

Introduction

Contested Worldviews and a Demographic Revolution

Deep in the mountains of Gunma, a chapel stands amid cedars and forest flowers. Under its eaves, a wooden tablet has slowly surrendered its paint to two hundred years of wind and rain. Yet when the light falls from the right angle, the eroded image still calls out its warning to travelers: It is early spring. The branches of a plum tree are still bare. In an open pavilion, a woman has just given birth. Next to her, a midwife kneels—and strangles the newborn. While the infant soul soars toward a bodhisattva, floating above on curled clouds, the midwife is destined for a darker place. On the right side of the panel, flames lick her face, and two devils break her body.¹

The tablet is a relic of a hundred-year war of images and words over the cultural place of infanticide and abortion in Japan. Especially from the 1790s to the 1870s, and especially in Eastern Japan, infanticide was a central topic of the public conversation, with abortion often mentioned in the same breath. The traces of this conversation are lopsided. While opponents of infanticide produced a steady stream of policy proposals and pamphlets with haunting illustrations, acceptance expressed itself less in writing than in killing one's own babies and speaking ill of neighbors with too many children. Proponents of infanticide also articulated their logic in a number of widely shared metaphors. The most famous of these, *mabiki* or “thinning,” likened infants to rice plants, some of which needed to be uprooted as seedlings to give their siblings the space and light to thrive. The metaphor encapsulates two of the fundamental assumptions of the act it described: that newborn children were not fully formed humans, and as such were disposable; and that to do right by their chosen children, responsible parents might need to destroy some infants at birth.

Beyond the question of its moral status, infanticide permitted a range of interpretations. Administrators worried about dwindling populations and falling revenues, and often thought that it was a love of luxury that prompted people to kill their children. Villagers complained that poverty left them no other resort, and sometimes helpfully suggested that lower taxes would do wonders for the safety of their newborns. Men of learning often believed that moral education could convince villagers to give up infanticide, but some thinkers argued that it would take a fundamental reform of the political system to achieve that goal. Men of substance who were content to work within the established order, meanwhile, reinvented themselves as moral leaders of their communities and wrote to their governments with offers to finance the eradication of infanticide. Most domains in Eastern Japan built expensive systems of welfare and surveillance. By 1850, the majority of women north and east of Edo were obliged to report their pregnancies to the authorities, and the majority of the poor could apply for subsidies to rear their children.

Over the same years, a demographic revolution was set in motion. In the eighteenth century, the consensus of many villages in Eastern Japan was that parents could, and under many circumstances should, kill some of their newborns. Perhaps every third life ended in an infanticide, and the people of Eastern Japan brought up so few children that each generation was smaller than the one that went before it. By 1850, in contrast, a typical couple in the same region raised four or five children, and a long period of population growth began. By the 1920s, the average woman brought six children into the world, and in Eastern Japan, as elsewhere in the nation, overpopulation at home became an argument for expansion abroad.² Eastern Japan, in other words, had experienced a reverse fertility transition.

While infanticide became less frequent, it nonetheless persisted. With the overthrow of the Tokugawa order in 1868, the elaborate countermeasures vanished together with the old regimes that had devised them. Around 1870, the first generation of governors of the new Meiji state announced ambitious eradication schemes, but their programs were short-lived. After about 1880, infanticide does not seem to have attracted much public notice, even though it continued to claim many newborn lives. At the beginning of the twentieth century, entire prefectures reported stillbirth rates so absurdly high as to suggest that in some of them up to one child in five died in an infanticide or a late-term abortion. Although these numbers decreased rapidly after about 1910, the traces of infanticides are visible even in the statistics of the 1930s. In 1949, finally, the legalization of abortion brought Eastern Japan's long story of habitual infanticide to a close.

In Eastern Japan, developments usually associated with modernity—expanding state capacity, growing literacy, regional integration—coincided with a steady increase in the number of children parents raised. This fact poses a challenge to prevailing theories of demographic change, which dichotomize

history into a prolific and perilous pre-transition world on the one hand, and a modern world characterized by few births and long lives on the other. Expectations of the demographic future derive from such historical narratives of unidirectional change. For example, the United Nations demographers who periodically publish population projections state their underlying view of demographic history as follows: “There has been a general consensus that the evolution of fertility includes three broad phases: (i) a high-fertility pre-transition phase, (ii) the fertility transition itself and (iii) a low-fertility post-transition phase during which fertility will probably fluctuate around and remain close to replacement level.” Even in the “high-fertility variant” of their latest projection, they therefore assume that fertility will continue to decline in those countries where it is above replacement level. The high-fertility variant projects a world population of 16 billion for 2100; when the same model holds fertility constant, that number rises to 27 billion people.³ The retreat of rigorous family planning in nineteenth-century Eastern Japan confounds the assumption that fertility only changes from high to low. It suggests that the demographic history of the world may have been much more varied, contingent, and interesting than the “general consensus” posits, and that the demographic future may yet hold many surprises.

EASTERN JAPAN

Within Japan, the easternmost third of Honshu was the largest contiguous area in which infanticides were so frequent as to shrink villages and motivate expensive countermeasures. Stretching from the old course of the Tonegawa in the south to the northern reaches of Sendai domain, this is the area I call Eastern Japan.⁴ While all chapters in this book feature men and women, governments, and ideas from beyond its borders, and four (Chapters 2, 11, 12, and 13) take an altogether archipelagic view, Eastern Japan furnishes much of the micro-level demographic data that undergirds this study, and is the setting for its central storyline: that after a century of very low fertility, a hard-fought rearrangement of mental categories and world-views brought about a reverse fertility transition. While there are signs that Eastern Japan’s narrative may have played out in full or in part in other parts of the country, the demographic records of western provinces such as Mimasaka deserve their own analyses, and their stories call for a separate telling.

