# Chapter 8 ASPECTS OF THE INFLUENZA PANDEMIC IN JAPAN



"Mask Day" in Osaka. (Shin Aichi, 30 January 1920)

This chapter will focus on various segments of Japanese society that suffered from the influenza pandemic. We will first closely examine the urban and rural areas of Kanagawa prefecture, business corporations (Mitsui and Mitsubishi) and other organizations (Keio University, Imperial Academy, etc.), then look at some accounts found in literary works and diaries.

## Kanagawa Prefecture

In attempting to zero in closely on the details of the 1918–1920 influenza epidemic in Japan, I introduce Kanagawa prefecture here because of the comparatively plentiful documentation available. One such document is the *Taishō 7–8 nen, Taishō 8–9 nen ryūkōsei kanbō ryūkō-shi* (Record of Influenza in 1918–1919 and 1919–1920; hereafter cited as the Kanagawa Report),¹ the only official prefectural-level report on the epidemic that has been located so far. Information on the population of Kanagawa prefecture in normal times is available in Kojima Miyoko's *Meiji-Taishō-ki no Kanagawa-ken: Jinkō kōzō to hendō o chūshin ni* (Kanagawa Prefecture in the Meiji and Taishō Eras: Population Structure and Fluctuations),² so far the only demography on the prefectural level of its kind. Details on the epidemic in the prefecture are also available in reports published in the local newspaper, *Yokohama bōeki shinpō*.

## The Period of the Epidemic

As already described in Chapter 2, Kanagawa prefecture was probably the first place on the Japanese archipelago where the "herald wave" of spring 1918 is recorded. That outbreak began in early May with patients diagnosed with influenza on a warship anchored at the Yokosuka naval port, and the infection spreading from there to the cities of Yokosuka and then Yokohama. The outbreak appears to have subsided without much cause for concern. In September, it was found that ships which had entered the port at Yokohama had influenza patients on-board.<sup>3</sup> Those cases, however, do not seem to have set off any major outbreak.

<sup>1</sup> Kanagawa Report. This document is among the materials collected through the "Research on Risk Communication and Management Based on the CRONOS Authoring Tool," at Keio University under the leadership of Faculty of Economics Professor Tomobe Ken'ichi, supported by a MEXT (education ministry) Grant-in-Aid for Creative Scientific Research.

<sup>2</sup> Kojima 2004. This work makes use of such statistical records as the *Kanagawa-ken tōkeisho* (Statistics on Kanagawa Prefecture) and *Yokohama-shi tōkeisho* (Statistics on the City of Yokohama) to provide population indices for the Meiji and Taishō eras not heretofore available. Details can be found in the CD-ROM provided in the book containing the statistical data on which the book is based. The "Spanish Influenza" is discussed on pages 138 to 141. Comparisons of mortality by age for the years 1913–1915 and 1918–1920 are also provided in Table 4-14 of Kojima's book, p. 117. The tables show that mortality for 1918–1920 was generally higher than for 1913–1915 and the disparity between the two periods for people in their 20s and in their 40s is the greatest.

<sup>3</sup> For example, it was reported that 16 persons on-board the *An'yō Maru*, a ship of the Tōyō Shipping Company entering port from the United States, had contracted influenza. Kanagawa Report, p. 47.

The outbreak of the Spanish influenza, or the Early Epidemic, in Kanagawa prefecture is said to have been on 9 October 1918 when 19 students at a middle school dormitory in the town of Odawara were diagnosed with "cold fever," or influenza. Other information, however, indicates there were outbreaks in late September in Kawasaki and Ōiso, so in fact, it is not clear when the first case of the epidemic actually occurred. According to the Kanagawa Report, the first outbreaks of influenza in the two cities and 11 districts of Kanagawa prefecture were recorded in Tachibana district (including the town of Kawasaki) and the district of Naka (including the town of Ōiso) in late September; in the cities of Yokohama and Yokosuka and in Tsuzuki, Miura, Kamakura, Kōza, Ashigara-shimo, Aikō, and Tsukui district in early October; in Ashigara-kami district in mid-October; and in Kuraki district in early January 1919. How it happened that the outbreak in Kuraki district, which was adjacent to the city of Yokohama, was so delayed casts some doubt on the reliability of the article in question, but for all the municipalities and counties the peak was January 1919. The epidemic finally came to an end by the early part of March to late April 1919.

#### First Outbreaks

The first deaths from influenza were reported in Kanagawa on 24 October 1918 in the *Yokohama bōeki shinpō*, relating that more than 300 absences were reported at Miyatani Elementary School in Yokohama's Nishi ward and that one student on the 18th, one on the 19th, and two on the 23rd had died. In October the only other reports of deaths are of one person in Ashigara-kami district and a mother and her three children in Yokohama died within a few days. Reporting on the epidemic appears to have been centered on the elementary school, but the actual cause of the deaths is not clear; and the newspaper pointed out that infection was virulent and accompanied by symptoms of pneumonia, characteristic features of the influenza epidemic.

By the end of October, the *Yokohama bōeki shinpō* is filled with articles on the pandemic, not just in the prefecture, but all over Japan and around the world. Particularly for an area with a port like Yokohama, which was closely connected to all parts of the world by shipping routes, the news must have been horrifying, and headlines cried out "The Fearsome Influenza Claims Thousands Daily Around the World" (*Yokohama bōeki shinpō*, 25 October) over stories of the epidemic situation on the Malay peninsula, in India, and in the Union of South Africa. Given that Yokohama was Japan's biggest port city, there were frequent articles about shipping, for example the story about the *Uraga Maru* run by the shipping division of Mitsui Trading Company, saying the captain had died and that 28 of 39 crew had been infected with influenza when the ship arrived in

<sup>4</sup> Kanagawa Report, p. 47. The report also says, "[the influenza] also spread in other elementary schools, factories, etc. in the area." The *Yokohama bōeki shinpō*, dated 17 October, reported on an outbreak of influenza in Odawara.

<sup>5</sup> See the "survey of deaths from influenza by city" on pp. 48–49 of the Kanagawa Report.

port at Hong Kong from Rangoon.<sup>6</sup> Other stories related that the *Seiyō Maru* operated by the Tōyō Shipping Company could not continue its voyage when 64 of its 84 crew contracted influenza in New York (26 October) and one of the ship's officers died (27 October).

## Rising Mortality

Influenza began to spread not only in schools, but prefectural offices, railways, and factories, and articles giving death counts increased in number. An article on 6 November reported that the number of reported deaths in Yokosuka was more than ten, three times the number in a normal year, and the cause of death was given as influenza or complications with pneumonia in almost all cases. Absences among postal workers were particularly numerous, crippling the delivery of telegrams and the operation of telephone exchanges (7 November). That same day the *Uraga Maru*, which had lost its captain and one other to influenza, reached the port of Yokohama.

