are fundamentally credibility contests in which what is at stake is epistemic authority: the legitimate power to define and explain “reality” and “truth.” Rival groups pursue their quest for epistemic authority and, in turn, policy influence through boundary work. In an insightful metaphor, Gieryn suggests that science can be thought of as a space on the cultural map. Science has no essential or universal properties; instead, the properties of science are shaped by what is excluded from the discursively constructed “science” in local, episodic instances of boundary work. Scientists define what science is
by creating rhetorical boundaries that separate it from other, nonscience domains (religion, politics, ethics, and so on) and elaborating on what makes science different from those other domains (science is rational, objective, disinterested, skeptical, and so forth). Maps of science are never final; instead, opposing groups are constantly drawing and redrawing the boundaries of science, claiming authority over a particular issue by placing it within their “science.” Boundary work is expansionist when scientists seek jurisdiction over a new ontological domain, and protectionist when they seek to retain authority over a contested issue. Which science wins the credibility contest and claims the policy prize depends on the scientific, political, and cultural capital each group of experts brings to the contest as well as the larger political and cultural context in which the struggles take place.

**Coproduction: Larger Effects of Scientizing Politics and Politicizing Science**

Classic studies of modern governmental projects suggest that schemes to reorder and optimize human life are always consequential—but rarely in ways their makers intend (Ferguson 1990; Scott 1998). That is, the policies and programs of modern states chronically fail to achieve their stated goals, but they produce other things instead. In a typical example, a massive project to develop Lesotho yielded little economic development, but spread bureaucratic state power throughout society (Ferguson 1990). Part of “what goes wrong” with these projects goes wrong early on, in the phase of science-based policymaking that unfolds well before the policy or program gets implemented on the ground. How might we understand what is produced when science and scientists get inserted into the policy process?

A fundamental insight of science studies is that science and the social order are *coproduced*—that is, constituted in the same moment and in relation to each other (Shapin and Schaffer 1985; Latour 1988). In a series of important studies of the production and use of science in legal and political decision making, Jasanoff has used that idiom of coproduction to make sense of the diverse and mostly unpredictable effects of science in the policy arena (and in political and social domains more generally) (Jasanoff 2004a–d; also 1990, 1995). When scientists are involved in policymaking, Jasanoff argues, the science and politics become inseparably intertwined. The result is that science and the sociopolitical order are co-constituted (Jasanoff 2004c: 17).
For analytic purposes, I separate this intertwining into two analytically distinct but empirically interconnected processes. I call these the scientization of politics and the politicization of science. Each side of this dynamic has distinct and consequential effects. In suggesting that the two are co-constituted, the coproduction idiom acknowledges that "the social" in social constructionism is very complex and that in fact neither the social nor the natural is ontologically prior. What happens when science and politics interact is an empirical question. The effects of scientific policymaking are always historically contingent, varying with the cultural and political context in which science and policy are made.

Two features of the coproductionist framework make it especially promising for this project on the one-child policy. First, because it encourages dissection of the messy processes by which politics is scientized and science is politicized, the perspective is especially fruitful for understanding times of heightened conflict and change. As the conflicts get resolved, important decisions often are made that get embedded in the politics and become enduring features of the political scene once things return to normal (Jasanoff 2004a: 276–277). The early Deng era that is the focus here was certainly a time of disruptive upheaval and transformative change. And the population policy that was made then did indeed get embedded in PRC politics in such a way that it was highly resistant to change. Another advantage of the co-constitutionist idiom is that it moves beyond early STS questions of fact making to pose new and important questions about sense making: how do states see and institutions think (Jasanoff 2004a: 276–277; Scott 1998; Douglas 1986)? These new questions allow us to see and to study the emergence of a critical new form of scientific sense making in the PRC regime. It was this novel form of reasoning by the regime that made the puzzling policy seem so necessary and so right.

Toward Political Critique

This epistemic approach to public policy is not merely an intellectual exercise. It also supplies tools for political critique and action. The approach proceeds by identifying a particularly troubling or noteworthy policy, often by its poor or disturbing effects, and then tracing it back in time to learn how it came into being—how the underlying problem and solution became thinkable, who made them so, using what logics and techniques, in what historical context—and how it produced
those troubling effects. By historically dismantling today’s “truths,” we see that the things we take for granted are not inevitable outcomes of history’s unfolding. Rather, they are contingent and specific, human products created by particular actors operating in given contexts. These discoveries open the political space for things to be done differently. They may also uncover new framings of and solutions to the world’s ills whose effects may be less unjust or inhumane than the problematizations we now have.

AN ANTHROPOLOGY OF SCIENCE MAKING AND POLICYMAKING IN THE PEOPLE’S REPUBLIC

The enthusiastic reception accorded modern science by China’s post-Mao leaders gives the question of science in the political domain particular significance in the PRC. Students of Chinese politics have viewed the emergence of a new “scientific” way of making policy as part of a profound shift in political practice that occurred during the transition from Mao to Deng. Under Mao, science was decimated; party policy was made on other, more political and ideological grounds. That changed markedly with the rise of Deng Xiaoping in the late 1970s. Recognizing the need for expertise to ensure the success of its modernization program, the Deng regime embraced modern science and technology with fervor, reopened scientific fields that had been closed, and called on specialists to lend their talent to the making of social and economic policy for the new era (e.g., Hamrin 1990: esp. 51–53; Halpern 1986, 1988, 1989). First as ad hoc advisors (April 1979 to mid-1980), then as members of institutionalized advisory centers (fall 1980 to early 1982), and later as members of more permanent consultative bodies within the bureaucracy (from 1982 on), over the next few years the Deng party gradually incorporated economists, foreign affairs experts, cyberneticists, and other scientific experts into advisory roles in the regime’s policymaking apparatus (Halpern 1986; Shambaugh 2000: 179–182; Watson 1987; Hsu 1988).

The notion of “scientific policymaking,” though used descriptively rather than theoretically in this literature, is helpful because it marks the early Deng era as a crucial, scientizing moment in the evolution of CCP politics when scientists were brought into policymaking and scientific logics and techniques were built into party policy. This is a promising place to start because the one-child policy, though not yet studied in these terms, appears to be the first major policy of the Deng regime to
be made with the help of scientists. In that first, ad hoc stage of scientific policymaking (spring 1979 to mid-1980), there was much room for policy entrepreneurship on both sides. Students of Chinese politics have stressed the positive contributions of this new style of making policy to the nation's modernization. In their account, the growing participation of scientific experts in the policy process from around 1980–1981 ushered in a more systematic, realistic, and data-driven process of policymaking that was far superior to the erratic, ideological, vision-driven mode of policymaking that had prevailed under Mao (Halpern 1986, 1988, 1989; Hamrin 1990; Shambaugh 2000). In general, this work suggests, the Mao-to-Deng transition was one of ideology to science, and the scientific mode of policymaking produced a better policy process and better policies than what came before.