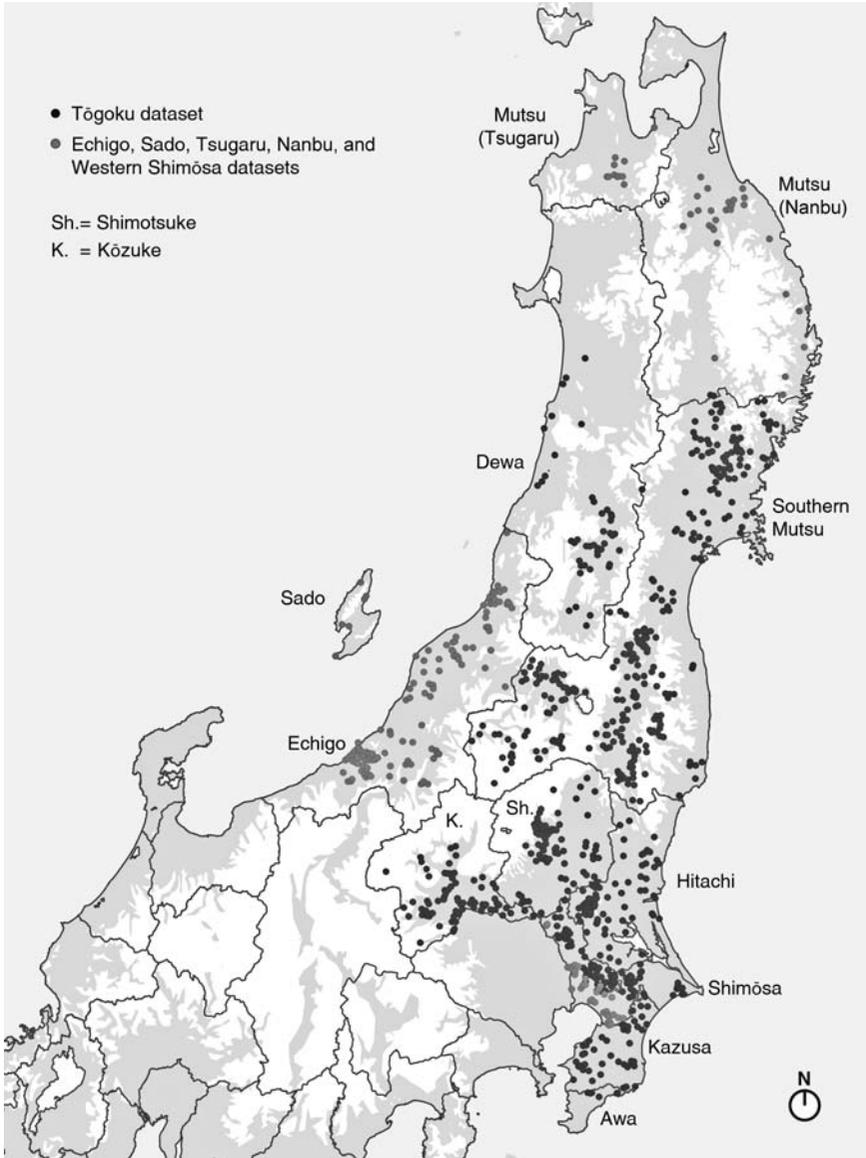
Around 1800, Eastern Japan was home to perhaps 4.5 million people. Although the region began on the doorstep of the shogun’s capital, then bustling with a million inhabitants, most towns in Eastern Japan were small. Castletowns, markets, and a few manufacturing centers dotted a landscape of paddies, dry fields, forests, and thatch-roofed villages. Though often portrayed as backward and poor, Eastern Japan in 1800 had higher wages and lower food prices than many other parts of the island realm.⁵ The economy of Eastern Japan was internally diverse. Parts of Mito

domain specialized in paper and tobacco, while Kōzuke (present Gunma) and Shindatsu (in present Fukushima) ranked among Japan's leading silk producers. Rice paddies covered the coastal plains of Sendai and Shōnai, while the mountain basins of Aizu and Yonezawa were famed for their lacquer trees. All inhabitants of Eastern Japan acknowledged the suzerainty of the shogun in Edo and the emperor in Kyoto, but local administration was fragmented into shogunal territories, bannermen possessions, and scores of domain states, which generally enjoyed autonomy in their domestic policies. Within Eastern Japan, the domains tended to be small and scattered in the south and large and contiguous in the north (see Map 3 in the frontmatter). While Sendai, the region's largest such state, had about half a million vassals and subjects in 1800, the dominion of some lords in the North Kantō fell short of ten thousand people.

For all its diversity of livelihoods and rule, Eastern Japan had a distinct demographic culture, at least during the eighteenth century. It probably shared key elements of that culture—above all a preference for raising only a few children—with parts of Japan's southwestern periphery. Contemporary observers thought that infanticide was commonplace in parts of Shikoku, western Honshu, and Kyushu. The few village studies that historical demographers have undertaken in those areas suggest that this reputation was deserved.⁶ In the late nineteenth century, the traces of infanticide in the Southwest were still visible in skewed sex ratios and implausibly frequent stillbirths in district-level statistics. Nonetheless, Eastern Japan accounts for a commanding proportion of the analyses, pamphlets, votive tablets, and policy regimes that the opponents of infanticide fashioned.

Despite its distinct demography and shared conversation about infanticide, Eastern Japan does not have a name that is both elegant and precise. Many contemporaries simply called it Azuma (“the East”) or Tōgoku, which can be rendered as “the Eastern provinces,” “the East of the country,” or “the country in the East.”⁷ The usual definition of Eastern Japan includes the southern Kantō as well as parts of central Honshu. Infanticides were probably fairly common in those areas, but not to the extent that they caused general depopulation, produced a reputation for rampant child-killing, or provoked the flurry of private efforts and public policies we see to their north and east. Eastern Japan, as defined in this book, comprises the North and East Kantō and the south of a region then called Ōu and now known as Tōhoku, the Northeast (see Map 1 in the frontmatter).

A thousand villages furnish the micro-demographic data for this book up to 1872 (Map 4).⁸ I call them the Ten Provinces dataset, which contains five distinct populations: (1) Eastern Japan, which for our purposes can be subdivided into areas whose rulers actively combated infanticide and areas that experienced neither pregnancy surveillance nor childrearing subsidies before 1872. It was above all in these latter regions, which included much of the provinces of Kazusa and Shimōsa, that infanticide remained widespread even after the mid-nineteenth



MAP 4. Villages of the Ten Provinces dataset. (For a list of these villages and the years each covers, see Appendix 3. Village coordinates are based on the *Kadokawa chimei daijiten*, the *Nihon rekishi chimei taikai*, and Kokudo Chiriin, *Watchizu chizu etsuran sabisu*.)

century. These two unequal halves of Eastern Japan form the core of this book, and I refer to their village sample as the Tōgoku dataset. (2) The districts of Katsushika and Chiba in western Shimōsa, where the traces of infanticide are too inconsistent to merit inclusion in this book's definition of Eastern Japan.⁹ (3) Tsugaru in the north, where people multiplied in good times and died in terrible numbers when the harvest failed. (4) Nanbu in the far Northeast, where infanticide was not challenged until the Meiji period. (5) Echigo, a large and populous province on the Japan Sea coast famous for abhorring infanticide and sending its surplus sons and daughters across the mountain passes to Eastern Japan.

UNLOCKING FERTILITY HISTORIES

Although this book makes extensive use of the statistical tables of the Imperial period (1868–1945), most of its demographic claims about the Edo period (1600–1868) derive from a sample of population registers. Depending on their time and place, they bear a dozen different names, including variations on *shūmon aratamechō* (“registers of religious scrutiny”), which began as a tool for the suppression of Christianity, and *ninbetsu aratamechō* (“person-by-person registers”), which originated in musters of a lord's strength. The different formats vary in whether they record the sectarian affiliations or the landholdings of each household, but all state each individual inhabitant's age as well as his or her role within the household.¹⁰

There is a hypnotic quality to these booklets. In neat columns, the adults and children of a vanished world file past the reader's eye, assembling themselves into households, mutual responsibility groups, entire village societies. Though the surviving registers represent only a fraction of those ever compiled, their sheer bulk begs the question why so much paper and time was devoted to creating such lists of villagers and townspeople. This question deserves a more detailed answer than I can give here.¹¹ It is nonetheless important to this book because the purpose of the registers has a direct bearing on their reliability as sources of demographic information. In regimes that compiled population registers to conscript men for labor duty, people often found ways to hide from census takers, and thereby also elude the grasp of historical demographers. Where registers were merely meant to satisfy official curiosity about the number of a lord's subjects, they were sometimes indifferently kept or even falsified to serve local economic interests or flatter the demographic goals of the regime.¹² It is therefore reassuring to the historical demographer that in the Edo period, population registers served the single greatest concern of the Tokugawa system: to control its subjects and maintain a stable, harmonious order. The registers typically played no role in conscripting labor, and although they served as the basis of headcounts, they were not maintained with the primary goal of furnishing rulers with demographic information.

