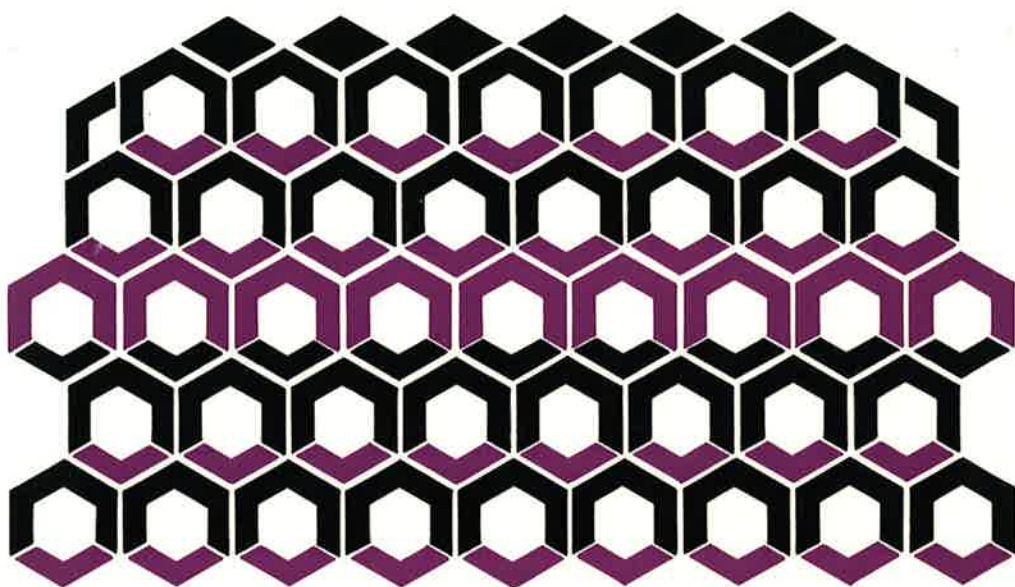




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The Demography of Sociopolitical Conflict in Japan, 1721–1846

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Introduction

The relationship between population and conflict has occupied both scholars and public officials since time immemorial. Teeming masses, climbing birthrates, floods of migrants, food supplies insufficient for the mouths they must feed, and high concentrations of rambunctious young males have seemed in many times and places to foreshadow conflict, either domestic or international. But factors behind these “shadows” have seldom been deeply penetrated by observers, and the implications drawn from systematic, scholarly studies have been in many ways mutually contradictory.

It is not my purpose to clarify all the implications for human conflict of demographic states and changes, but merely to examine a few aspects of the topic in such a way that modest generalization may be possible. Specifically, I wish here to disaggregate the topic of population and examine the relationships of its several dimensions to social conflict and political protest in one preindustrial agrarian society: Japan in the eighteenth and nineteenth centuries, under the rule of the Tokugawa shōguns. The dimensions of population that I shall examine are absolute size, density, pressure (on the food supply), distribution, and crisis (resulting from natural calamity), and changes in all of these.¹ Conflict will also be disaggregated; my focus is on conflict internal to Japanese society only and, within that society, on the contentious behavior of the common people in Japan’s 73 provinces.² This behavior includes legal petition and litigation directed at other commoners or at the authorities; social conflict between individual commoners or between groups of

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them; social conflict that eventuated in overtures to the government for adjudication or relief or otherwise drew officialdom in; and pure protest action opposed to government policy, performance, or incumbents.

Each of the above elements will be described in detail below, as will the data to be used to address the questions before us. But rather than jump into the data, I shall first review some of the relationships found by other scholars, focusing on other eras and cultures, in order that we might have a better idea of what to expect to find in Tokugawa Japan.