Also, on the *Africa Maru*, which had come into Yokohama port from Tacoma<sup>7</sup> on 7 October, two passengers developed influenza on 25 October after leaving port, and eventually a total of 36 passengers were infected, and 11 of them died. Other, scattered reports include the death of a seaman on the *Atsuta Maru* of the Nippon Yūsen (N.Y.K.) line serving Seattle and an anecdote about how the hospitalization of a telegraph operator in Hawaiʻi had prevented his ship (*Meikai Maru* of the Tōyō Shipping Company) from learning about the ceasefire ending World War I.

#### Short Respite, Then More Outbreaks

The fierce spread of influenza entered a lull in late November. After cremating 28 bodies on the 9th at the Yokohama crematorium, the number decreased, and it was thought the epidemic had ended. But in the middle of January 1919, outbreaks were reported again from different places in the prefecture. The number of cases of postmortem examination handled by the office in charge at Yokohama city hall increased gradually from 14 on 14 January to 49 on the 25th. Surely these included cases of death other than from influenza, but clearly indicate a relapse of the influenza epidemic. Not only in Yokohama, but in Kanagawa's rural areas, there were renewed outbreaks, and in not a small number of cases both parents died of influenza, leaving their children orphaned (15 February, *Yokohama bōeki shinpō*). Another report that appeared in the newspaper on the same day confirmed that "the influenza strikes equally the old and young, male

<sup>6</sup> The death of the captain of the *Uraga Maru*, however, is not mentioned in the Mitsui Trading Company bulletin *Mitsui Bussan shahō*, to be discussed below (see pp. 159–60). There being various forms of use of ships such as chartering, the captain apparently was not an employee of Mitsui Trading Company.

<sup>7</sup> This city south of Seattle on the American western seaboard was known for the large number of Japanese immigrants settled there.

and female, but among fatalities those in the prime of life are more numerous than the very young or those advanced in age."

Only in late February did the epidemic finally appear to have passed and schools begin to reopen. The last newspaper article to appear about the January to spring 1919 influenza epidemic stated that a patient had been identified in a village of Ashigara-kami district on 15 April.

## Ferocity of the Late Epidemic

The Early Epidemic passed, but people lived in fear of the next wave to come. The 3 November 1919 *Yokohama bōeki shinp*ō carried an article calling on readers to protect themselves, warning that the "world flu" would strike again. According to the 7 November article, Kanagawa prefecture handed out a document called "Yobō kokoroe" (Rules for Protection [against Influenza]) cautioning citizens to air clothing and bedding in the sun, maintain their health, and beware of phlegm congestion, sneezing, or coughing. The prefecture deemed the vaccine produced by the Kitasato Institute to be effective and began its production and a public vaccination program.

But in December, outbreaks began to occur in army regiments across the country among new recruits who had just signed up for military service as well as on navy ships at anchor at Yokosuka. As of the 19th, there were 174 patients at the naval hospital, of whom ten died. Toward the end of the year, the epidemic spread from the military forces to civilians, including more than 500 female factory workers infected at year's end at the Fuji Gasu Spinning Company's Hodogaya factory, among whom more than ten died. With the start of the New Year 1920, it began to spread like wildfire, with reports in early January that "business was brisk" at the crematoriums in Yokohama (12 January). As distinct from the Early Epidemic, the Late Epidemic was characterized by relatively fewer cases but a higher mortality. Even if the virus was the same H1N1-type, the higher mortality was either because the virus may have acquired a higher degree of toxicity through discontinuous variation, or because those who had not acquired immunity in the "herald wave" or Early Epidemic were hit hard this time.

It was on 13 December in the midst of the renewed spread of the epidemic that the Tōyō Shipping Company's *Siberia Maru* arrived in Yokohama after a voyage from the United States. The ship was carrying two ambassadors and representatives of management and labor who had attended the International Conference on Labor in Washington, D.C., but influenza had broken out on-board, with 80 cases in the third-class cabins, seven of whom died while the ship was at sea. One of the deceased was a mother survived by two small children. Eighteen were immediately hospitalized upon arrival (14 December report).

The crematoriums were working day and night and could still not keep up, leaving rows of coffins waiting their turn. The remarkably sharp increase in the number of deaths from influenza and respiratory diseases recorded in January 1920 in Kanagawa prefecture

as elsewhere showed how virulent, if brief, was the Late Epidemic. Reports came in one after another of families completely bewildered by the loss of their breadwinner or patriarch, people who committed suicide out of desperation at the situation, and cases when all the members of a family perished from the virus. Doctors and nurses were in short supply everywhere, and after working day and night to help patients, in many cases they themselves succumbed.

Reports that the epidemic had slowed finally appeared on 5 February and the number of new patients began to decrease, although people continued to die. Particularly in rural areas, the Early Epidemic dragged on; it came later and subsided later in villages like Hatashuku and Sukumogawa in Hakone along the old Tōkaidō highway, showing the lag in the transmission of the virus. The headline saying "Epidemic finally passes" only appeared in the *Kanagawa bōeki shinpō* on 20 February. The places where cases were reported toward the very end were the remote areas of the prefecture such as the Ashigara-kami and Ashigara-shimo districts, the virus having eventually spread there from urban areas like Yokohama and Yokosuka. The newspaper reported that the number of cases for the Late Epidemic was 53,450, of whom 2,153 died, for a high mortality of 40 per mil. The collection of influenza data by the prefecture ended on 27 February (28 February report).

## Yosano Akiko's "Fear of Death"

The *Kanagawa bōeki shinpō* was quite a mass-circulation paper at this time, with a print run of 150,000 copies and more widely read in the prefecture than any Tokyo newspaper.<sup>8</sup> The well-known poet, essayist, and social reformer Yosano Akiko (1878–1942) was a frequent contributor, and two pieces by her about the epidemic were published.

Yosano's first piece, entitled "Kanbō no toko kara" (From My Influenza Sickbed), was published in the paper on 10 November 1918 amid the Early Epidemic. The article begins with her explanation of the virulence of the influenza and how one of her children had brought the flu home from school and the whole family had been infected. She then grumbles about the slowness of the national government to do anything about the epidemic, declaring it should have taken much earlier the preventive step of temporarily closing large dry goods stores, schools, public entertainments, major factories, large exhibitions and the like, where crowds of people were likely to gather. She also mentions the advice of the Metropolitan Police Department office of sanitation that had called on people to avoid crowds. She expresses her ire at the government for its lack of a firm stand on the problems, leaving citizens in such dire peril. Apparently what she found most intolerable was the Japanese tendency to be "only concerned with what is right in front of them and only with their own convenience."