In general, warriors were either omitted from the population registers or listed in separate documents that have apparently survived less well than the village records.¹³ As a result, samurai bestride the pages of this book as commentators and policymakers, but are not a part of the database that underlies most of my demographic statements.

For commoners, Tokugawa-period population registers survive in gratifying numbers. In some villages, series of these booklets run unbroken for more than a century. Most of the great achievements of historical demography in Japan over the past forty years have relied on such series, detecting births, deaths, and other events as changes between every two of these booklets. This study owes much to such earlier longitudinal analyses, but takes a different approach to generate demographic knowledge beyond the relatively rare villages whose registers have come down to us in continuous series.

That approach is the Own-Children Method (OCM) of Fertility Estimation, a reverse-survival technique that is based on the simple insight that in closed populations, the distribution of ages and kinship ties within each household are the result of past fertility and mortality. When combined with information about mortality, the snapshots of population structure preserved in the registers therefore hold the key to reconstructing fertility rates for the years immediately preceding the creation of each register.¹⁴ I invite readers who are curious about the details of this technique to consult Appendices 1 and 2, where I discuss the sources of my mortality assumptions, sampling issues, and possible biases.

To visualize the process by which household snapshots yield information on fertility, let us consider a single household, captured in the third month of 1858 by the brush of its village headman.

	Seishirō	37 [seal]	parishioner of Daisenji, a temple of the Jōdo sect; owner of land valued at 3.424 koku
Wife	Noe	35	
Son	Ichisuke	13	
Daughter	Ise	7	
Son	Mataji	3	

Total of 5 people, of which 3 are male and 2 female¹⁵

This moment in a household's life contains precious clues to its more distant past. If Noe is the birth mother of the three children, the register shows that she gave birth at the ages of 23, 29, and 33 in the years 1846, 1852, and 1856. The register does not, however, tell us whether Noe lost any children over the same years. In her individual case, only further documentation could dispel such uncertainties. For large populations, a knowledge of the prevailing mortality conditions permits us to reconstruct a fractional shadow population of the recently dead. In this approach, each living child is the representative of a larger number of children who were born in the same year. That larger number is the inverse of a child's risk

of having died by that age. The historical demography of Edo-period Japan is so well developed that we can estimate those risks with a good deal of confidence.¹⁶ Even in times without major mortality crises, only 65 percent of boys whom their parents attempted to raise were still alive by their thirteenth year. Noe's son Ichisuke, therefore, represents 1.55 (1 divided by 0.65) boys born in 1846. Because parents succeeded in keeping only 67 percent of girls alive into their seventh year, we can think of Ise as the lone survivor among 1.49 girls born in 1852. By the same logic, Mataji represents 1.32 boys born in 1856.

Noe, too, is a survivor. Her chances of living from the age of 23 to the age of 35, the span of Ichisuke's life, were 87 percent. Noe therefore stands for 1.14 23-year-old women in 1846, 0.14 of whom had died by 1858. Total fertility rates are calculated by dividing the number of children born to women of a given age by the number of all women of that age, and then adding up these age-specific fractions. In 1846, the year of Ichisuke's birth, Noe contributed 1.55 children to the numerator the age-specific fertility of 23-year old women, and 1.14 women to its denominator. In the years of Ise's and Mataji's birth, Noe similarly contributed to both numerator and denominator; in all other years, she only appears in the denominator of her age-specific fertility rate.

Multiply Seishirō's household by 170, and we obtain the fertility history of the village of Fujita with its 904 inhabitants. Fujita is one of a thousand-odd villages that constitute the Ten Provinces dataset with its 780,000 observations and 5.5 million reconstructed person-years.

The Ten Provinces dataset derives from about 3,300 individual population registers, which I accessed in four different formats. I consulted about five hundred of these in manuscripts held by museums, archives, and libraries between Aomori and Tokyo, Harvard and Capitol Hill, as well as one private collection. The information on eleven villages comes from "Basic Data Sheet" tabulations in the collection of Hayami Akira, the doyen of historical demography in Japan. Four villages are part of Danjuro, a database constructed by Kawaguchi Hiroshi, a pioneer in the borderlands of information science and historical geography. In assembling the other two-thirds of the population registers, I have depended on the work of a thousand local historians. Over the past fifty years, virtually every municipality in Japan has published at least some of the primary documents found within its boundaries.¹⁷ Thanks to these collective labors of love, I spent long, happy days combing through shelf upon shelf of handsome cloth-bound volumes in university collections and prefectural libraries. In many thousands of hours, an assistant, Lin Cunyang, and I converted the resulting photographs and photocopies into a format that computers can read. In the initial round of data entry, each individual in the registers became a line in a spreadsheet. I then translated the relationship terms into a unified system and matched parents with their children. After several iterations of data cleaning, the 3,300 spreadsheets became a single teeming sample

of village society in Eastern Japan and the adjacent lands, ready to surrender some of its secrets to database queries and statistical analysis.

A REVERSE FERTILITY TRANSITION

The Tōgoku dataset yields fertility rates as far back as the mid-seventeenth century (Figure 1). Between 1700 and 1800, the total fertility rate (TFR) of Eastern Japan hovered around 3.5 children per woman. That is to say, a woman who survived to the end of her childbearing years would have given birth to an average of 3.5 children, not counting any children killed at birth. When moral suasion, subsidies, and surveillance challenged the discourses that sustained infanticide, the TFR drifted upward. Although briefly interrupted by the famine of the 1830s, fertility rates continued to rise into the 1880s. For about thirty years, they stabilized at close to five children per woman, then soared toward six in the 1910s. Between the 1920s and the 1950s, Eastern Japan had the nation's highest fertility by a considerable margin.¹⁸ For a region that a few generations earlier had been notorious for a reluctance to rear children, this was an astonishing change. Eastern Japan's age of very high fertility was brief, however; after the effective legalization of abortion in 1949, fertility rates plunged, declining to levels even lower than those of the eighteenth century.¹⁹

The net reproduction rate (NRR) brings the import of the early-nineteenth-century fertility rise into sharper focus (Figure 2). The NRR is the average number of daughters that a newborn girl will bear during her lifetime if she suffers the average age-specific mortality risks for her population. At an NRR of one, each generation of daughters is as numerous as that of its mothers. Throughout the eighteenth century, however, the average number of daughters a girl would bear in her lifetime remained below one. This number was so low in part because of infanticide, but also because many chosen children died in spite of their parents' efforts and prayers. As in other societies of the time, smallpox recurred in intervals of three to five years and carried off many infants and toddlers. Enteric and respiratory diseases also claimed many young lives.²⁰ In normal years, about 15 to 20 percent of chosen girls died of natural causes within their first year of life, a level comparable to the more salubrious parts of contemporaneous Europe and China, and more died in childhood and adolescence. A girl lucky enough to be accepted by her parents and to grow up at a time without famines or epidemics of measles or cholera therefore had a 60 percent chance of living to see her twentieth year.