Size

Other things being equal, one would expect to find more conflict of all kinds in, say, China or India than in Japan or the Trobriand Islands. As the number of individuals in a society increases, the number of social relationships grows geometrically, and so do the opportunities for conflict. For this reason, we are interested here in magnitudes and frequencies of conflict per capita, not in the absolute, and in changes in per capita levels of contention that do not simply reflect changes in absolute population size. Population size alone has not been clearly related to forms or frequencies of contention except in the gross sense expressed above (Sanders 1981:16–17, 178ff.; Choucri 1984:ch. 1). Population increase, on the contrary, is arguably associated with disproportionately increased levels of collective behavior (Wolf 1969; Choucri 1974:ch. 11), and it is indirectly associated with conflict through its significant influence on the cast of contenders in a society, the resources at their disposal, and the ability of governments to control them (Tilly et al. 1975). Indeed, according to Jack Goldstone (1988; n.d.), one of the major factors in the political and social upheavals of seventeenth-century Turkey, China, and England was the previous century's population increase, which contributed to inflation and governmental fiscal difficulty, increased competition among the more numerous sons of the elite for elite positions, and new (and largely untaxed) economic pursuits that diminished the government's share of the resources available and indirectly exacerbated conflict when the government tried to extract their fruits from the people.

Goldstone's work, like that of others, implies the significance of population pressure, not simply growth, insofar as it assumes a relatively static agrarian economy and government. Those who have focused on growth per se have often found less impact: Ted Gurr and Herman Weil (1973) found a modest relationship in a sample of modern societies, but such relationships sometimes disappear in multivariate analyses (Zimmermann 1983). And although Douglas Hibbs found some forms of conflict to vary with population growth (1973:28–30), others dispute this finding

Demography and Dissidence in Tokugawa Japan

The population of Japan during the Tokugawa era (1600–1868) went through three stages: rapid growth during the seventeenth century, extraordinary stability during the eighteenth, and the beginnings of increase again during the nineteenth. Estimates of the national population in 1600 range from 6 to 20 million (Taeuber 1958; Hanley and Yamamura 1977; Sekiyama 1959), with 12 million probably the most accurate (Nishikawa 1985:30ff.). In 1721 the central government of the shōgun ordered the first of a series of censuses, which indicated a population of 26,065,425 (although Kitō Hiroshi's [1983b:12] estimate for 1721 is already 31 million, indicating growth during the seventeenth century of some 150 percent; see also Hayami 1988). Data for eighteen subsequent censuses have survived, as shown in Table 1, and depict both the stability of the eighteenth century and the recovery of the nineteenth. The period between 1732 and 1744 includes the Kyōhō famine; the 1780s, the Temmei famine; and the 1830s, the Tempō famine, three of the four greatest famines of the era.¹ For the most part, however, the nineteenth century figures represent growth.

By the end of the Tokugawa era, the national population had grown to well over 30 million; in 1877 it was 36 million (Kitō 1983b:12; Nishikawa 1985:30ff.). The apparent growth thus represented is to some extent spurious. The Tokugawa censuses were incomplete: they included only the commoner population (the samurai aristocracy accounted for between 5 and 10 percent of the population) and perhaps only the rural commoner population (the cities probably accounted for another 10 percent); moreover, documentation was far from exhaustive (Hanley and Yamamura 1977; Jansen and Rozman 1986; Sekiyama 1959:114; Saitō 1988). Thus the censuses omitted somewhere in the vicinity of 5 million people, and the most accurate estimate of the national population between the late seventeenth century and the early nineteenth is probably Hayami Akira's 31 million (Nishikawa 1985:30ff.). But the trends

Table 1
The Population of Japan, 1721–1846

Year	Population	Index (1721=100)
1721	26,065,425	100.0
1726	26,548,998	101.9
1732	26,921,816	103.3
1744	26,153,450	100.3
1750	25,917,830	99.4
1756	26,070,712	100.1
1762	25,921,458	99.5
1768	26,252,057	100.7
1774	25,990,451	99.7
1780	26,010,600	99.8
1786	25,086,466	96.2
1792	24,891,441	95.5
1798	25,471,033	97.7
1804	25,621,957	98.3
1822	26,602,110	102.1
1828	27,201,400	104.4
1834	27,063,907	103.8
1840	25,918,412	99.4
1846	26,907,625	103.2