The thesis of improvement in policy process and outcome seems incontrovertible on a general level, but when one looks at particular economic and social policies that were shaped by scientists and engineers, a more complex picture emerges. An epistemic approach suggests that whether expertise is superior to Marxian ideology as a basis for public policy depends very much on the specifics: what type of scientific and/or engineering expertise is applied; how is that policy science made and politically advanced; what scientific logics and techniques get built into the policy that is made?

In the preface I described anthropology's emergent interest in the study of public policy. The field's appreciation of governmentality and STS perspectives, its ethnographic methods, and its ethical commitments make it a uniquely productive disciplinary site from which to pursue these important questions. In this book I draw on the concepts just elaborated and, taking advantage of the unusual institutional setup of the PRC (which gives elite scientists access to the inner world of policymaking) as well as personal access to elite Chinese informants, develop a distinctively anthropological approach to science making and policymaking among Chinese elites in the early post-Mao period. Despite its focus on past events, this project is ethnographic in essential ways. It focuses on one relatively bounded slice of life—the making of population science and policy during 1978–1980—and tries to capture and reflect the actor's point of view. This project is also ethnographic in its efforts to provide holistic, or culturally and historically contextualized, interpretations; its basis in ethnographic field methods (described in a later section); and its ultimate concern with fundamentally ethical issues. In this section I introduce three of the most important elements
of the one-child policy assemblage that will feature in the story told in this book: actors, institutions, and knowledges.

Actors

In tracing the making of the one-child policy, this book places individual actors center stage, following the political leaders, program leaders, and scientists as they meet, talk, plan, worry, grumble, and generally go about doing the things that produced the one-child policy. Because the number of leaders and scientists centrally involved was remarkably small—perhaps two dozen in all—an actor-centered approach should be able to capture the main dynamics of the making of this policy. These actors, whom readers will encounter again and again in the pages that follow, are introduced in table 1.

Institutions

Anthropologists sometimes slight formal institutions to focus on “real people,” yet a clear grasp of the nature and work of institutions, both formal and informal, is essential to understanding the making of public policy. In China in the immediate post–Cultural Revolution years, the apparatus of government was just being reestablished. Yet within a
Table 2. Official Policymaking Institutions
(listed in order of political power and importance)

<table>
<thead>
<tr>
<th>Institution</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Party elders</td>
<td>Set directional policy, probably make final decisions on specific policies through informal, behind-the-scenes mechanisms</td>
</tr>
<tr>
<td>Leading bodies of the party (Central Committee and Secretariat) and government (State Council)</td>
<td>Formally make policy decisions and make them official by the construction and issuance of documents</td>
</tr>
<tr>
<td>Government birth planning apparatus (Birth Planning Leading Group; Birth Planning Office, both under the State Council)</td>
<td>Manages and coordinates policymaking and enforcement</td>
</tr>
<tr>
<td>State Planning Commission</td>
<td>Establishes long-term, short-term, and annual population plans and plan targets, whose achievement is the central goal of population policy</td>
</tr>
<tr>
<td>National People’s Congress</td>
<td>Discusses policy, formally passes policy documents</td>
</tr>
<tr>
<td>Relevant ministries and mass organizations</td>
<td>Work out details of policy—policy rules, implementation, management of the social costs</td>
</tr>
<tr>
<td>University- and party school–based population studies institutes</td>
<td>Provide Marxian theory, propaganda, and ideology, policy ideas, projections, and other policy elements on request from birth planning agencies</td>
</tr>
</tbody>
</table>

Relatively short time, a set of formal institutions and procedures had emerged to handle the processing of population issues and the making of population policy. In the PRC’s tripartite regime (composed of party, government, and military sectors), the institutions charged with making population policy belonged to the party and government (the “party-state” or simply “state”). Although these party and government bodies were still working out how to do their assigned tasks, they were widely accepted as the legitimate makers of population policy. I call these culturally legitimate policy bodies the official policymaking institutions. These institutions and their main policymaking activities are listed in table 2. Although I do not attempt a full account of all the policy work done by these entities—such a project would require another book—I locate the core actors in their institutional contexts and follow the population issue as it gets processed by each of these institutions.

The value of an epistemic approach featuring science and scientists “beyond the state” depends on how big an influence those scientists and their ideas have on policy. Political scientists and others accustomed to more state-centric approaches might well wonder if all these new concepts are really necessary. By paying attention to the official, state-based
institutions involved in making policy, we can get a handle on how and how much science and scientists influenced policymaking. Close study of the policy work performed by these party and governmental organs enables me to identify a variety of sometimes cooperating, sometimes competing institutional “channels” that influenced the making of the one-child policy. These might be called the elder channel, the planning channel, the legislative channel, the ministerial channel, and the government-authorized expert channel.\textsuperscript{12} For readers unfamiliar with the policy process in China, table 2 provides an overview of the ideal process by which policy is made. In the chapters on policymaking that follow, I discuss the work of these various institutional channels in passing. I return to this issue in the book’s conclusion, where I review how scientists operating through illegitimate channels outside the party-state may have constituted themselves as a new channel or somehow penetrated the existing channels to alter their policy thinking and practices.

I also highlight the role of informal institutions such as social networks and relationships. The study of social networks is of course a classic concern of political anthropology and it is a concern of anthropologists of policy today (e.g., Wedel et al. 2005). Guanxi—personal connections—are essential to the working of Chinese society and politics generally (in anthropology, see, e.g., Yang 1994). Such ties were crucial to the making of the one-child policy, serving as bridges between various policy bodies and giving actors located outside the institutions charged with policymaking a means to get their ideas into the central policy organs of the state. Of special importance were three kinds of social ties: personal networks spanning the formal divisions of party, government, and military; patron-client relationships within the science community; and hierarchical relationships within the top leadership that accorded most influence to party elders with extensive revolutionary experience.