With the retreat of infanticide, however, the NRR began to rise in the early nineteenth century, consistently exceeding one after about 1840 and rising above two in the 1920s. At this level, each new generation is about twice as large as its predecessor. Although Eastern Japan's NRR dropped by nearly half in the 1950s, only in the last twenty years has it returned to the levels of the eighteenth century.

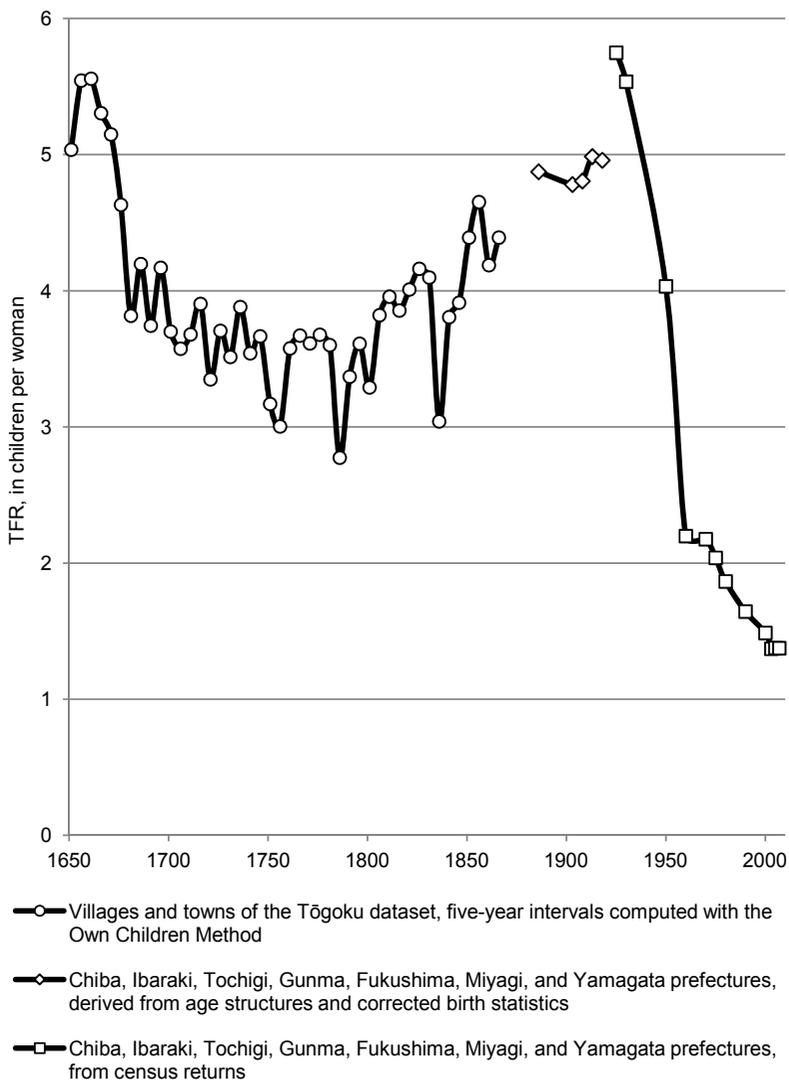


FIGURE 1. Total fertility rates (TFR_{15-49}) in Eastern Japan, 1650–2010. (These figures exclude the victims of infanticide before 1872; after 1886, they only include the relatively rare infanticides that were reported to the authorities as a live birth followed by a neonatal death. SOURCES: 1650–1872: Tōgoku dataset. 1886–1918: Naimushō and Naikaku Tōkeikyoku, eds., *Kokusei chōsa izen*; and Takahashi, “Meiji zenki” and “Meiji kōki.” 1925–2009: KSHJMK, eds., 2011 *Jinkō no dōkō*.)

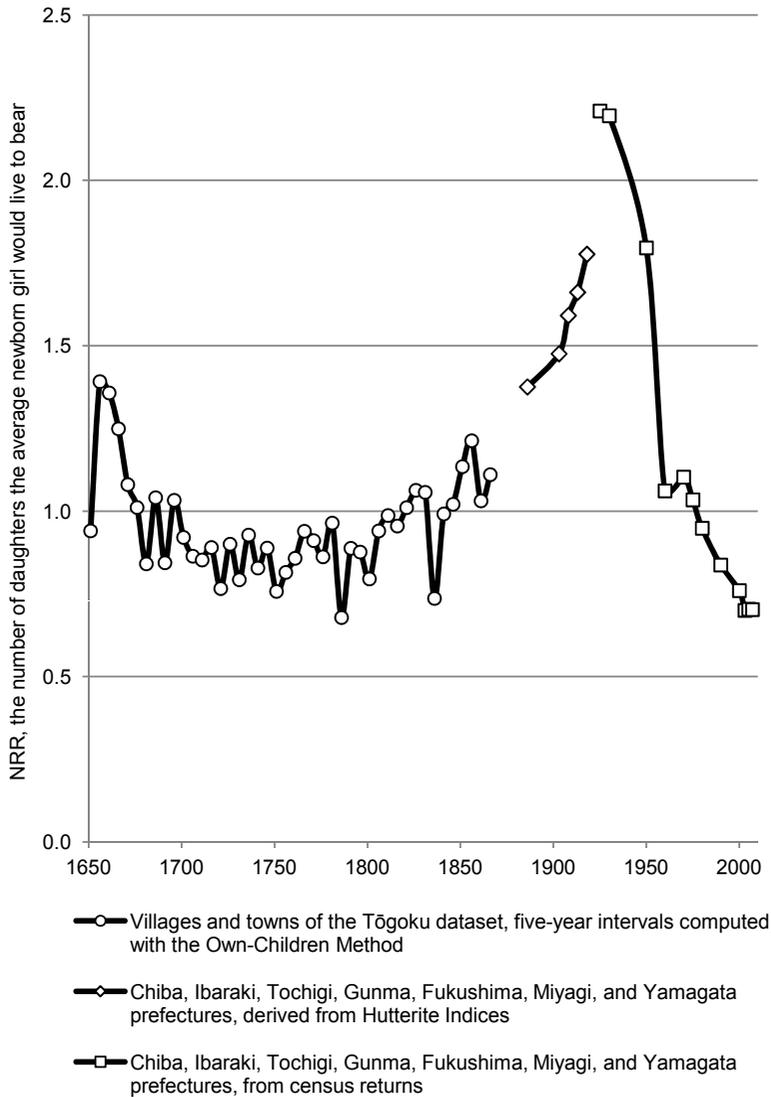


FIGURE 2. Net reproductive rates (NRR) in Eastern Japan, 1650–2010. (SOURCES: Fertility data, 1650–1872: Tōgoku dataset. 1886–1918: Naimushō and Naikaku Tōkeikyoku, eds., *Kokusei chōsa izen*; and Takahashi, “Meiji zenki” and “Meiji kōki.” 1925–2009: KSHJMK, eds., 2011 *Jinkō no dōkō*. For mortality data to 1895, see Appendix 1; after 1886, interpolated with Japan’s official life tables.)