<sup>8</sup> See entry on the Yokohama bōeki shinpō in Kokushi daijiten, vol. 14.

Yosano's second article appeared on 25 January 1920, in the midst of the Late Epidemic, under the title "Shi no kyōfu" (Fear of Death) and is written in a rather pessimistic, philosophical style. Starting by asking, "What is death?" she goes on to say that even if she ends up dying from the new epidemic, she wants to live to the end for her children. She wants to protect herself against the influenza, be vaccinated, and live as best she can, heightening her lust for life to the utmost, and if after that she should die she can be resigned to her fate because she did the best she could do. Back in 1904, she had written her famous poem opposing the war fought against Russia (1904–1905), "Kimi shini tamō koto nakare" (You need not give up your life for the Emperor). "You" in this poem is her younger brother, whereas in this essay she seems to be telling herself not to give up her life.

#### Two Precious Sources of Statistical Data

The Kanagawa Report contains two important sources of statistical data regarding the influenza epidemic. The first is the numbers of patients and deaths from influenza listed by administrative unit (city, town, and village) for Kanagawa prefecture from 1 October 1918 through 15 January 1919 and then every half-month from 16 January 1919 to 30 April. The second source shows the daily number of reports of deaths from pneumonia in the city of Yokohama from 1 October 1917 to 31 March 1918 before the epidemic began, for the same period of 1918 to 1919, and from 1 December 1919 to 31 March 1920. The first group allows detailed observation of the regional spread of the Early Epidemic based on figures for the smallest administrative unit, while the latter group, though it is limited to the area of the city of Yokohama, shows the daily figures for deaths from pneumonia from before the influenza outbreak and throughout its duration, allowing observation over time and space.

Of course, these statistics are not without problems. The first set of data from the second half of January 1919 onward are given in half-month intervals, but the figures before that are given in one lump from 1 October 1918 onward, which makes it difficult to know the situation about the outbreak of the epidemic in autumn 1918 and its subsequent spread. The same problem also applies to the statistics by prefecture that accompany the Home Ministry's *Ryūkōsei kanbō* report. Perhaps this was the result of a statistics compilation policy made by the Kanagawa police and the Sanitary Affairs Bureau. Another problem is that the deaths are given as victims of *ryūkōsei kanbō* (influenza), but as I have observed before, that category is quite vague, and it is not clear whether the figures are based on only cases when the death certificate gave influenza or also included cases of when influenza had developed into pneumonia or bronchitis. Finally, with regard to numbers of influenza patients, since influenza was not among notifiable diseases, it is

<sup>9</sup> Yosano Akiko raised 11 children who grew to adulthood.

doubtful that there was a single criteria for calculating the number of influenza patients throughout the prefecture. The fact that the number of patients appears to have been rounded off to the nearest hundred for some villages suggests that there may be some problems with counting.

Also, regarding the second group of statistics, the fact that the figures are for "deaths from pneumonia" is obviously not influenza per se. Considering the large number of cases in which influenza progressed to pneumonia or was combined with it resulting in death, however, we can use these figures as an indication of the spread of the Spanish influenza.

Tables 8-1 through 8-3 below show the conditions of the Early and Late influenza epidemics for cities and districts<sup>10</sup> in Kanagawa prefecture from early October 1918 through the end of March 1919 (Table 8-1). Despite the problems mentioned above, these figures give a good overall picture of conditions during the Early Epidemic. Looking at the tables, we can see that mortality vis-à-vis population<sup>11</sup> stands at 3.8 per mil, which is equivalent of one sixth of normal mortality<sup>12</sup> for Kanagawa prefecture at that time. However, this figure is limited to those who died specifically of influenza, and it would be much higher if we were to add those who died of other respiratory diseases that may have been caused by having contracted influenza or cases where the cause of death was not identified but was in fact influenza.

## High Rate of Cases in Remote Areas

As far as we can see from the data in Tables 8-1 and 8-2, there were quite wide disparities in the rate of cases and in mortality by city and district in the prefecture during the epidemic period. The rate at which people contracted influenza was quite high in remote areas, for example in the district of Tsukui, where it amounted to more than half the population. We can interpret those figures in two opposite ways. One is that the rate was indeed high, resulting from many people having contracted influenza for some reason. The second is that the figure is inflated, since it appears that the towns and villages in Tsukui, unlike those for other districts, very often gave approximations of numbers of

<sup>10</sup> Although the Kanagawa Report presents the figures by town and village (*chō* and *mura*), I have compiled these tables by city and total of districts (*gun*) because at that time Kanagawa prefecture had some 200 cities, towns, and villages, which is far too many to list in one table and also because by showing the figures for villages with very small populations the range of the figures would be extremely broad.

<sup>11 &</sup>quot;Population" here is "de facto population" as of the end of 1918, from the *Nihon Teikoku jinkō seitai tōkei* for that year. The "de facto population" was obtained by first adding "temporary residents" to the "de jure population" and then from that total, subtracting "temporary migrant population." (It was not until 1920 that population censuses were conducted in Japan.) In urban areas, therefore, some temporary residents were counted more than once, thus inflating the figures. The rates calculated with the inflated "population" as denominator were, therefore, lower than in reality. For details about this, see chapter 2 of Hayami and Kojima 2004 and chapter 1 of Kojima 2004.

<sup>12</sup> See the table on page 99 in Kojima 2004. The figures are from the statistical data included in the CD-ROM attached to that book.

Table 8-1. Influenza Cases and Deaths in Cities and Districts in Kanagawa Prefecture (Early October 1918 to the End of March 1919)\*

|                   | Population:<br>end of 1918 | Patients | Deaths | Morbidity rates | Mortality 1 | Mortality 2 |
|-------------------|----------------------------|----------|--------|-----------------|-------------|-------------|
| Yokohama          | 447,423                    | 101,263  | 1,759  | 226.3           | 3.9         | 17.4        |
| Yokosuka          | 88,742                     | 13,556   | 180    | 152.8           | 2.0         | 13.3        |
| Total             | 1,323,026                  | 287,439  | 5,021  | 217.3           | 3.8         | 17.5        |
| City subtotal     | 536,165                    | 114,819  | 1,939  | 214.1           | 3.6         | 16.9        |
| District subtotal | 786,861                    | 172,620  | 3,082  | 219.4           | 3.9         | 17.9        |