\textit{Sciences/Knowledges}

The unusual tangling of science, society, and politics in the People’s Republic makes this an especially interesting—and challenging—arena in which to study scientific policymaking. The literature on Chinese science illuminates four features of those intertanglings that bear note.\textsuperscript{13} First, over most of the history of the PRC, science has been subordinated to the CCP. As a result, many of the practices that go by the name “science” bear the clear imprint of party politics. Second, in the PRC
the term "science" embraces Marxian social science as well as modern natural science. This broad construction of "science" allows us to do two interesting things. It enables us to view Marxist social science as a science and to study the two sets of knowledges and practices within the same analytic frame. Third, science underwent a tortuous history under Mao Zedong, who dominated PRC politics for twenty-seven years (1949–1976). In the early 1950s, the social sciences were decimated; some were transformed into Marxian fields while others were eliminated outright. During the Cultural Revolution (1966–1976) most of the natural sciences too were suppressed. Only defense science survived and remained productive. This history left different groups of scientists differently equipped to create and advance their sciences in the post-Mao years. Finally, like the Soviet Union, especially under Stalin (Graham 1990), China has an unusually florid culture of scientism. Born in the early twentieth century and intensified under Soviet tutelage in the 1950s, the view of science as a panacea for all the nation's ills reached extreme heights in the early post-Mao years. Indeed, it was at that time that scientism and its twin, technicism, which values instrumental reasoning and technical efficiency above all, emerged as virtual official ideologies of the Deng regime (Suttmeier 1989). These features of Chinese science and scientism will be central to the story of population science and policy told in this book.

SCIENCE MAKING AND POLICYMAKING UNDER DENG: THREE STORIES

This book tells three stories about the making of modern China in the early Deng years: the science story, the politics/policy story, and the cultural story.

The Science Story

The first story is about China's sciences of population, how they got made, and what political work they performed. Chapter 2 lays out some crucial historical background. Under Mao, it shows, most of the sciences were suppressed. Population was declared a forbidden zone. In 1978–1979, the new reform leadership opened that zone, calling on specialists to draw on international S&T to create a new science of population to guide the state's now high-priority project of population control. The first of the book's two main parts, "Making Population
Science,” examines the three distinctively Chinese sciences of population that emerged in response to that call. I call these a Marxian statistics of population (chapter 3), a sinified cybernetics of population (chapter 4), and a Marxian humanism of population (chapter 5). Reflecting the intellectual background, political biography, and institutional location of their makers, each of these bodies of thought offered a different notion of the nature of China’s population problem, its ideal solution, and the social and human costs that were tolerable in the name of rapid demographic modernization. The statisticians drew on Marxian statistics and population thought to frame the population problem as one of imbalance in the state plan; its solution was a rapid elimination of third births and gradual increase in first births. The cyberneticists borrowed ideas from the Western Club of Rome school and from China’s strategic defense science, defining the population problem as a crisis of modernization whose only solution was one child for all. The Marxian humanists, applying ideas from party thought and practice, emphasized the serious sociopolitical costs of a one-child-for-all policy and proposed a two-child-plus-long-spacing scheme instead.

This part also explores the political characteristics and consequences of these new sciences of population. Through close study of the micro-practices of population science, we see how the values of the scientists and the historical context got embedded in the policy constructs they created and then how those human fingerprints got erased so that what emerged appeared as pure scientific truths. Those scientific truths did important political work. The Marxian statisticians factified the leaders’ ideas on population, turning political truths into empirical facts. The Marxian humanists massified the leaders’ views, adding the voice of ordinary people that rarely gained expression in China’s population politics. Finally, the cyberneticists mathematized and scientized the Deng regime’s worries about population, making their own radical narrative of population crisis and its necessary one-child-for-all solution appear as indisputable truths of modern science. Underlying these varying perspectives on population governance were competing visions of the place of science and the state in the social order. One vision was economistic, another technocratic, the third humanistic. Which of these proposals got embedded in party policy would leave a big imprint on the society and politics of the reform era, helping to locate one science and its visions of good governance at the center of China’s drive to achieve socialist modernity while displacing the others to the margins. In telling this particular story about China’s sciences of population,
I also tell a more general story about the nature of “Chinese science” and “Chinese facts.”

The Politics/Policy Story

The second story is about politics and policymaking. In the nine months between December 1979 and September 1980, the most drastic of these proposals—the cyberneticists’ plan for every couple to have but one child—would emerge victorious. The book’s second main part, “Making Population Policy,” explains how that happened. This part describes the unusual assemblage of elements that came together for enough time to produce a policy that gained the assent of the party’s top decision-making body. That assemblage included not only the institutional elements described earlier, but also the epistemic and linguistic elements of population science: a certain cluster of knowledges; the associated policy proposals, values, and visions; and the scientific graphs, tables, and other forms of rhetoric by which the proponents of these sciences sought to persuade others of the truth value of their ideas.

This part of the book charts the extraordinary science and party politics by which that maverick group of natural scientists seized the initiative on population and then, from their location outside the official policy organs, intervened in the policy process, hijacking that process to get their plan adopted. While interweaving the accounts of China’s leaders and their scientific advisors, I tell much of the story from the vantage point of the scientists, who not only were key actors in the process but also, through their contacts with mid- and high-level officials, were able to provide remarkable (though of course partial) insight into the reactions and thinking of China’s top leaders. I tell this story as one of protracted struggle between the three sciences of population for credibility—the right to tell the truth about China’s population problems—and political/policy influence. As Gieryn and others have suggested, one of the central tactics in that struggle was rhetorical boundary work. During these crucial months, the natural scientists worked repeatedly and successfully to expand the boundaries of their science to include “population,” while the social scientists fought to defend their boundaries and retain jurisdiction over what traditionally was their topic. These struggles unfolded over several overlapping phases, each relayed in a separate chapter.

Chapter 6 uncovers the “scientific revolution” that occurred at a crucial meeting of scientists and population officials in December 1979. Focusing on the credibility contests by which different groups jockeyed
for jurisdiction over “population,” the chapter examines the brilliant boundary work by which the natural scientists claimed population policy for themselves, persuading top population officials that they possessed the scientific tools necessary to correctly define the demographic problem and its solution. Their victory in this initial skirmish set the stage for the cyberneticists to promote their ideas more broadly. At that time, however, the natural scientists’ version of demographic truth—that China faced a population crisis warranting a drastic solution—had few adherents. Chapter 7 charts their vigorous efforts to recruit key groups of participants in the policy process—top decision makers, the educated public, and the intellectual community of scientists and engineers—to their cause. It documents too the dismay of the social scientists, who reacted with both quiet complicity and loud complaint to their loss of epistemic authority and policy influence. Chapter 8 turns to policy formulation, documentation, and dissemination within the institutions of the party Center. It shows how political leaders, working with top population experts and officials throughout the bureaucracy, ironed the wrinkles out of the one-child policy. Then, through a complex blurring of science and politics, the party formalized the one-child-for-all rule as national policy and embodied it in the foundational document on population policy for the new era. During each phase I trace the coproduction of science and politics—the scientization of policymaking within the regime and the politicization of science making by the regime’s policy advisors—and the larger effects those dynamics produced. This first instance of scientific policymaking produced a policy that was as much scientistic as scientific. We see in the book’s conclusion that it also promoted the rise of a technoscientific state and a highly state-centric biopolitics that embodied the hierarchical and technicistic values of the scientists and engineers who triumphed.