Given the trajectory of the NRR, it is not surprising that the headcounts of most domains and villages in the region make for trough-shaped charts.²¹ From a high around 1700, they declined gently in good years and precipitously in times of famine. Depopulation mostly halted after 1800. While in some domains the demographic recovery began already in the 1790s, it was only after the Tenpō famine of the 1830s that sustained growth resumed virtually everywhere in the region. Even when the Edo period ended in 1868, many villages and domains had yet to recover their 1700 peak numbers. By then, however, a broad-based age pyramid gave population growth a solid foundation, and Eastern Japan's inhabitants doubled in number between the 1870s and 1930s. The rapid population growth of Imperial Japan, which was particularly fast in eastern Honshu, rested on the changing childrearing attitudes of the nineteenth century.

Figure 3 translates this history into rates of population growth. Throughout the eighteenth century, they were negative in a typical year. In the early nineteenth century, a time when moral suasion, subsidies, and surveillance challenged the culture of infanticide, they frequently visited positive terrain. Between 1840 and the early twenty-first century, Eastern Japan's population grew continuously, interrupted only by a wave of rural-urban migration in the 1950s.

The experience of Eastern Japan challenges the single most powerful generalization in the field of demographic history, the Demographic Transition Theory, which divides world history into three periods.²² In the pre-transition period, stretching from the dawn of time to, depending on the country, the nineteenth, twentieth, or twenty-first century, people had many children, watched several die young, and often failed to reach old age themselves. On the threshold of modernity, there follows a transition period in which civilizational progress—improvements in sanitation, nutrition, and medicine—reduces death rates. People do not adjust their reproductive behavior to this new environment immediately; with falling death rates and stable birth rates, the population enters a phase of rapid growth. Finally, birth rates reconverge with death rates on a far lower level. Population growth ceases as society reaches a happy state of homeostasis, with universal family planning and long lives ripe with opportunity.

The theory, first proposed by the American demographer Warren Thompson in 1929, has had remarkable predictive power for developing countries after about 1950, not least as a self-fulfilling prophecy that told people they needed to limit themselves to a few children if they wanted to be modern and prosperous. As a description of the Western experience up to 1929, the Demographic Transition Theory has since been shown to be unsatisfactory. In much of Europe, birth rates began their secular decline well before the onset of the decline in death rates.²³

For Eastern Japan before 1920, birth and death rates bear little resemblance to those the Demographic Transition Theory postulates (see Figure 4).²⁴ Throughout the eighteenth century, the birth rate (the number of births per thousand people,

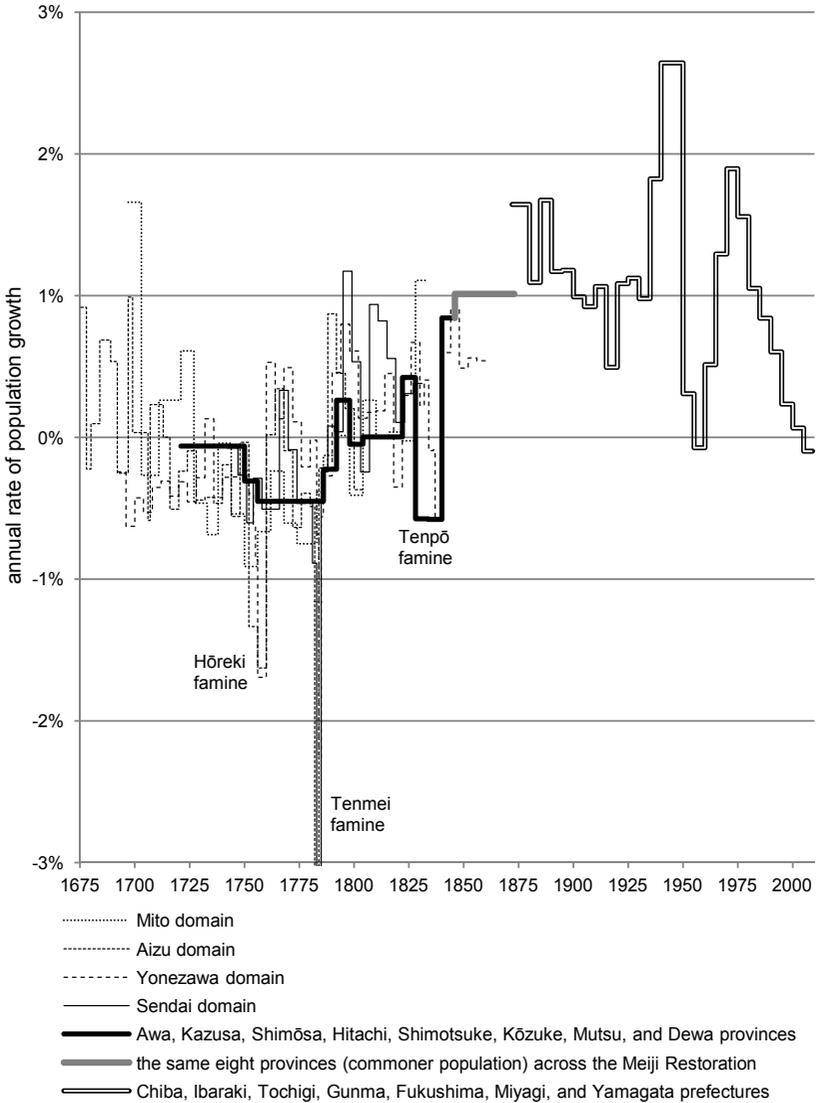


FIGURE 3. Population growth in Eastern Japan, 1675–2010. (The figures that underlie this chart vary in quality. On the particular challenges of calculating growth rates across the nineteenth century, see Hayami, “Bakumatsu” and Saitō, “Jinkō hendō.” SOURCES: Matsueda, *Aizu-han no jinkō seisaku*, 11–17; Yoshida, *Okitama no minshū seikatsushi*, 113–118; Mito *shishi chūkan* 2, 71; Sekiyama, *Kinsei Nihon no jinkō kōzō*, 137–140; Minami, “Kansei 4-nen no shokoku jinkō ni tsuite,” 42–47; Naimushō and Naikaku Tōkeikyoku, eds., *Kokusei chōsa izen*; KSHJMK, eds., 2011 *Jinkō no dōkō*.)