SOURCE: Minami 1978:180.

noted above—growth, stability, recovery—are undisputed and corroborated by data on the growth rate in the number of villages nationwide (Kitō 1983b; Umemura 1965). Moreover, we may assume here that whatever biases were at work were consistent over time and across provinces (Jansen and Rozman 1986:286). Therefore, although we cannot compare the census data with either the 12 million estimate of 1600 or the official figure of 1877, we can compare the censuses with one another in order to analyze the population between 1721 and 1846.

Population: Macro-stability, Mesovariety, Microdynamism

Given the period we are able to examine, the picture presented in Table 1 is consistent with the common assertion that Japan's population was largely unchanged during the latter part of the Tokugawa era. Various explanations have been offered for this stasis: famine, epidemic, natural disaster, purposive population control, diminishing completeness of the

Demography and Dissidence: A Quantitative Analysis

Armed with the expectations discussed in the previous chapter, let us now see if our data on population and popular contention prove useful in clarifying the relationships in which we are interested. Most of these data are, as noted, provincial-level (although we shall bring in our time-series data also at times); we shall look first at them all together, considering Japan as a whole. Aware that there are other meaningful ways to disaggregate the nation, such as into regions or into more or less urban or more or less climatically capricious areas, we shall also regroup our provinces and look at them as such. But first, let us assess our five dimensions of population on the national level.

The National Level

Size

We have measured the size of provincial population in four ways: large or small in both the eighteenth and nineteenth centuries, and growing or declining in each century.¹ Absolute population size we find to be modestly related to *per koku* levels of petition and litigation, social conflict, and political conflict in both centuries, with correlation coefficients (Pearson r) ranging from .14 to .41. Political protest, however, showed no significant relationship in either century. This finding was unexpected. The largest provinces—Mutsu and Dewa in the north, Yamashiro (home of Kyōto), Settsu (home of Ōsaka), and Musashi (home of Edo)—were among the more contentious provinces, for reasons that may well have nothing to do with their intrinsic size.

Change in population size bore no consistent and significant relationship to any form of conflict. Magnitudes of provincial change ranged from -50 percent to +60 percent in the eighteenth century, and between -17 percent and +100 percent in the nineteenth, so that lack of variation does not appear to be the reason. For whatever reason, neither the

general theoretical expectation (population growth conduces to conflict) nor the distinctively Japanese expectation (poverty leads to population decrease and to conflict, creating a spurious negative association between growth and contention) is supported.

Density

In measuring population density we used two different indices. The first was simple density of people per square kilometer of provincial territory; the second was density per unit of arable land in the province. Densities were calculated for both eighteenth and nineteenth centuries for each type of density; changes in density were also calculated for each century for each type of density.² The analysis, however, was a total washout—as hypothesized, density per se (as opposed to density of certain types, e.g., urbanization, or vis-à-vis other factors such as food supply) counts for nothing. Our measure of density on cultivable land might have approximated a measure of population pressure on the food supply, but if so there is nothing here either.

Pressure

In order to get at the notion of population pressure, I used a variety of measures, that data from other societies indicate will be related positively to conflict (although our sketchy overview of some Japanese data indicates quite the opposite). The first index was gross and net (after taxes) agricultural productivity per capita in both the eighteenth and nineteenth centuries, and changes therein from the beginning of the eighteenth to the middle of the nineteenth century.³ The second was gross and net calories of food production per capita during the Edo period.⁴ The third was the change in agricultural productivity relative to population change during the Edo period.⁵

Overall, analysis supported the suggestions of the Japanese data that greater pressure on the food supply is related to lower levels of conflict, not higher. The relationships found were hardly universal—food supply in terms of calories per capita, for example, showed no tie whatsoever and changes in gross and net *kokudaka* per capita during the eighteenth and nineteenth centuries showed only suggestions—albeit significant ones: correlation coefficients ran in the .20 to .30 range. Again, political protest was almost entirely unaffected by these factors. But, repeatedly, modest links between higher pressure and lower levels of the other forms of conflict emerged. Again, it is possible that spurious relationships exist: perhaps the poorest provinces were depopulating (and thus declining in population pressure, assuming that the lower population could maintain