Table 8-2. Influenza Cases and Deaths in Cities and Districts in Kanagawa Prefecture (Early October 1919 to the End of June 1920)\*

|                   | Population:<br>end of 1918 | Patients | Deaths | Morbidity rates | Mortality 1 | Mortality 2 |
|-------------------|----------------------------|----------|--------|-----------------|-------------|-------------|
| Yokohama          | 447,423                    | 32,065   | 908    | 71.7            | 2.0         | 28.3        |
| Yokosuka          | 88,742                     | 2,255    | 91     | 25.4            | 1.0         | 40.4        |
| Total             | 1,323,026                  | 56,992   | 2,398  | 43.1            | 1.8         | 42.1        |
| City subtotal     | 536,165                    | 34,320   | 999    | 64.0            | 1.9         | 29.1        |
| District subtotal | 786,861                    | 22,672   | 1,399  | 28.8            | 1.8         | 61.7        |

Table 8-3. Influenza Cases and Deaths in Cities and Districts in Kanagawa Prefecture (Early October 1918 to the End of June 1920)\*

| (                 |                            |          |        |                 |             |             |  |  |
|-------------------|----------------------------|----------|--------|-----------------|-------------|-------------|--|--|
|                   | Population:<br>end of 1918 | Patients | Deaths | Morbidity rates | Mortality 1 | Mortality 2 |  |  |
| Yokohama          | 447,423                    | 133,328  | 2,667  | 298.0           | 6.0         | 20.0        |  |  |
| Yokosuka          | 88,742                     | 15,811   | 271    | 178.2           | 3.1         | 17.1        |  |  |
| Total             | 1,323,026                  | 344,431  | 7,419  | 260.3           | 5.6         | 21.5        |  |  |
| City subtotal     | 536,165                    | 149,139  | 2,938  | 278.2           | 5.5         | 19.7        |  |  |
| District subtotal | 786,861                    | 195,292  | 4,481  | 248.2           | 5.7         | 22.9        |  |  |

<sup>\*</sup> Mortality 1 = Deaths / Population Mortality 2 = Deaths / Patients

cases. This suspicion is based on the fact that of the 22 towns and villages in Tsukui, the figures for October 1918 to 15 January 1919 are rounded to the nearest 100 in four cases and rounded to the nearest ten in seven cases. It does seem therefore that numbers of influenza patients given are rather unnatural, possibly inflated, in these cases.

Assuming that the number of people who contracted influenza in Tsukui district was quite high, we can surmise that this was the case because its population had not undergone the viral baptism brought by the "herald wave" of the spring 1918 and so, when the epidemic hit Kanagawa full force, many people there were infected.

When we look at mortality, however, although 5.2 per mil does seem high, the mortality vis-à-vis those who contracted influenza (morbidity) is less than 10 per mil, which is on the low side.

The figures for the city of Yokohama are on about the same level as those for the prefecture as a whole. As can be seen in the tables, the population of Yokohama accounts for more than one third of the population of the whole prefecture, so the rate at which Yokohama people contracted influenza and their mortality had a major impact on the figures for the prefecture. On the whole and over the entire span of the epidemic, there was no major gap between the figures for the cities and for the districts.

The reader will note, however, the conspicuous figures for Tsuzuki and Miura districts, which border on Yokohama and Yokosuka. The rate of cases for both districts was the lowest in the whole prefecture. On the other hand, both the mortality and morbidity in Tsuzuki district were the highest. For Miura district as well, morbidity was second highest. Perhaps this reflected the impact of influenza cases among the urban citizenry of the cities close by.

## High Mortality in Rural Areas during the Late Epidemic

Regarding the Late Epidemic, the Kanagawa Report shows numbers of cases, number of deaths, and mortality of influenza patients by city and district (see above Table 8-2). The report also indicates that the epidemic started in the city of Yokosuka (early October 1919) and spread from there to Yokohama (mid-November 1919) and then to the countryside (early December). The most notable feature of the Late Epidemic was that while mortality in the population as a whole fell to half or less compared to the Early Epidemic, mortality for influenza patients was double or higher. Also, while there is no disparity in population mortality between urban and rural areas, mortality for influenza patients is twice as high for rural areas as for urban areas, meaning that the deaths per mil was over 60 in rural areas. The mortality among influenza patients was especially high in Tsuzuki and Aikō districts, at 130 per mil. This is similar to the Early Epidemic, especially its early phase, making us wonder if there is some correlation between the two. Also, when looking at mortality vis-à-vis population figures, we observe that the figures are higher for districts like Kuraki and Tachibana that were adjacent to the city of Yokohama. And on the contrary, as far as a district like Tachibana with rather urban-like characteristics is concerned, mortality for influenza patients was not especially high, but actually less than the average rate among the districts.

#### Correlations between the Early and Late Epidemics

Charting mortality vis-à-vis population for the Early and Late epidemics also brings out some interesting information. Figure 8-1, putting mortality for the Late Epidemic on the vertical axis and for the Early Epidemic on the horizontal axis, shows the distribution for cities and rural areas. At first there seems to be no correlation as the points are quite spread out (the coefficient of determination for all cities and districts is 0.033), but for seven districts out of eleven (Kamakura, Kōza, Naka, Ashigara-kami, Ashigara-shimo,

Aikō, and Tsukui), the distribution clearly tilts downward to the right, suggesting a significant correlation (r = -0.651). Among these seven districts (the "rural group"), those where the mortality was higher for the Early Epidemic had a lower rate for the Late Epidemic, and those where the mortality was lower for the Early Epidemic had a higher mortality in the Late Epidemic. Does this not mean that the difference can be attributed to the presence or absence of immunity to the influenza virus? If that is the case, it would indicate that the virus causing the Early Epidemic and that of the Late Epidemic were the same H1N1-type.

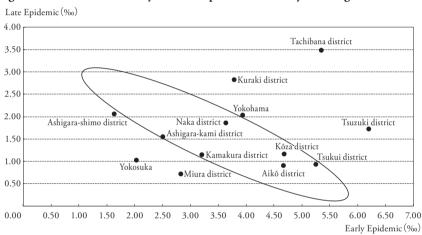


Figure 8-1. Correlation of Early and Late Epidemics Mortality in Kanagawa Prefecture

Other than Miura, which was close to the "rural group" of districts, Kuraki, Tachibana, and Tsuzuki show quite different locations on the chart, and Tachibana and Tsuzuki in particular show high mortality vis-à-vis the population for both the Early and Late epidemics. These results can probably be explained by the fact that they lay close to the city of Yokohama and that Kawasaki-chō (present-day Kawasaki city) and its vicinity, which were undergoing rapid industrialization and urbanization, was part of the district of Tachibana in those days.

Also of interest is the fact that the cities of Yokohama and Yokosuka are surrounded by these seven districts, and while mortality in Yokohama was high for both phases of the epidemic, it was low for Yokosuka. The figures for number of deaths of members of the navy probably were not included for the city of Yokosuka.