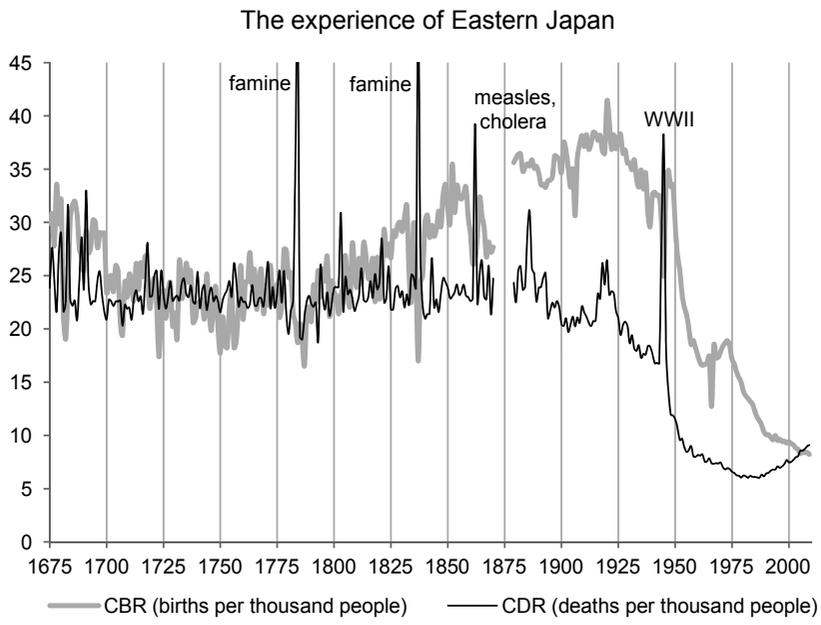
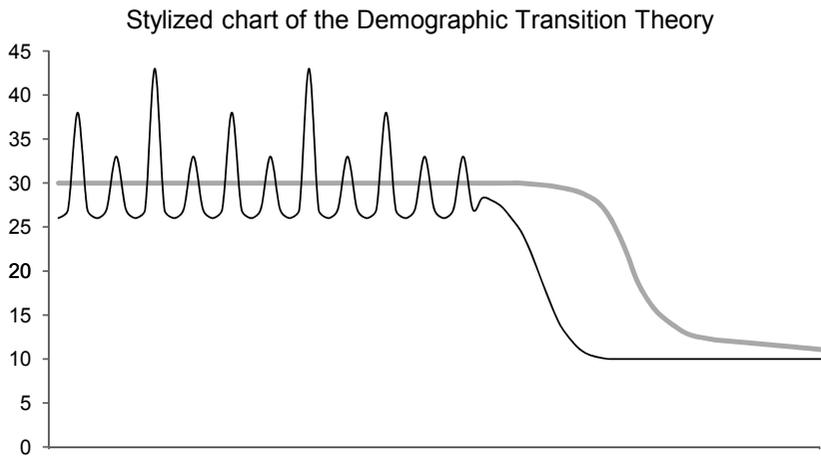


FIGURE 4. The Demographic Transition Theory in stylized form (above) and the actual experience of Eastern Japan (below), 1675–2010. (The victims of infanticide are included in neither birth nor death rates, unless they were reported as liveborn after 1879. SOURCES: To 1871: Tōgoku dataset and its mortality sources [see Appendix 1]. From 1879: Takahashi, “Meiji zenki” and “Meiji kōki”; and KSHJMK, eds., 2011 *Jinkō no dōkō*.)

a measure that, unlike the fertility rate, is sensitive to the age structure of the population) frequently dipped beneath the death rate. After 1800, it rose in several waves, interrupted by a famine, several cholera epidemics, and the dislocations of the late 1860s. There was no clear improvement in mortality conditions over those years. In Eastern Japan, it was rising fertility that turned population decline into demographic expansion.²⁵

After decades of steady increase, the birth rate peaked in about 1920, roughly the same moment when Eastern Japan's modern mortality transition began.²⁶ Although the birth rate declined over the next two decades, it was still as high in 1948 as it had been in the 1890s. In 1949, the legalization of abortion unleashed one of the most rapid fertility declines in history. By 2007, more deaths than births were counted in Eastern Japan.

FERTILITY: A SPECIAL DEFINITION

This challenge to the Demographic Transition Theory rests on omitting the victims of neonaticide from the birth and death statistics, that is, treating them like aborted children. The alternative—making no distinction between children killed at birth and those that parents tried to raise—would invest the moment of birth with a significance that it did not have for their parents.²⁷ The cultural assumptions that made large-scale infanticide possible require a special definition of one of my most important terms, *fertility*.

Birth and death have relatively precise meanings, challenged only at the margins by the possibilities of modern medicine. The textbook definition of fertility confers immense significance on the child's passage through the birth canal. The implicit delineation of ontogenetic stages that derives from this event, however, is culturally specific. Across the threshold of birth, the continuities in metabolism, cognition, and complete dependence on nurturing adults are arguably greater than the discontinuities, such as the end of exclusive dependence on the biological mother and the activation of lungs and intestines in lieu of the placenta. Many cultures did not acknowledge the moment of birth as the child's entry into the human community, but instead invested a ritual—the first bath or the first bite, for example—with that transformative power.²⁸ Other cultures, including those of many modern Christians, also accord only minor importance to birth itself, but in the opposite sense of extending the personhood of the infant back into the intrauterine past, sometimes all the way to conception. To infanticidal parents in Eastern Japan, birth signified neither the beginning of life nor the acquisition of full human status. Both were seen rather as gradual developments, or as a long journey marked by a series of milestones. The most critical of these was the moment at which the parents decided whether to raise or reject the child. Even its opponents did not always distinguish infanticide from abortion, and sometimes

used one term to cover both.²⁹ At least one domain punished the two transgressions with the same fines.³⁰ An official who rejoiced over the success of his domain's infanticide countermeasures documented them with a statistic of steeply rising *births*, assuming as a matter of course that the victims of infanticide would not be included in their number.³¹

Out of respect for the categories of the Edo period—and for readers' limited tolerance for cumbersome compound nouns—I will therefore use the term *fertility* in the unusual sense of a measure calculated on the basis of infants *allowed to live* rather than actually born. There is in addition a practical reason for this choice. Fertility as conventionally defined cannot be calculated from the population registers of the Tokugawa order, which do not record the victims of neonaticide.³² This omission derived in part from the limited reach of the state, but also reflected the prevailing idea, long shared by the authorities, that a child's acquisition of human status was a gradual process premised on the parents' decision to nurture it.

If we do not treat birth as a great ontological divide, we can also follow the people of the Edo period and see abortions and infanticides as related forms of a single family planning strategy. In this book, I differentiate between the two where the distinction bears on the argument. The need for concision prompts me at other times to use infanticide as shorthand for both, for example when writing about the opponents of infanticide, who almost uniformly disliked abortion with nearly equal vehemence. This choice of terminology should not be taken to mean that I equate the moral status of the two practices; I deliberately refrain from making value judgments about infanticide and abortion in this book. My goal is to understand rather than to judge people who inhabited a different cosmology than our own, and I trust readers to reach their own conclusions.

THE MEANINGS OF INFANTICIDE

This study follows in the footsteps of a rich and sophisticated literature on Edo-period infanticide.³³ Over the past ninety years, scholars first deplored infanticide as rooted in poverty and then acknowledged it as a sign of a rational mindset that made possible economic progress in the Edo period and perhaps even laid the foundations for Japan's rapid development in the modern age.³⁴ Both interpretations accepted Edo-period claims that infanticide was widespread. At present, most historical demographers depart from this view and—in contrast to my argument here—appear to believe that outside Japan's Northeast, infanticide was only a minor phenomenon. Beyond the demographic debates, historians and folklorists have found infanticide a rich subject matter for probing Edo-period understandings of life, death, parenthood, and women's bodies.