Magnitude and Type of Conflict

The primary dependent variable used in this study is the magnitude of conflict, calculated both for different types of conflict and for the total amount of conflict occurring in each of the spatial units (631 counties or *gun*, 74 provinces or *kuni*, and 363 feudal domains or *han*) and temporal units (288 years) represented in the data. Thus two variables are needed: a typology of conflict events and a measure of the magnitude of each event. Such typologies are not hard to find (Kokushō 1971; Yokoyama 1977; Borton 1938; inter al.), but all of them are based either on the causes of conflict (e.g., Borton, Kokushō) or on the formal names of types of petitions, protests, village disputes, and riots—often legal terms with little relation to the magnitude of the events described. Measures of magnitude are rarer; to date only two quantitative studies of Edo-era protest have been made, and both weighted events according to the formal categories used by Aoki (Sugimoto 1978; Yokoyama 1977). These categories—which tend to be assigned according to the form of activity rather than its duration or intensity—cannot be ignored, since for many of the events in the Aoki *Nempyō*, supplementary data on the magnitude of conflict are missing. But because many events actually combine types of conflict (e.g., a village dispute followed by a petition, or a petition accompanied by a riot [see Sasaki 1973]), it is advisable to create a more elaborate typology and measure of magnitude.

Magnitude of Conflict

My first step was to code as many of the events in the Aoki *Nempyō* as possible according to Aoki's own categories. These categories and additional categorical descriptors appearing in the entry for each event were used, with a maximum of two descriptors per case. The result was 69 different types of events; 7370 of the total 7664 events in the *Nempyō* (96 percent) had at least one such descriptor assigned to them. This raw taxonomic resource far surpasses in detail the six to eight types of events used by Aoki and other historians to date. Some of these types, however, represented overlaps in judgment by coders and some represented the content of conflict (e.g., "tax strike") rather than its form; consequent combination of types reduced the number of types to 52.

The next step was to impose some theoretically meaningful order on the types derived from the *Nempyō*. Three intuitively important dimensions of

conflict appear over and over in the literature on popular protest, or *ikki*: (a) whether a form of collective behavior is legal or illegal, (b) whether behavior is nonviolent or violent, and (c) whether conflict behavior is within the commoner class or directed at the warrior class or the formal institutions of government. These themes, somewhat elaborated, were adopted, and each of the 52 conflict types was categorized as

1. Legal or ambiguously legal (1)
or
 Illegal (2);
2. Not violent/confrontational/challenging/challenging of the status quo, deferential (1)
or Disorderly, challenging (by its very disorderliness), but weak or unfocused in its objectives, targets, and degree of dissatisfaction (2)
or
 Aggressively, purposefully, actively, directly confrontational and challenging (3)
or
 Violent toward persons and/or property (4);
3. Horizontal, among individuals or groups within the commoner class (1)
or
 Vertical, between individuals or groups within the commoner class unequally situated in the socioeconomic or political hierarchy (2)
or
 Vertical, between groups of commoners and the institutions or incumbents of the government (3).

The result of this categorization is the typology presented in Table A1.

My next step was to create three indices based on the three dimensions presented above and to see if these dimensions in fact bore any relationship to the empirical reality of the magnitude of the events so described. The coefficients presented in Table A2 indicate that, indeed, the dimensions theoretically derived above do bear substantial relation to this reality. The only surprise is that horizontal social conflict appears to be more aggressive and destructive than vertical political protest. Communal conflict may be smaller in scale but more intense, whereas political protest may be larger in scale but relatively deferential.