#### Sharp Increase in Deaths in January 1920

Among the detailed insights into the nature of the influenza epidemic thus provided by the figures given in the Kanagawa Report, let us look lastly at a comparison of deaths from pneumonia for the period of the epidemic by year. Figure 8-2 charts the number

of daily reported deaths from pneumonia for the three years: 1 October 1917–31 March 1918 (a "normal period"), 1 October 1918–31 March 1919 (Early Epidemic period), and 1 December 1919–31 March 1920 (Late Epidemic period).<sup>13</sup>

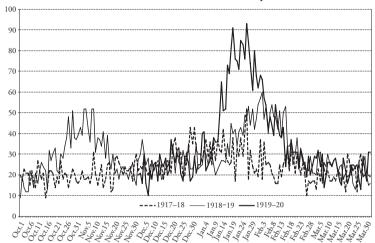


Figure 8-2. Number of Deaths from Pneumonia in the City of Yokohama (1917–1920)

It must be quite rare for one city to daily record and publish figures for the number of deaths (that is deaths from the one illness—pneumonia) in a normal period when influenza was not rampant and for two epidemic periods. As the graph clearly shows, the number of deaths for one month starting in late October in 1918 jumped up nearly twice that for the normal period in 1917–1918 and then, after returning in late November to about the level of the normal period, continued through the early part of January the following year (1919) at around normal figures. Then, toward the end of January the number again began to rise to its highest peak in the early part of February and then returned to the level of the normal period in March. As this shows, the increase in number of deaths in Yokohama for the Early Epidemic has two peaks, representing the two parts of the Early Epidemic. The graph for 1920 is even more dramatic. As shown in Figure 8-2, the number of deaths through December 1919 is not so distinguishable from the number for the normal period, but after 10 January, it rises sharply to a number three times that of the normal period. This was the period when the crematoriums were "overwhelmed," as reported in the newspapers.

<sup>13</sup> Note that death reports for the second day of each year are equally divided between 1 and 2 January because on 1 January such reports were apparently not accepted by the authorities. Also note that 1920 was a leap year, so for that year, 29 February is shown as 1 March and the last day of March as the 30th of March for the other years.

These "reported deaths," of course, are not equivalent to deaths from influenza, but represent those who died from pneumonia, and on this point the Kanagawa Report includes an explanatory note that reveals something about the purpose of compiling these materials.

Since Kanagawa prefecture has for more than ten years been conducting the official inspection of certificates showing the diagnosis of cause of death submitted to the city of Yokohama in order to protect citizens against infectious diseases, these can be applied to the survey of deaths from influenza. Almost all those who died from influenza succumb after the influenza was complicated by pneumonia, so it is probably safe to say that the rise and fall of the number of those who died from pneumonia is the same as the fluctuations in deaths from influenza.<sup>14</sup>

The daily death record by infectious disease is valuable for the study of epidemics, as demonstrated by Appendix 1.

## Mitsui Bussan: Influenza Record in the Company Bulletin

As yet no complete record has been found of any Japanese corporation concerning conditions resulting from the influenza epidemic, but the Mitsui Bussan trading company published a company bulletin, called the *Shahō*, that was printed daily, except for holidays, and records information on company personnel as well as reports and notifications. The bulletin provides insight on company employees who died around the time of the influenza epidemic. No information is given about the cause of death except in a few cases, so there is no telling what proportion of them died from influenza. There is also no information about the number of company employees who contracted the flu. However, in periods of both the Early Epidemic (October 1918–April 1919) and the Late Epidemic (December 1919–May 1920) there were a far greater number of deaths than for other periods, and it seems that there were quite a large number of deaths from causes directly or indirectly related to the epidemic.

Table 8-4 shows data on death of employees appearing in the *Shahō* from June 1918 through May 1920 listed in order of date. Founded in 1876 and based in Tokyo, Mitsui Bussan was Japan's largest trading company with a total of 3,000 employees in the 1910s, branches in many countries in the world, and a fleet of ships of its own. As can been seen from the table, those who died were not only in Japan but overseas, though the places where they died were often different from the branch to which they were assigned. While for those who died of influenza, we cannot tell whether they were infected in the place

<sup>14</sup> Kanagawa Report, p. 64.

where they were working, still a conspicuous number of deaths were of people who had been working in Taiwan, Kwantung (southern Manchuria), and mainland China.

The table lists the deaths of 42 people, and if following the phases of the epidemic within Japan, 16 died during the Early Epidemic period, and 17 during the Late Epidemic period. Of the total 25 months of the entire period covered, 79 percent of the deaths took place in a total of 13 months of the epidemic, suggesting that most of the deaths can be considered to have been from influenza.

Mitsui Bussan-related news also appeared in a national newspaper. The 5 November 1918 edition of *Tōkyō Asahi shinbun* published a story on a tragedy that struck the family of the deputy head Mr. M of the Mitsui Bussan's Osaka branch office. He and his wife both died of influenza. He is the man who is listed in Table 8-2 as having died in the "Osaka office, 3 Nov. 1918." The article recounts how his pregnant wife contracted influenza, developed pneumonia, and died on 2 November. On the 3rd, Mr. M. himself died from pneumonia, leaving four small children, who had also contracted influenza. They had all been taken to the Red Cross hospital and two of them were in serious condition. It must have been a happy, lively family before the virus struck, plunging them all into tragedy. The Mitsui Bussan bulletin does not report on the private affairs of families, but there is no doubt that the same kind of sad stories accompanied many of the deaths in the list.

# Mitsubishi Group: Heavy Toll on Miners

The *Mitsubishi shashi* (History of the Mitsubishi Companies), the [*Mitsubishi Gōshi Kaisha*] *Nenpō* (Annual Report [of Mitsubishi Gōshi Kaisha]),<sup>15</sup> and other materials I gained permission to peruse at Mitsubishi Heavy Industries include a number of anecdotes from the Spanish Influenza era regarding the companies under the Mitsubishi umbrella. The *Mitsubishi shashi* records the hiring and "retirement" of employees (*yakuin*) at the Head Office (Mitsubishi Gōshi Kaisha). The majority of retirements are "voluntary," or those who decided to retire of their own free will, but some include cases when the employee died. In the four years between 1917 and 1920, a total of 1,220 people "retired."

The number of "employees" who died during the period of the influenza epidemic (1 June 1918 through 30 June 1920) was 59 according to the *Nenpō*. Not all of these would have died of influenza, but the breakdown is five who died during the "herald wave" period (June 1918), 28 during the Early Epidemic period (adjusted for the time between contracting the virus and death to November 1918 to June 1919), and 14 during the Late Epidemic period (also adjusted, December 1919 to June 1920). The

<sup>15</sup> The Nenpō is in the collection of the Mitsubishi Economic Research Institute, Mitsubishi Archives. I am indebted to the librarian, Ms. Yamada Naoko, and other persons at the Institute for their help while I was conducting this research.