The Cultural Story

In twenty years of conversations with the makers of the one-child policy, one theme that emerged repeatedly was that of boundaries—and their violations. There was a sense that in the making of the one-child policy something very wrong had happened: fundamental boundaries had been breached, the proper order of things had been disturbed. Some informants were troubled about the boundary between natural and social science. “Population belongs to social science, not natural science!” Others were disturbed about the line separating politics and science. “No government official asked the scientists for their opinion on population policy!”
Twenty-five years later, one longtime official declared: “Everyone is still angry about this” (everyone, that is, except those who prevailed). Evidently, the birth of the one-child policy had something to do with territories and borders on the elite cultural map of the PRC.

Reflecting my informants’ concerns, my third story is about the making and remaking of the cultural map of China. By *cultural map* I mean the conceptual distribution of ideas, issues, ideologies, discourses, and representations at the elite level. The territorial divisions on the cultural map do of course correspond to institutional divisions in the PRC’s complex apparatus of rule: among China’s “systems” (*xitong*), among the government, party, and military sectors of the regime, among divisions of these three sectors, between legitimate and illegitimate institutions of population policymaking, and so on. In this project, however, I use the map concept loosely to highlight that what ultimately was at stake in these struggles over population was fundamentally cultural: for the scientists it was the authority to articulate “the truth” on demographic matters, while for party leaders it was the legitimacy to govern the country and its population affairs.

On this cultural map of elite politics we are most concerned with three spaces: the land of Marxian ideology/party politics, the territory of natural science and technology, and the region of Marxian social science. Under Mao, the regnant ideology of the CCP was of course Marxist-Leninist–Mao Zedong Thought. The social sciences were either abolished or forcefully transformed into fields of Marxian inquiry and annexed by the land of ideology/politics. Natural science, at least defense science and technology, occupied a relatively independent space on the map. Although military science certainly served the regime, in international S&T it possessed an independent source of authority that party leaders, most of whom were political generalists, respected and needed in order to achieve their grander schemes of constructing socialism and defending the nation. The defense scientists’ success in building bombs, missiles, and other critical guarantors and symbols of national might also helped secure for them a special space on that map of elite culture.

Our story centers on the migration of topics and the shift of regions on this cultural map that occurred in the early post-Mao years as the Deng party articulated its science policies for the new era and different groups of specialists jockeyed for cultural credibility and political influence. We see how “population control,” long trapped in the land of Marxian ideology/party politics, where it could not be addressed because of Marx’s antipathy to Malthusian ideas, migrated to the land of natural
science, where it could be formulated in essentially Malthusian terms and then transformed into concrete party policy. We observe how “the woman question,” because of its sensitivity to a Marxist party that claimed to have liberated women, remained in the land of party politics, to be settled by political, not scientific truths. Finally, we see how in the course of the battles over population, the logics and techniques of natural science and technology gained a huge foothold in the land of party politics, where they acquired great epistemic authority and, in turn, the political capacity to shape party policy. Modern S&T could not displace Marxism as the official ideology of the regime, but it became an important new de facto guiding ideology and source of legitimation.

_The Technical Is the Political: On the Primacy of the Ad Hoc, the Tacit, and the Contingent_

In telling these stories, I linger over details that to many readers may seem, if not simply trivial, then overly technical. In studying the science, for example, I am keenly interested in questions such as: How reliable were the input data? How were the tables and figures constructed? In tracking the policy, I am intrigued by matters such as: How were the plan targets created? How was the document announcing the one-child policy to the public prepared? Small details of person and place abound as well: Who telephoned whom to say what? Which ministries were located near one another in Beijing?

Why this attention to detail? First, following a classic anthropological strategy of creating dense layers of descriptive material, I offer these details as a kind of “thick description” of the people, practices, and places behind the one-child policy (Geertz 1973). In a study of policymaking, the concrete practices of science and politics are the ethnographic observations that matter.

The emphasis on the specific and the contingent has analytic significances as well. First, an approach that eschews generalization to focus on the practices of specific actors operating in particular historical contexts is able to capture the disorderliness, variability, and historical contingency that characterize the real-life making of science and policy virtually everywhere. Such a perspective is especially useful in the case of China’s one-child policy, which was created at a time of extraordinary societal and governmental disorganization. With few science making or policymaking institutions functioning according to standardized procedures, everyone had to make everything up as they went.
along. An approach that underscores the ad hoc, contingent, and tacit captures the messy reality of late-1970s China. Second, in the governmentality and STS literatures, matters such as data quality, table construction, and target setting, far from being “merely technical,” form the crucial technical basis for knowledge claims and governance practices (e.g., Dean 1999: 31; Latour and Woolgar 1979; Latour 1987). Close attention to such mundane matters is thus a methodological imperative. This work suggests that the micropractices of science making and policymaking, because they get embedded in governmental projects, provide a crucial key to the large-scale organization of power and politics in modern societies. Our study of the one-child policy will provide a dramatic illustration of that point.

"SLOGANS," "POLICIES," AND "DOCUMENTS": UNDERSTANDING THE PRC POLICY PROCESS

In telling these stories, this book will help to make sense of the differing narratives about the one-child policy in the scholarly literature. Some accounts date its birth to January 1979, others date it to September 1980, while still others fudge the issue by using 1979–1980. Some observers place the key decision on the policy in the summer of 1978, others maintain it occurred in February 1980, while yet others believe it happened in June 1980. Given the importance of this policy, the lack of agreement about something so fundamental as when it came into being is truly surprising. To make sense of these differing interpretations, I need to describe some unusual features of the PRC policy process. Readers unfamiliar with Chinese politics are advised to pay close attention, for a grasp of these details is crucial to understanding the trajectory of the one-child policy mapped out in the chapters that follow.

Documentary Politics and Policy Dynamics

These conflicting accounts reflect the extraordinary complexity of the policy itself and of the process that gave rise to it. One source of confusion is that there was no single one-child policy; rather, there were several variants that differed in their emphasis on single childbearing (was it merely “best” or was it mandated?) and in the proportion of couples granted exemptions. Another source of confusion can be traced to the PRC’s distinctive policy process. In standard political science models of the policy process, a policy is formulated, is implemented, and produces effects,
which then feed back into further policymaking. In the PRC, policy formulation characteristically follows implementation. Generally, when China’s policy makers are working out a new policy, they first put it to the test in a small number of pilot projects (shidian). The experiences of these pilots are used to perfect the policy before it is formalized in a Central document (that is, a document of the party Center, which is the center of power in the PRC). In some cases, party leaders may allow a policy to be more widely propagated while the details are being worked out and the formal document prepared. In both cases, implementation precedes final formulation. Some observers of the one-child policy have used the time of implementation to signal its inauguration, whereas others have used the date of issuance of a formal policy document.