Population histories have long been fascinated with Japan's demographic stagnation during the second half of the Edo period. While it is well known that this stagnation was the fortuitous result of divergent regional trends, with growth in some areas and depopulation in others, the flat line of Japan's "national" headcount between 1721 and 1842 has long offered an irresistibly striking contrast to the exuberant growth curves of most European and Chinese societies during the same period. Early population historians adopted the view of their sources and saw infanticide, along with abortion and urbanization, as a major proximate cause for stagnant or shrinking populations.³⁵ The greatest single achievement of the genre, Takahashi Bonsen's monumental three-volume *Japan's Population History* (*Nihon jinkōshi no kenkyū*, 1941–1962), embodies this understanding of infanticide as a central demographic fact of the Edo period. In a reflection of the general focus of Edo-period texts on demographic questions, *Japan's Population History* allocates most of its pages to the attempts of various domains to halt their population decline by fighting infanticide.

Beginning in the late 1960s, the remarkable flowering of historical demography in Japan moved the study of past populations beyond its previous mainstay, the interpretation of descriptive sources and simple headcounts. Scholars now gathered series of village population registers and painstakingly linked records across years to reconstitute individual life courses. They computed fertility rates that were moderate in some villages and astonishingly low in others. Such findings were consistent with the qualitative claims of widespread infanticide.³⁶ Earlier historians had cited infanticide as a symptom of rural misery, the result of Malthusian pressures or feudal exploitation. The details of the new discoveries cast the whole Edo period in a more positive light. In the early 1970s, Hayami Akira found that in one of his study villages fertility dropped even as mortality conditions improved. He concluded that infanticide was a key reason for the low fertility of this village but did not dwell on the subject.³⁷ Working in parallel with Hayami's efforts, American scholars put infanticide squarely at the center of their analyses. In innovative cross-tabulations of male and female births, Susan Hanley, Thomas Smith, Robert Eng, and later William Skinner detected patterns that could not be explained in the absence of what Hanley called "post-partum birth control."³⁸ In their analyses, Edo-period villagers were employing infanticide as a family-planning tool to further their individual goals and advance the welfare of their household. The implications mattered beyond demography, for such evidence of a rational mindset persuaded many historians to seek the roots of Japan's modernization in the villages of the Edo period. One dissenting voice in this period was Carl Mosk, an economist who reinterpreted Smith's data as reflecting the attempt of parents to maximize child survivorship amid malnutrition and crushing physical labor.³⁹

By the early 1990s, historical demographers had published careful analyses of about two dozen Japanese villages. There was clear evidence for family limitation

in some of these, but not in others. Most historical demographers were doubtful or agnostic about the frequency of infanticide, considering it a relatively minor factor in the demographic system of the Edo period. Instead, they have emphasized the role of low fecundity (the ability to bear children), late marriage, spousal separation during labor migration, and the lactational amenorrhea that long breastfeeding conferred on Japanese mothers.⁴⁰ Only about the Northeast of Japan is there general agreement that infanticide was demographically important. In this region, Narimatsu Saeko calculated fertility rates below three for two villages in Nihonmatsu domain. Working with the same data, Tsuya Noriko and Kurosu Satomi later discovered sex-ratio patterns in the same two villages that echo Thomas Smith's earlier findings in Central Japan that parents tried to balance the genders of their children. In another important paper about Nihonmatsu—whose lords could never have imagined what prominence their middling domain would achieve among historical demographers—Takahashi Miyuki demonstrated the effect of domain subsidies in discouraging infanticide.⁴¹ Nonetheless, in 2008 the influential economist and historical demographer Tomobe Ken'ichi concluded that at present the only evidence for truly frequent infanticide in the Northeast was the shape of the age-specific fertility curve, which could equally be interpreted as the result of miscarriages induced by overwork and sexually transmitted diseases.⁴² Even scholars who were persuaded that infanticide was common assumed that it followed perhaps 2 percent of all births.⁴³ In this book, I place the proportion of infanticides and abortions closer to 40 percent during the decades when they were at their most frequent. This is a number for the entire Tōgoku dataset; in individual villages, their incidence must have been higher still.

Over the past quarter century, a number of gifted scholars have examined the history of infanticide with concerns that go beyond its demographic import. Ōtō Osamu and Takahashi Satoshi have illuminated the household context of infanticide.⁴⁴ Suzuki Yuriko has drawn attention to the continuities across the Meiji Restoration of 1868.⁴⁵ Among other notable contributions toward reconstructing what she calls “people’s historical experience of sex and reproduction,” Sawayama Mikako breathed new life into the study of the pregnancy surveillance systems, examining their records to discover how village women understood their bodies and to reconstruct the web of power that connected them to their families and rulers.⁴⁶ Susan Burns demonstrated how educational texts for women, including exhortations against infanticide, defined the female body in a Neo-Confucian cosmological framework.⁴⁷ Ōta Motoko placed infanticide in the wider context of the history of childhood and parentage.⁴⁸ Together with six colleagues, she also obliged future students of the topic by editing a splendid volume of Edo-period sources on infanticide and abortion in different parts of Japan.⁴⁹

Perhaps the single most remarkable primary source on the subject was discovered by Andō Shikō, a local historian of southern Aizu: a diary that soberly records

several infanticides committed by its prosperous author, the rural merchant Tsunoda Tōzaemon. Andō published a prescient sketch of its interpretive possibilities, but left it to younger scholars to elaborate.⁵⁰ In a series of subtle analyses, Kawaguchi Hiroshi and then Ōta Motoko have done full justice to Tsunoda's diary, in the process drawing attention to the role of divination in the decision to kill a newborn child.⁵¹

Infanticide after the 1870s has received far less attention from historians and demographers. In contrast to abortion, whose criminalization in the Meiji period has been scrutinized by an illustrious line of historians, the study of infanticide in modern Japan has largely been left in the hands of *minzokugaku* (folklore) scholars, whose findings can be challenging to integrate into historical accounts.⁵²

Several studies have addressed the issue of historical change. In 1989, Ochiai Emiko defined a new problem by postulating a “reproductive revolution” beginning in the late eighteenth century, when, she argued, developments in obstetric medicine redefined the status of infants and fetuses. William LaFleur, a scholar of religion, argued that in the late Edo and early Meiji periods, “neo-Shinto” pronatalism and the modern state marginalized more permissive Buddhist understandings of abortion and infanticide.⁵³ Helen Hardacre has drawn attention to yet another discontinuity by demonstrating that the commemoration of aborted fetuses in Buddhist temples is largely a postwar phenomenon, with only very limited antecedents in the Edo period.⁵⁴

THE CASE FOR A REGIONAL PERSPECTIVE

The research design of this book departs from the established literature in two ways: it is equal parts demographic and cultural history, and it takes an unusual spatial scale as its subject. Spatial scales that have defined most previous research projects in this field—the village, the province, the domain, the whole of Japan—remain meaningful in this history, but the level at which I aggregate most numbers and make most generalizations is Eastern Japan, a region of eight provinces, scores of domains, and about 15,000 villages.