Table 8-4. Deaths of Mitsui Bussan Employees (1918–1920)

|                             | Di C i   |                             | NT .   |
|-----------------------------|--|-----------------------------|--|
| Pub. date                   | Place of employment                                    | Date of death               | Notes Notes  |
| 13 Jun. 1918                | Bombay (India)   | 10 Jun. 1918                | Died of stomach ulcer                                |
|                             | Moji (Fukuoka)   | 9 Jul. 1918                 | D: 1.1   |
| 1 .                         | Head office  | 13 Sep. 1918                |  |
| 16 Sep. 1918                |  | 15 Sep. 1918                | Died previous day, in Kamakura                       |
| 25 Sep. 1918                | Machine division, Dairen (Dalian,<br>China) office     | 23 Sep. 1918                | Died morning two days earlier                        |
| 7 Oct. 1918                 | Coal division  | 1 Oct. 1918                 | Died in hometown in Toyama prefecture                |
| 10 Oct. 1918                | Nagoya office  | 7 Oct. 1918                 |  |
| 24 Oct. 1918                | Coal division, Moji office                             | 23 Oct. 1918                |  |
| 4 Nov. 1918                 | Osaka office   | 3 Nov. 1918                 | Died at place of assignment                          |
| 22 Nov. 1918                | Tainan (Taiwan) office                                 | 21 Nov. 1918                |  |
| 23 Dec. 1918                | Shipping division, Moji office                         | 20 Dec. 1918                |  |
| 6 Jan. 1919                 | Ōtsu (Shiga) office                                    | 30 Dec. 1918                |  |
| 11 Jan. 1919                | Shanghai (China) office                                | 10 Jan. 1919                | Died during business trip to Qingdao (China)         |
| 27 Jan. 1919                | Coal division  | 26 Jan. 1919                |  |
| 29 Jan. 1919                | Osaka office   | 27 Jan. 1919                |  |
| 31 Jan. 1919                | New York office  | 29 Jan. 1919                | Died of heart attack                                 |
| 1 Feb. 1919                 | Coal division  | 1 Feb. 1919                 | Died of illness                                      |
|                             | Machine division                                       | 14 Feb. 1919                |  |
| 8 Mar. 1919                 |  |                             | Died at Kyushu University Hospital                   |
| 15 Mar. 1919                | Manila (Philippines) office                            | 14 Mar. 1919                | Died at place of assignment                          |
| 4 Apr. 1919                 | Tianjin (China) office                                 | 3 Apr. 1919                 | Died of illness                                      |
| 19 May 1919                 | Yokohama office  | 18 May 1919                 | Previous day, died of illness                        |
| 14 Jul. 1919                | Changchun (China) office                               | ·                           | In Notsukeushi (Hokkaido)                            |
| 4 Oct. 1919                 | Dairen (Dalian) office                                 | 1 Oct. 1919                 | Died of illness                                      |
| 11 Dec. 1919                | Sick leave   | 10 Dec. 1919                | Died of illness                                      |
| 17 Dec. 1919                | Dairen (Dalian) office                                 | 16 Dec. 1919                |  |
| 18 Dec. 1919                | Ship's captain   | 11 Dec. 1919                | Died in Saigon                                       |
| 6 Jan. 1920                 | Accounting section, Lumber division                    | 31 Dec. 1919                | Died of illness                                      |
| 6 Jan. 1920                 | Bombay (India) office, Karachi                         | 5 Jan. 1920                 | Died of illness in Tokyo                             |
|                             | Part-time worker                                       | -                           | ,  |
| 7 Jan. 1920<br>13 Jan. 1920 | Fertilizer division, Moji office, part-<br>time worker | 7 Jan. 1920<br>12 Jan. 1920 |  |
| 13 Jan. 1920                | Dairen (Dalian) office, apprentice                     |                             | Died in native town of Takayama<br>(Gifu prefecture) |
| 27 Jan. 1920                | Fertilizer division, Nagoya office                     | 27 Jan. 1920                | Died of illness                                      |
| 29 Jan. 1920                | Survey section   | 29 Jan. 1920                | Died of illness                                      |
| 30 Jan. 1920                | Osaka office   | 29 Jan. 1920                | Died of illness                                      |
| 31 Jan. 1920                | Driver, second class                                   | 23 Jan. 1920                | Died earlier, on the 23rd                            |
| 9 Feb. 1920                 | Fertilizer division, Hong Kong office                  | 8 Feb. 1920                 | [Died in] Ise Yamada Red Cross<br>Hospital           |
| 18 Feb. 1920                | Machine division, Osaka section                        | 17 Feb. 1920                | Osaka Red Cross Hospital                             |
| 24 Feb. 1920                | Head office  | 23 Feb. 1920                | Died in Nagoya                                       |
| 4 Mar. 1920                 | Shipping division                                      | 1 Mar. 1920                 | Died of illness                                      |
| 5 Apr. 1920                 | Otaru office (Hokkaido)                                | 21 Mar. 1920                | Died of illness in Tokyo                             |
|                             | Head office, correspondence section,                   |                             |  |
| 20 Apr. 1920                | secretary  | 19 Apr. 1920                | Died of illness                                      |

figures are conspicuously high. Of the 47 people who died during the epidemic periods, even if not all of them died of influenza, we may surmise that the majority succumbed as a result of the epidemic.

Figure 8-3 shows the number of deaths for employees of the Mitsubishi companies from 1917 through 1920. This shows how the usual figures of one to two people for the months in the year when there was no epidemic jump up in the epidemic phases of June 1918 at the time of the "herald wave," sharply increase even more in November of the same year at the beginning of the Early Epidemic and from March to May of 1919 toward the end of the Early Epidemic, and again peak in January 1920 at the time of the Late Epidemic. The 13 deaths for November 1918 seems inordinately large, however, so detailed examination of those figures is needed.

The Mitsubishi *Shashi* history gives information on the death of employees in the Mitsubishi group of companies, and when we examine this data, we find that the breakdown of those who died in November 1918 includes nine at Mitsubishi Mining, two at Mitsubishi Shipping, one at Mitsubishi Ironworks, and one at Mitsubishi Trading, showing that the clear majority are those working on production sites. As distinct from the Mitsui-affiliated companies, those of the Mitsubishi group included many engineers employed in coal or other types of mines. It is easy to imagine that many workers in the mines died of influenza during the Early Epidemic. At the Omodani mine in the upper reaches of the Kuzuryū river in Fukui prefecture alone, five men had died, so it appears the influenza virus raged through that mine.<sup>16</sup>

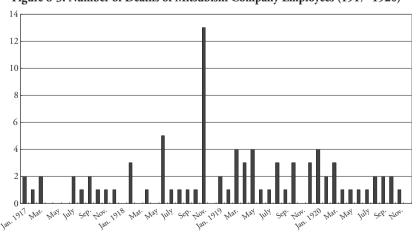


Figure 8-3. Number of Deaths of Mitsubishi Company Employees (1917–1920)

<sup>16</sup> In fact, it was largely because of the heavy toll from influenza in the Omodani mine and in the town where it was located that this mine was finally closed.