In the earlier book, *Governing China’s Population*, my coauthor and I drew a clear distinction between the enforcement of a set of birth rules and their official codification in a formal document of the Central leadership, treating only the latter as official “policy.” This book follows that practice. This emphasis on the authority of formal documents is based on the “documentary character” of Chinese politics under Deng Xiaoping (G. Wu 1995; Hamrin and Zhao 1995b). Under Deng, the Chinese Communist regime operated largely by directives from the top, which were given expression in a variety of Central documents: numbered documents of the Central Committee, speeches by top leaders, and so forth. Because it represented the collective will of the ruling leaders, a document that had passed through the appropriate stages and gained formal approval enjoyed symbolic and administrative authority. In population, as in other sectors, a policy became official and authoritative only when it was encoded in a major document of the party Central Committee and/or governmental State Council. With codification it became a “policy” (zhengce); before that it was only a “slogan” (kouhao). Although slogans may be and often were implemented on the ground, they lacked the authoritative character enjoyed by policies carrying the imprimatur of top party and government bodies.

Not One, but Several One-Child Policies

When Chinese informants today speak of a “one-child policy,” what they mean is a strict policy of one child for every couple with very, very few exceptions. That strict policy was codified as formal “policy” in September 1980 and was carried out between 1980 and 1984 in the now much denounced process of “one-childization” (yitaibua). The making of this
TABLE 3. THE EVOLUTION OF THE ONE-CHILD POLICY

<table>
<thead>
<tr>
<th>Policy Rules</th>
<th>Announced by Program Leader</th>
<th>Codified in Central Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1] Best is one, at most two; eliminate third births</td>
<td>June 1978 (LG); January 1979 (BP directors)*</td>
<td>October 1978</td>
</tr>
<tr>
<td>[2] Best is one</td>
<td>December 1979</td>
<td>January 1980</td>
</tr>
<tr>
<td>[4] One child with exceptions for rural couples with only a daughter**</td>
<td>Early 1984 (on trial basis); May 1988 (formal policy)</td>
<td>April 1984 (on trial basis); March 1988 (formal policy)</td>
</tr>
</tbody>
</table>

*LG = Leading Group; BP directors = birth planning directors (at national meeting)  
**Known as the daughter-only (dauhu) or 1.5-child policy.  
NOTE: These rules applied to the Han majority; ethnic minorities have enjoyed more lenient policies.

strict one-child policy is the central focus of this book. To understand that process, we need to make one more distinction introduced in GCP. Directional policy (fangzhen zhengce) is the general statement of policy directions established by the top party leadership. Given legitimacy by the guiding ideology (zhidao sixiang), it provides the overarching framework for the formulation of more specific policies (or simply policies) by the Central Party Secretariat and/or State Council. To guide readers through this complicated story, I offer here a brief overview of the evolution of the policies that culminated in the strict one-for-all rule. Readers may wish to refer back to this summary account (especially table 3) as they read through the chapters that follow.

Soon after Mao’s death, top leaders in a series of speeches set the directional policy on population for the new era: the rapid growth of the nation’s population must be brought sharply under control if China was to achieve its central goal of the “Four Modernizations” by century’s end. In working out specific policies to fit this overarching guideline, actors within subordinate agencies of the government created a series of population plan targets and birth rules designed to encourage and advocate one-child families.  

Between June 1978 and September 1980, they devised three increasingly restrictive birth rules. In each case, the rule was first announced by the birth planning program leader, initiating trial implementation, and later codified by the national political leadership in a Central document. Technically, the first was a “slogan,” the second a “policy.” These policies and their dates of implementation and codification are given in table 3.
This book traces the evolution of these policies. It asks how a relatively lenient policy encouraging one child but allowing two became a harsh policy demanding one for all immediately. Although that rigid one-for-all rule was abandoned four years later, that policy and the process leading up to its adoption had profound consequences for Chinese politics and state making that are felt even today. The book’s final chapter spells out some of those ramifications. Our story of policy evolution ends shortly after the strict one-child policy was codified in a major document in September 1980. GCP takes the policy story up to late 2004. It shows how the implementation of “one-childization” in the countryside produced catastrophic effects, leading the party leadership in 1984 to soften the policy to allow rural couples whose first child was a girl to have two children. That one-and-a-half-child policy was formalized in early 1988 and it remains in effect as I write this in 2007.

A “NECESSARY POLICY” BECAUSE THERE ARE “TOO MANY CHINESE”? RETHINKING COMMONSENSE UNDERSTANDINGS

The epistemic approach outlined earlier is very different from widely accepted ways of understanding China’s population affairs. Conversations held over some twenty years suggest that in the United States there exists a set of everyday assumptions about China and its population problems that is rarely if ever subject to scrutiny. Two are central to this project.

*China’s Population “Crisis”: Real and Humanly Constructed*

One assumption is that at the end of the Mao era (and, in the view of many, still today) China faced a veritable population crisis that was devastating the economy and environment and fully warranted a muscular population policy (e.g., Lee and Wang 1999). Behind this enduring image of China as grossly overpopulated is the larger realist view that population problems exist unproblematically as objects in nature that lie in wait of scientific discovery. Although demographic research offers no support for the idea that a drastic policy of one child for all was demographically or economically mandated (e.g., Banister 1987: 217), the power of the Malthusian myth is such that a great many observers, laypersons and specialists alike, believe that a harsh one-child policy was necessary if regrettable. Popular writings on China’s population
affairs often make this claim. In her book *Mao’s War against Nature*, for example, Judith Shapiro depicts the “population explosion” as “China’s great nightmare,” which required “a draconian one-child family policy” (*Shapiro 2001: 197, 46, 36*). “The Chinese people are still paying a heavy price for Mao’s shortsightedness,” she asserts, in the form of a “devastating population burden of 1.3 billion” (pp. 46, 205).

In this book I query these taken-for-granted notions and tell a different story about China’s population problems and their necessary solutions. I certainly agree that China in the late 1970s faced a serious population problem. In contrast to the realist view, however, I present a social constructionist view which holds that population problems are real and they are socially constructed. The chapters that follow show how in the late 1970s the notion that China faced a “population crisis” was humanly created by particular scientists (and politicians) working in specific contexts, and how the fundamentally political process of crafting this account was then depoliticized by scientizing rhetorics that presented China’s population problems as numerically describable, objective “facts.” I will argue that China indeed faced a serious population problem, but one that rose to “crisis” level—and thus demanded a one-for-all solution—only under a set of highly particular assumptions.