Given three empirically and theoretically meaningful dimensions of conflict, the next step is to reduce the 53 conflict types according to them. Therefore I created a new index in which each event was given a three-digit code in accordance with its values, for the first descriptor given for it, on the three dimensions of conflict. For example, an at-least-probably legal, politically nonchallenging, and horizontal intervillage border dispute would be coded 111 on this index, as suggested by columns 1 through 3 of Table A1. This index, as one may gather from the twelve groupings of event types in Table A1, has twelve categories (N.B. This is a categorical variable).

Notes

Notes to Chapter One

1. Other aspects of population that deserve attention but are beyond the potential of the data used here include age and sex structure. I shall touch on each occasionally but attempt no systematic analysis.
2. There were in fact 74 provinces, but my data do not include Matsumae (presently Hokkaidō prefecture). When I speak of conflict per se here, I refer to the 73 provinces; when relating population to conflict, I have collapsed Mutsu, Rikuchū, Rikuzen, Iwashiro, and Iwaki provinces into Mutsu; and Ugo and Uzen provinces into Dewa; for a total of 68. Provinces are not ideal units of analysis. They are larger and fewer than Japan's 631 counties (*gun*). But county-level census data have not survived. Moreover, the provinces were not designed to vary on demographic or economic grounds; indeed, most were constituted as national microcosms: some highland, some lowland, some seacoast; some communications links; some cities, some countryside, and so forth. But in fact they vary considerably on the measures of interest here: e.g., frost-free days per year range from under 150 to more than 250; population varies from under 10,000 to over 1,000,000; and absolute agricultural productivity declined in some provinces while more than doubling in others.
3. Some of these analyses, of course, are not oversimple, but turn on the question of what is a significant relationship. Bohstedt (1983:11ff.), for example, finds correlations in the .30 to .40 range between food prices and riot behavior in eighteenth-century Britain and downplays them. Given imprecise data and the causal complexity of contentious behavior, it seems to me that these are substantial relationships indeed. Bohstedt rightly emphasizes community characteristics in calculating riot potential and causation (see also Calhoun 1982), but I would assert that the contribution of dearth is greater than he implies.

Notes to Chapter Two

1. The fourth, the Keiō famine of the late 1860s, occurred after the censuses ceased. The Kyōhō famine was most severe in the west, the Temmei and Tempō famines in the east.
2. The data on natural disasters used here are taken from Arakawa Hidetoshi's *Saigai no Rekishi* (1964:248–262). The Arakawa data are the only systematic compilation of such disasters for the period under examination, although probably not complete and in many instances quite imprecise (some events, for example, are given as affecting “eastern Japan” with no elaboration). Within these constraints, it is still possible to estimate the number of provinces affected by the events recorded (1108 during the years 1590–1877) if one does not insist on meretricious precision. For this analysis each province was recorded as being subject to a given disaster if it was specifically mentioned in Arakawa or if it was located in a region recorded as having been affected. Annual disaster figures were calculated as the number of provinces affected by all disasters recorded for each year (not the total number of disasters recorded, which was much lower). The annual data are given in this simple summed form; the provincial data were recoded into quartiles. This reduction of categories to four is costly in precision but, as mentioned, much of this precision is illusory given the crudity of Arakawa's original data. This presentation does indicate which provinces were relatively severely subject to the whims of nature and which ones were not. The types of disasters included by Arakawa in his compendium are wind and storm, flood, and rain damage to crops; excessive rain; drought; famine; epidemic; volcanic eruption; earthquake; and fire. They are not coded for intensity but for scope (number of provinces or regions affected) alone.
3. These data are taken from Iwahashi (1981). The composite scale is justified by the intercorrelations (r) of prices in the four cities, which range from .65 (Aizu and Hiroshima) to .94 (Ōsaka and Hiroshima).
4. One must recall here that the overwhelming bulk of government revenue came from the land tax; most nonagricultural pursuits were taxed lightly, if at all, despite accelerating official attempts to exploit them in the later Tokugawa period. Thus occupational exit from agriculture, even if not physical movement from the land, was the government's real concern.

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