Was there any record of the condition of manual laborers in the Mitsubishi companies? The *Nenpō* gives statistics on a monthly basis for deaths of such workers of Mitsubishi companies. It appears that the greatest toll was at Mitsubishi Mining, where many manual laborers, as in the case of "officer" workers, died. Figure 8-4 shows the number of deaths of manual laborers in Mitsubishi Mining (which includes the coal mines) by month for 1918, 1919, and 1920. Work in the mines entailed various dangers to begin with, and the death toll was an average of 50 per month in normal years, but in November 1918 during the Early Epidemic period, the number jumped sharply by six times the normal number. The number fell and held steady after that, but then once again peaked around January 1920 during the Late Epidemic period, and if adding the months immediately before and after each of these months (namely, November 1918 and January 1920), resulted in the loss of five times as many as in normal times.

Those who worked in the mines, whether they were employees (*yakuin*) or manual laborers, were constantly exposed to large amounts of dust that impaired their respiratory systems, so they were especially vulnerable to the influenza virus, which may be why the toll was the highest for the mines during the Spanish influenza.

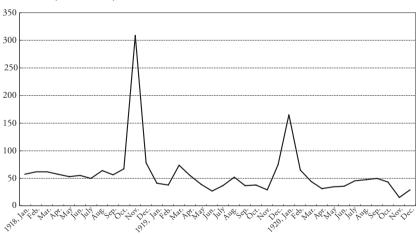


Figure 8-4. Number of Deaths by Month of Mitsubishi Mining Co. Manual Laborers (1918–1920)

# Tokyo Municipal Electric Bureau: The "Herald Wave"

The Tokyo Municipal Electric Bureau (TMEB) was in charge of supplying electricity to Tokyo citizens and operating the streetcar lines in the city. According to 1918 statistics,<sup>17</sup> the total volume of electricity supplied by the bureau during that year was

<sup>17</sup> Tōkyō-shi tōkei nenpyō.

61,530,000 kilowatts for streetcars, and 64,410,000 kilowatts for streetlamps and all other use. 18 The bulk of electric power for streetlights and consumer use was supplied by private companies, and the major business of the TMEB was the streetcars. At the time of the influenza epidemic, the train services in Tokyo were all terminal based (out of Tokyo, Ueno, Manseibashi, and Ryōgokubashi) and not linked together as they are today; the first buses began operation only in 1919 and there were as yet no subways. Public transportation in the city consisted entirely of electricity-powered streetcars. In the days before the streets were widened to accommodate such vehicles and were not yet sufficiently paved, and with the streetcars often packed to over capacity passing between rows of buildings with eaves reaching over the street, reports of collisions with automobiles—which had just begun to appear in the city—and other accidents frequently made headlines. The population of the city rose over 2,300,000, and there were also many passengers coming from nearby towns and cities. The bureau had 1,453 streetcars, but 908 of them were small, limited volume four-wheelers and the need to add bogies was urgent. The personnel who manned the streetcars as of the end of 1918 consisted of 275 supervisors, 3,017 conductors, 2,118 drivers, and 217 signal keepers, for a total of 5,627.19

Surveys of the health of such workers for the Tokyo Municipal Electric Bureau were conducted and reports have been preserved.<sup>20</sup> The 1918–1920 years when these surveys were conducted coincides with the 1918–1920 influenza epidemic, so we can tap the survey data to study the physical condition of Municipal Electric Bureau employees.

The document on which this survey is recorded consists of a large folded chart showing monthly numbers of patients suffering from major categories of illnesses of the time, listed by job category in the Electric Bureau. It also compiles totals by month and job category for the three years. Influenza should have been included under the major category of "constitutional or infectious diseases," but since the number of patients listed there for the period when the epidemic was raging is close to zero, clearly it seems that influenza was not being counted that way for their survey. There is, however, an item for "cold"  $(kanb\bar{o})$  in this category, so we can consider that influenza patients were included there. I have therefore charted the number of patients whose condition is given as a

<sup>18 &</sup>quot;Commerce and Industry: No. 25, Electricity Supply Volume of TMEB" in *Tōkyō-shi tōkei nenpyō*, pp. 792–93. In those days, other than the Municipal Electric Bureau, the Tokyo Electric Lighting Company and the Nihon Dentō Electric Lighting Company supplied electricity to Tokyo residents. The TMEB managed about 15 percent of streetlights and supplied about 2 percent of consumer electricity.

<sup>19 &</sup>quot;Transport, No. 13 Municipal Streetcar Cars and Personnel" in Tōkyō-shi tōkei nenpyō, p. 958.

<sup>20</sup> Tōkyō-shi Denkikyoku Chōsaka (Tokyo Municipal Electric Bureau, Survey Section), ed. *Taishō shichinen ikō ku-nen ni itaru jūgyōin no shippei chōsa*. Tōkyō-shi Denkikyoku Chōsaka Nōritsu Chōsashitsu, 1923 ("Nōritsu oyobi hoken chōsa shiryō" [Surveys on Efficiency and Health], vol. 2). This survey was commissioned by the TMEB and carried out by a doctor named Takamine Hiroshi. It is a valuable document for which tables were compiled showing numbers of patients by type of job as well as by type of ailment under major categories of illnesses used in those times.

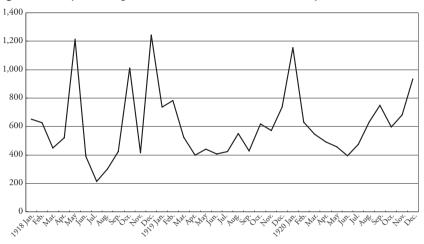


Figure 8-5. Tokyo Municipal Electric Bureau Influenza Patients by Month (1918–1920)

"cold" for the influenza epidemic period from January 1918 to December 1920 in Figure 8-5. For this graph, I have combined the figures for "new patients" and "continuing patients" in the original tables.

The fluctuations in the chart are quite striking and we can see the peaks in numbers correspond with the three outbreaks of the influenza epidemic: the "herald wave" in May 1918, the Early Epidemic in November 1918 and January 1919, and the Late Epidemic in January 1920. If we set the average number of patients for normal times at 400, it is clear that the number of patients tripled during the influenza epidemic.

This survey is a physical condition survey, so it does not give figures for deaths. In the data available here we can observe the number of patients at the time of the "herald wave," which is rare in other documents, and the number of patients with a "cold" is quite large.