*China’s Population Scientists: Inside Politics and Shaped by It*

A second set of everyday assumptions concerns the work of population science and the relationship between science and politics. If, as the realist account holds, population problems exist as objective facts in nature, the task of population science is to discover those facts and report them to interested parties such as public policy makers. This commonsense account presumes that scientific knowledge about population can be created outside of, and uninfluenced by, politics. More generally, it assumes that population science is objective and truth-telling, in stark contrast to politics, which is subjective and ideological.

Not surprisingly, the small demographic literature on the post-Mao history of China’s population policy embodies these taken-for-granted assumptions. In the demographers’ bare-bones account of the origins of the one-child policy, in the 1970s Chinese population specialists discovered a new demographic truth: given China’s young age structure, the population would keep growing for a very long time. China’s leaders listened to the experts, saw the demographic light, and rationally responded by devising a tougher (albeit too tough) policy to fix the problem. In this
story, science and numbers appear as conveyers of an unproblematic truth about demographic reality. As one scholar has put it: "during 1978 and thereafter, . . . emerging statisticians . . . began briefing top government leaders on the demographic momentum," producing a "new understanding of demographic reality."17 The China population literature also posits a sharp divide between science and politics. This divide comes out in statements such as: "the vicissitudes of politics . . . cannot alter the precepts of knowledge" or "[the cyberneticists] crossed the borderline between demographic analysis and political advice."18

Demographers are right to emphasize the centrality of population science to the making of the one-child policy. When we look more closely at the science and how it was made, however, a picture emerges of a science that was more internally diverse and humanly shaped than their accounts suggest. In this book I suggest that because science is humanly made and because population science is closely connected to population policymaking, Chinese population science—like all population sciences—is not detached from, but linked to and in varying degrees shaped by politics. I also hold that the numbers of science tell a truth, but it is only one truth. That is because the numbers are created by particular human beings working in specific historical contexts, and both the people and the context leave their imprint on the science that gets made. This more political view of population science suggests that the decision to adopt a one-child-for-all rule was rooted not so much in "the facts" as in the politics behind the constitution of some numbers as "facts."

AN ANTHROPOLOGIST IN THE WORLD OF POPULATION SCIENCE AND ELITE POLITICS: PROBLEMS OF METHOD

It is with humility that an anthropologist approaches the prospect of doing fieldwork on elite policymaking in the PRC. As political scientists long ago discovered, China is a formidable object of political study. Like other communist regimes, the PRC concentrates power in the hands of a few party leaders who are obsessed with secrecy. In the early Deng era that is our focus, China was run by a couple dozen top party leaders who remained totally inaccessible to Chinese citizens, to say nothing of foreign scholars. Policy was decided on by the top party organ in a process that was cloaked in utmost secrecy to protect the sacred myth of party infallibility.

The class of policies created through "scientific policymaking," however, offers an unusual opportunity to peer into the inner world of CCP
policymaking. That opportunity is provided by the location of China’s scientists inside the regime (though not the state) apparatus. Depending on their institutional affiliation within the party, government, and/or military sector, from their location in the penumbra of the policy process scientists who serve as advisors to the regime may acquire knowledge of, and perhaps even personal access to, those at the center of decision-making power. If one can gain access to the scientists, one can use the classic anthropological technique of in-depth interviewing with a small number of “key informants” to learn more than generally is possible about what goes on in the inner sanctum of decision making. From the scientists and their policy science one can also learn how a policy concept that may have been initially proposed by a leader is then “scientifically” shaped and transformed in the hands of experts. In many cases, scientists may know more about the evolution and empirical basis for a policy proposal than the leaders themselves, who may see just the finished product. For the social scientist seeking insight into CCP policymaking, talking to key scientists is likely to be more productive than interviewing top leaders. That is because the culture of science is one of open discussion, whereas the culture of Leninism is one of secrecy. A politician is likely to give formalistic and formulaic answers to the researcher’s questions, whereas a scientist, even one subject to Leninist restrictions, is likely to speak more openly to a colleague in the scientific enterprise.

Unfortunately, as noted earlier, the sensitivity of the one-child policy has led China’s leaders to place severe restrictions on its public discussion. Compounding the difficulties, the rules of the political game in Chinese elite politics work to impose uniformity and harmony on political actors and to silence those with dissenting views. Under the consensus imperative, important decisions at all levels are to be negotiated and consensually agreed on by all relevant parties. Under the loyalty imperative dictated by the principle of democratic centralism, those who disagree with an emerging policy consensus can offer dissenting viewpoints, but only until a policy decision is made by the political Center. Once a decision is rendered and the party line is issued, proponents and opponents alike must get on board and actively support the “correct policy choice” (Hamrin and Zhao 1995b). Defying these rules poses grave political dangers. Such rules and sanctions most definitely applied to the intellectuals involved in making the one-child policy.

How does one get through the thicket of secrecy and behind the myth of party infallibility to see how a policy such as the one-child policy was made? A decade of employment in a prominent nongovernmental organization
in the population field allowed me to get behind the public face of the one-child policy. In the corridors of China's population studies institutes (and, to a much lesser extent, policymaking agencies) I discovered that the party's restrictions and erasures did not quiet the debate but simply pushed it underground. If all knowledges are situated—that is, contingent on how and why they are acquired—then it is important to convey to readers how I came to be engaged with these questions and why they matter to me. These hows and whys have profoundly shaped the account presented in this book.

Situatd Knowledges: A Brief History of Engagement

My knowledge of the population politics of the PRC is a product of an unusual career history that has spanned two quite different institutional (and intellectual and political) worlds: an international NGO and an American university. For the first ten years (1984–1994), I worked as anthropologist and policy analyst at the Population Council. Based in New York City, the Council is an international, not-for-profit, non-governmental research organization interested in "population," very broadly defined. When I joined the Council, I had no training in demography, the statistical study of population, but I had a keen interest in population studies—examination of the social, cultural, economic, and political aspects of population processes. Population engaged my attention because projects of population management are so important a part of the world we live in and so little studied from humanistic perspectives such as anthropology. With its concern for population policy in broad social context, the Council was a good place from which to pursue these interests.

I had just joined the Council when, in 1984–1985, the media began reporting the use of highly coercive practices in the Chinese birth program and the troubling violation of human rights that ensued. As an anthropologist concerned above all about the people in the population, I was appalled by the party's adoption of a fertility policy that was so profoundly out of touch with rural reality that it could be enforced only through physical coercion. I was also perplexed by that move. How could the party endorse a policy that was certain to damage women's bodies, destroy young lives, and ruin party-mass relations? To be sure, this same party had inflicted the Great Leap Forward on the rural masses. But the Great Leap was the product of the megalomaniac Mao and the institutions of Maoist China. With his promises to reform the
party and bring prosperity to the Chinese people, Deng seemed different. I could not comprehend how harming the “vital interests” of the rural majority, as the party later recognized them to be, served the Deng party’s goal of building a prosperous socialist nation. What were China’s leaders’ investments in this patently harmful policy? These were the questions I needed to answer.