The best demographic studies in Japan have usually focused on one or two villages, the natural and in many ways ideal unit for their longitudinal analyses. Histories of population policy have generally taken individual domains as their subject.⁵⁵ For all their merits, such local histories have tended to privilege the agency of individual domain governments and to exaggerate the distinctiveness of individual policy regimes. Exclusive attention to smaller areas deafens us to the consonance of Eastern Japan's demographic discourses and blinds us to the networks that created and maintained them. These networks included the domain governments themselves. They all maintained palaces in Edo, where their officials could exchange views and trade experiences; and in Hanawa, a village near the

geographical center of Eastern Japan, ten domains and several intendancies convened two formal conferences on the eradication of infanticide.⁵⁶ Initiative for policies frequently came from private individuals of less lofty status. They, too—scholars, merchants, rural administrators, and village headmen—moved in networks of business and friendship that did not stop at domain boundaries.

In an attempt to make sense of the complexity of social developments, many students of Tokugawa Japan have read space as time, whereby at any given point the core around Kyoto and Osaka was more advanced than the peripheries, especially the Northeast, so that the core anticipated the future of the ostensibly backward regions, which in turn preserved key aspects of the core's past. In telling a story centered on Eastern Japan, a story that has no parallel in the supposed pioneer region, this book adds to a growing literature that challenges this developmental paradigm and its conflation of time and space.⁵⁷

By 1790, Eastern Japan was at the forefront of intellectual and political changes within the Tokugawa realm. Concerns about rampant infanticide were a catalyst, or at least a useful cover, for many a radical proposal for systemic reform at home and expansion abroad. For example, the men who outlined a Japanese empire in the North Pacific frequently reserved a crucial place for infanticide in their arguments about why Japan needed to acquire new territory. Critiques of infanticide also served men eager to tweak, reform, or question the established order in less fundamental ways. In addition, the many commoners, clerics, and low-ranking samurai who pursued the narrower goal of eradicating infanticide and thereby restoring population growth were equally breaking new ground in a political system that had long excluded them from policy debates. After 1790, the dense network of pamphlet publishers, philanthropists, administrators, and authors of policy proposals may be one of the best instances of a truly political, rather than recreational or aesthetic, public sphere that arose in Japan before the general flowering of public political debate in the last years of shogunal rule.⁵⁸

DISCOURSE AND DEMOGRAPHY

A feedback loop between demography and discourse goes through several cycles in this book. Demographic outcomes were shaped by understandings of life and death, security and status, obligations and community, the nature of time and the boundaries of humanity. These understandings, in turn, were challenged or favored by the demographic context of each historical moment. In the late seventeenth century, overpopulation fears and individual household strategies amid an increasing scarcity of land reinforced preexisting permissive attitudes toward infanticide. A hundred years later, backlash against infanticide was in no small part a reaction to the depopulation of the countryside over the eighteenth century. When the steady population growth of the 1870s decoupled infanticide from

demographic concerns, the eradication policies ceased and the practice was permitted to continue on a very large scale with very little public commentary.

Before the 1790s, infanticide was widely regarded as ethically unproblematic, indeed as socially responsible. In this view, infants were liminal beings rather than fully formed vessels such as adult animals and humans (Chapter 3). When the stem family began to promise its members an afterlife as serene ancestral deities, children other than the heir threatened to sap its strength and imperil the immortality of its ancestors (Chapter 4). To maintain the prosperity of the household and do right by their chosen children, parents had to keep their number small (Chapter 5). Elaborate techniques assisted them in selecting the most promising newborns and added another layer of justification for why some babies had to be “thinned out” (Chapter 6). If we add abortions to these victims of infanticide, their number must have come to about four in every ten children (Chapter 7).

This culture of infanticide and its internal logic are the topic of Part I of this book. Part II examines the efforts to fight infanticide as well as the processes that allowed infanticide to remain a part of daily life for many communities into the twentieth century. Although it is useful to think of 1790 as the tipping point between an age in which infanticide was widely tolerated and an age in which its opponents began to dominate the public conversation, Japanese critiques of infanticide go back to at least the late seventeenth century. When depopulation reached a critical point in the 1780s, however, so did opposition to infanticide. Soon, each of the discourses and understandings that permitted and recommended the culling of newborns was challenged. As villagers contemplated the extinguished household lines of their neighbors, they questioned whether infanticide could really ensure a pleasant ancestral afterlife (Chapter 8). In words and images, they argued that the victims of infanticide were fully human and that its perpetrators degraded themselves into monstrous beasts (Chapter 9). Pregnancy surveillance raised material obstacles to infanticide. Subsidies changed the economics of childrearing and undermined the excuse that the poor had no other choice than to kill their progeny (Chapter 10). Surveillance and subsidies also marked prolific childrearing as a contribution to the community, so valuable as to merit the deployment of great resources in its support. Beginning in the 1790s, bringing up children also came to be seen as a patriotic duty toward the whole of Japan, as the perceived threat of foreign invasion convinced a growing circle of men that infanticide starved the realm of much-needed manpower (Chapter 11).

The new understandings took time to find general acceptance, but already in the 1800s the traces of infanticide become markedly shallower. By 1820, most villages in Eastern Japan were growing again. In the next turn of the feedback loop, statistics that reported robust population growth in the 1870s helped retire infanticide from the center of attention, at a time when a concern with civilized behavior made it unattractive to dwell on what the mainstream view now

considered the barbarous custom of backward peripheries (Chapter 12). Ironically, the retreat of infanticide now slowed. Without attracting much notice, parents disposed of tens of thousands of newborns every year as late as the 1910s. After 1910, the decline of infanticide gathered speed once again, so that in the mid-1920s, the proportion of fetuses that died in late-term abortions or infanticides fell below 2 percent in Eastern Japan, and below 1 percent nationwide (Chapter 13). The ebb of post-conception family planning was brief. Amid desperate overcrowding in the ruins of defeat, abortion was effectively legalized in 1949, chiefly for demographic reasons. The number of procedures soared so quickly that they soon exceeded the number of live births and ushered in a new age of low fertility.⁵⁹

This reading of Eastern Japan's history underlines the contingent nature of demographic change. Today, we confidently talk about the size and structure of populations half a century hence. High and low projections reflect different assumptions about the speed of progress different societies will make along the road to low mortality and low fertility, but assume in unison that this is a one-way street on which we all travel. Turning points of the kind that Eastern Japan experienced in the 1790s are not part of this extrapolated future. This book contends that in Eastern Japan, fertility rose and fell as the result of images, metaphors, and understandings of human life. If this argument holds, fertility eludes confident prediction. Demography is instead an open, dynamic system inextricably intertwined with the changing conversations and concerns of a society.

To retrace the long endurance and eventual demise of Eastern Japan's culture of infanticide is to take a journey through the mental landscapes of the Edo and early Meiji periods. The writings, drawings, and actions of local elites express much more than their views of infanticide; they reveal as well their notion of time, their concept of nature, and the locus of their loyalties. Nor are less literate villagers entirely mute. With due caution, it is possible to discover the categories of their beliefs in the analyses of contemporary observers, in the administrative documents of the child welfare systems, and in the traces their own lives have left in the population registers. Reproductive choices lie at the very heart of the human condition. In this sense, the patterns of the demographic record grant us glimpses into the hopes, fears, and cosmologies of men and women whose voices are not otherwise captured in the historical record.