Deeply concerned by the media stories and sensing a rare opportunity, I became keenly interested in discovering what I, as an anthropologist and China specialist, could contribute to understanding the policy process in China—and, I hoped, also helping in some small way to soften the policy. From my location in a highly regarded international NGO, I had extensive opportunities to travel to China and engage with Chinese population specialists as colleague and collaborator, and with Chinese policy makers as interlocutor. By quickly mastering the arcane lingo of China’s byzantine population politics, working collaboratively with Chinese scholars (in data gathering but not analysis or policy recommendation), and actively promoting U.S.-China scholarly exchange, over time I developed a reputation as a critical yet fair observer who always speaks her mind, sometimes to the discomfit of her hosts. Despite—or because of—that critical voice, the sense of trust and the personal connections that developed opened doors to top policy makers and arenas of policymaking rarely accessible to foreign scholars in any domain of PRC policy.

I ended up spending twenty years trying to make sense of the one-child policy. The change of professional location altered my perspective in important ways. When I was based at the Population Council, I operated as an insider in the world of international population science and an insider-outsider in the field of Chinese population science. Absorbed into the population field, I did not much notice its scienceness. I rarely wondered where the one-child policy came from; that question was irrelevant to the project of monitoring and changing it. When I moved to a university anthropology department, I relocated to a place far outside the sphere of population science. From that more academic site I encountered critical work that illuminated how, historically in the West, the human sciences such as demography had been central to the making of modern regimes of governance. New work on governmental logics posed fresh and important questions about the Chinese case: how did the bizarre idea of limiting all couples in a country of one billion to one child become thinkable? It was then that I turned my previous world of Chinese population science into an object of ethnographic investigation and began
systematically studying the work performed by population science in China's modern project of human governance. This book is the result.

*Extended Interviews, Participant Observation, Documentary Research*

The arguments developed in this book draw on three sources of information. The first is a series of in-depth conversations held with China's population specialists and officials between 1985 and 2006. My first sustained contact was with scholars at the Population Studies Institute at the People's University of China, the leading center of population research in the country. Although I was primarily interested in current policy developments, I was curious about the history of the policy and asked questions about it on all my trips, duly recording the answers in field notebooks. A political culture of consensus coupled with fear of political reprisals encouraged those I met to stress their agreement on the necessity of the one-child policy and to downplay differences of opinion in the population field. As time went by, however, I came to understand that the field was torn by a great divide between the social and natural scientists. As I learned of the existence of different views on the one-child policy, I sought out people holding divergent perspectives. I particularly sought out opponents of the one-child policy, who had no public voice. In 1987 I made a special trip to Taiyuan to meet with the leading dissident from the one-child orthodoxy. In that same year I also met for the first time with the space scientists and engineers who were the main proponents of a strict one-child-for-all policy.

As I put together a mental picture of the field and its fractures and began to identify the principle voices in the policy debates, I started treating these individuals as key informants. I met with them as often as possible to get their accounts of various episodes in the policy's history and their views of each other's views. Over time I was able to build networks throughout the field. Although few scholars based outside Beijing had been involved in the making of the one-child policy, virtually all possessed important information about their colleagues closer to the policy process and about the larger climate in which the policy had been born. In China and at international meetings I was also able to talk with some students of those professors who had been present at the policy's birth. These students provided important insight into their professors' private views and the difficulties they faced expressing loyal opposition to a "basic state policy." In 1994 I joined the University of California and my interests shifted. In the late 1990s I began developing a much more
focused interest in the origins of that policy, whose harsh enforcement and wrenching effects I had become only too familiar with through rural fieldwork in 1988 and 1993. Equipped with new intellectual frameworks that showed how the science and politics might fit together, in 1999 and 2003 I returned to China to do sustained interviewing on the origins question, filling in pieces of the puzzle that were missing.

Between 1985 and 2006, I conducted more than one hundred forty interviews that varied in length from roughly a half-hour to weekend-long marathon discussions. I was able to talk at length with all but one of the scientific principals involved in the policy's making. I also met with several ministers-in-charge of what was then the State Birth Planning Commission and with top officials at the Commission who were knowledgeable about the policy's beginnings. Although the ministers were cautious, telling me little I did not already know, the officials in charge of substantive divisions of the Commission were remarkably forthcoming. These officials provided crucial inside information on the policy process within the regime and on the larger political context in which the decision to adopt a strict one-child policy was made. A list of key interviews cited in this book can be found in the back matter. In most cases, I cite these interviews by my interview file, giving date and location. For example, an interview cited as (IF,11/15/87,BJ) took place on November 15, 1987, in Beijing. When there are two interviews in the same city on the same day, I cite them as BJ a and BJ b. Unlike most anthropological studies, this book deals largely with important people with public identities. To protect my informants from possible political risk, where information they provided might be damaging to them, I use a generic location (such as "U.S.") or simply attribute it to a "confidential source."

The arguments developed here are also informed by participant observation of Chinese population science undertaken while working collaboratively with Chinese specialists in the 1980s and early 1990s. While teaching a month-long course on gender and development and conducting multiyear collaborative research with scholars at Sichuan and Xi'an Jiaotong Universities, I gained invaluable firsthand knowledge of the culture, institutions, techniques, and context of Chinese science making. From strategizing with like-minded colleagues to track the internal debates over the one-child policy, I gained a wealth of practical knowledge about how things get done in Chinese politics. The collaborations helped in more specific ways as well, allowing me to discern social networks connecting various actors, identify key research reports that shaped the policy process, and perceive the subtle ways in which
dissent was generally expressed. These cooperations also provided informal opportunities to ask casual questions about sensitive events of the past. These ad hoc knowledges—personal stories about the scientists, gossip about China's leaders, observations of the interactions between scientists and officials, and so on—form a crucial part of the ethnography of science and policy presented in this book.

Finally, this book draws on extensive documentary research on the history of Chinese population science and policy. I acquired, read, and analyzed all the articles and books of the major figures in the debate written during the decade 1976 to 1986. To understand the Western-scientific roots of the winning policy proposal, I studied all the English-language works cited by the authors, looking for borrowings and adaptations. To get a sense of the larger intellectual and political context in which the policy debates took place, I read widely in Chinese population journals produced at the time (especially Population Research [Renkou yanjiu, inaugurated in 1977] and Population and Economy [Renkou yu jingji, from 1978]). I also studied biographies and speeches of top leaders as well as histories of the birth program and compendia of documents and “big events” produced by the birth establishment. Four of these sources proved particularly useful: Sun Muhan’s history (Sun Muhan 1987); Shi Chengli’s chronology (Shi 1988); the birth program’s chronology of key events (Main Events or ME, published in 2001); and an unpublished chronology of important developments put together by a key staff person in the State Council’s Birth Planning Office from original documents he saved from the period. I cite the last as a confidential chronology (ConfidChron, compiled in the early 2000s). In the 1980s I discovered many such materials, often labeled neibu (for internal consumption only) or even jimi (extremely secret), hiding in plain sight in the libraries of China’s population studies institutes. By the end of the 1990s scientific communications between China and the United States had opened up so much that I was able to locate a uniquely valuable compendium of the writings of the scientific architect of the one-child policy in the Library of Congress in Washington, DC. Many party documents, however, remained confidential.

**Studying a Hypersensitive Policy**

The political delicacy of the one-child policy had two important effects on my efforts to understand its origins. First, for a host of political reasons—the restrictions just mentioned, the obsessive secrecy on the part of key
specialists, the high political status of the lead scientist, and, most critically perhaps, the fearful knowledge that this story affects the historical evaluation of the CCP—no one knew the full story of how the strict one-child policy was born. The problem was not just that population intellectuals and officials were reluctant to talk about it; they simply did not know. Different individuals were familiar with parts of the story in which they were involved (or about which they had heard gossip) but they were missing the other pieces of the puzzle. My challenge has been to find as many of the pieces as possible, figure out how they fit together, and then place them in the larger historical context that makes them make sense. That is what I try to do in this book.

At the same time, however (this is the second effect), the behind-the-scenes controversy swirling around the policy—a controversy that persists to this day—made people eager to press their viewpoints (and articles and books) on the interested anthropologist. It did not take long to discover that no one in China’s population field was neutral about the one-child policy. Instead, there were ardent proponents and fierce opponents. (The general public, of course, was kept in the dark about the policy debates.) Although the party could restrict public debate of the policy, it could not keep people from talking about it in the privacy of their offices. Both supporters and critics were not only willing but, at least at certain times, anxious to talk about it. As other students of Chinese politics have discovered, there are many things that Chinese can tell a foreigner that they cannot tell another Chinese, who might divulge the secret, causing any number of political problems. Moreover, there was an incentive to tell this foreigner, who was actively concerned about the direction of Chinese population policy. Especially at times when internal debate on the policy was permitted (roughly 1984–1990, 1993 on), both sides, but especially the critics, used me to get information and ideas out into a broader domain. Although the discussion centered mostly on the current policy situation, some were more than willing to tell me what they knew about the history of the policy, which, after all, affected all later policy developments.

Throughout these years one of my most valuable resources has been a reputation as a “friend of China”—a constructive critic, not a hostile one. Despite my persistent criticisms of the one-child policy, and especially of its gender consequences, I was always graciously hosted when I went to China. The welcome I received was in part a product of Chinese cultural norms. It was also rooted in the PRC’s energetic project of “learning from Western S&T.” During the decade that I was with the
Population Council I was part of the “Western S&T” my colleagues in China sought access to. As a Council researcher I was centrally located at an organization that was perceived as a rich and influential member of the international community of population science and policy specialists. Moreover, during the 1980s and early 1990s I personally played an active role in fostering the internationalization of Chinese population studies. Chinese scholars knew about and appreciated my efforts to connect them to that world they sought to join. Lastly, my Chinese colleagues’ tolerance of my critical voice may also have reflected the fact that many agreed that some of the social consequences of the policy were terrible and needed to be acknowledged and addressed. Some were undoubtedly happy that I was articulating the critique because, at least before the late 1990s, it was too dangerous for them to do that.

AIMS AND AUDIENCES

If the origin of the one-child policy is a closed matter in China, why open it now? Why pursue this difficult and perhaps politically dangerous quest? For me the answers are of course intellectual, but they are political and ethical as well.

Political and Ethical Stakes

Despite the continued sensitivity of the one-child policy, prying open the black box of population science is a critical and, I believe, a politically constructive project. Delving into that troubled history should allow us to demystify the science underlying the one-child policy and clear the way for fresh consideration of policy alternatives that have lain dormant (at least publicly) for more than two decades. Now is a propitious time to undertake this work, for China’s population “crisis” has been largely resolved (though officially a potential crisis still lurks), permitting the gradual emergence since the mid-1990s of a new, health-oriented rationale for and approach to population work (GCP: chaps. 5, 6). Today some Chinese scholars are energetically encouraging the adoption of a variety of two-child alternatives. Although the leadership continues to postpone a decision on a policy change, this book may add weight to the scholars’ arguments, encouraging earlier consideration of alternatives to the one-child policy.

The imperative is ethical as well. Whatever its effects on fertility, the harsh enforcement of the one-child policy has produced social suffering
on a monumental scale. The policy has also accelerated the growing
gaps in the sex and age structure of China’s population, creating distor-
tions that will complicate the nation’s social and economic development
for decades to come. It has also brought China moral condemnation
abroad, reinforcing images of the PRC as an ethically problematic
nation ruled by a heartless regime that cares more about its own sur-
vival than the well-being of its people. What constellation of histories,
politics, and personalities bears responsibility for this? If the policy was
made by actors and processes “beyond the state,” what becomes of the
coercion narrative that blames a cruel Communist Party? To what
extent can the policy be traced to specific individuals? Did they promote
the one-child rule in full awareness of the individual, familial, and
national trauma that would likely result, or did limits on knowledge
and action at the time tie their hands? For students of contemporary
China—and even more so, for the Chinese themselves—how the policy
came into existence is a pressing moral question.

Audiences

This analysis of the making of the one-child policy should be of general
interest to scholars in several fields. Let me suggest a few of the contribu-
tions I hope it will make. For specialists on contemporary China, it
unravels many mysteries surrounding China’s most notorious and con-
sequential social policy, and provides the most detailed case study avail-
able of the construction of a single policy by the PRC regime. For
demographers, the China story provides a sobering case of mathemati-
cal modeling gone awry and social policy missing its mark, concerns
demographers themselves have raised both in general and with regard
to China. It should also be of interest to women’s studies specialists as a
cautery tale of the dangers of applying certain kinds of scientific
logic in a policy arena that deeply affects women’s lives; to political sci-
entists as a model of a new sort of epistemic perspective on policy; to
anthropologists as an illustration of why they should and how they can
study top-level policymaking; and finally, to STS scholars as a powerful
example of why the questions and insights of STS matter in the world we
live in. Beyond the social sciences, this study should appeal to scientists
curious about the nuts and bolts of science making in the highly politi-
cized arena of the PRC and to anyone interested in some of the political
dynamics behind China’s emergence as a modern global power.