#### Sumo Association: The "Sumo Flu"

Another source testifying to the "herald" presence of the influenza epidemic is the records of the Sumo Association. As introduced in Chapter 2, so large was the number of wrestlers who came down with influenza and dropped out of the 1918 Summer (May) tournament held in Tokyo that the term "sumo flu" (*sumō kaze*) came into use. Table 8-5, based on the official records of sumo match results for each wrestler<sup>21</sup> announced by

<sup>21</sup> I was able to make use of these records thanks to the kind consideration of Takeuchi Makoto, director of the Edo-Tokyo Museum. Mr. Takeuchi also explained old rules about the sumo matches and the use of the " $\uparrow$ " character (meaning "absent" [yasumi]) in those days.

the Sumo Association after each tournament, shows the bout-cancellation figures<sup>22</sup> for wrestlers ranked as  $j\bar{u}ry\bar{o}$  (second-highest division of wrestlers) and above for eight 10-day tournaments in the period of four years, from the Spring (January) 1917 to the Summer (May) 1920 tournaments.

Table 8-5. Number of "Absences" from Tournaments (Sumo Association Figures 1917 to 1920)

| Number of absences        | 1917   | 1917   | 1918   | 1918   | 1919   | 1919   | 1920   | 1920   |
|---------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Transer of absences       | Spring | Summer | Spring | Summer | Spring | Summer | Spring | Summer |
| 0                         | 22     | 34     | 21     | 25     | 28     | 28     | 38     | 29     |
| 1                         | 8      | 4      | 8      | 8      | 6      | 6      | 1      | 4      |
| 2                         |        | 1      | 3      | 1      | 1      |        |        |        |
| 3                         | 1      | 1      | 2      | 2      |        |        | 1      | 1      |
| 4                         |        | 1      | 1      | 2      |        | 3      |        |        |
| 5                         | 4      | 2      | 3      |        | 5      | 4      | 2      | 5      |
| 6                         | 3      | 1      | 3      | 1      |        |        | 1      |        |
| 7                         | 1      | 1      | 2      |        | 1      | 1      |        |        |
| 8                         | 1      |        |        | 1      | 1      | 1      |        |        |
| 9                         | 3      |        | 1      | 1      |        |        |        |        |
| 10                        | 3      | 1      | 4      | 5      | 4      | 3      | 1      | 5      |
| A) Total                  | 46     | 46     | 48     | 46     | 46     | 46     | 44     | 44     |
| B) Absence is 0 or 1      | 24     | 12     | 27     | 21     | 18     | 18     | 6      | 15     |
| C) Absence is more than 2 | 16     | 8      | 19     | 13     | 12     | 12     | 5      | 11     |
| C/A(%)                    | 34.8   | 17.4   | 39.6   | 28.3   | 26.1   | 26.1   | 11.4   | 25.0   |
| D) Scheduled tournaments  | 230    | 230    | 240    | 230    | 230    | 230    | 220    | 220    |
| E) Actual tournaments     | 182    | 206    | 186    | 188    | 194    | 195    | 208    | 190    |
| E/D(%)                    | 79.1   | 89.6   | 77.5   | 81.7   | 84.3   | 84.8   | 94.5   | 86.4   |

Note: Compiled by the author from the standings (hoshitorihyō) published by the Sumo Association.

According to the figures shown in the table, it appears that there were not a particularly large number of absences at the Summer 1918 tournament. In fact, it appears that the number of absences for wrestlers was greater for the Spring 1917 and Spring 1918 tournaments. This may have something to do with the season, but the only feature we

<sup>22</sup> Today, when a wrestler does not appear for a match his bout record is indicated by *fusenpai* (loss by default) and his opponent by *fusenshō* (win by default). In those days, the record for wrestlers who did not show up for a match would of course be marked with the *hiragana* character \*> (ya; "absent") denoting absence from the ring, but unlike today, their opponents, too, would have the same notation on their records, meaning no "win by default." The number of "ya" character notations, therefore, does not directly equal the number of wrestlers who dropped out of a tournament. This is why there are so many cases of just one "ya" for a wrestler shown in the chart. In those days, the tournaments continued for ten days, so cases when there were ten "ya" for a wrestler meant they had not participated in the tournament at all.

can identify for the Summer 1918 tournament is that there are five wrestlers who were absent for the entire tournament. If we add the number who were "absent" eight or nine of the ten times, it indicates that seven wrestlers were absent for most or all of the tournament, while that situation cannot be observed for any of the other tournaments. These wrestlers most likely dropped out of the tournament either because they had developed fevers or because they could not practice adequately for the competition (in both cases, due to influenza). Another feature that can be observed in the chart is that for the Summer (May) 1918 tournament, the total number of absences is much larger than for the others, and the proportion of actual bouts in the aggregate number of bouts including "absence" bouts is lower than in any other tournament. This would suggest that the term "sumo flu" was quite apt.

Another observation we can make is that wrestlers who were down with influenza during the "herald wave" appear to have acquired immunity against the later Early and Late epidemic phases. While there were many cases when the wrestlers came down with high fevers and dropped out of the tournaments, they did not die in the "herald wave." During this phase, the symptoms of the flu appear to have been relatively light and those who were fortunate enough to contract the flu then seem to have acquired immunity that enabled them to remain healthy through the Spring tournament the following year and even the duration of the Late Epidemic the following year. In any case, there were no other tournaments with such a high number of absences after that.

## Keio University: Toll among University Students

Like the military, the schools were the locus of large numbers of young people gathered together and a natural target of the influenza virus. Almost all the newspapers reported on how influenza spread in elementary schools, then spread to the secondary schools, forcing them to close their doors until the epidemic passed.

If, as our study thus far has demonstrated, the greatest toll was among young people in their twenties and early thirties, then it must have been higher schools, colleges, and universities that suffered far greater toll.

To learn how the influenza epidemic must have affected such schools, we may look at the example of Keio University. Under the educational system of the time, six years of elementary education were followed by five years of secondary education. Students who successfully passed the entrance examination could enter Keio University, where they would pursue a three-year preparatory program and after that join the undergraduate course. Therefore the students at the university were in the same age bracket as the young men who were joining the army and navy after passing the examination for new conscripts. In fact there were a number of students at the university who were listed as on "leave of absence" for service in the army or navy.

By charting the number of students in the preparatory program and in the undergraduate course at Keio University and the number of those who died or left school for other reasons, as in Table 8-6, we can see the sudden increase both in the number of students who died and in the mortality of the students in 1918 at the time of the Early Epidemic.<sup>23</sup> There were also many who left school because of illness. The figures show, however, that even in 1921 after the influenza epidemic had run its course, the number of students who died or left school because of illness was larger than before the epidemic. This is probably because the statistics are not reported by month but by academic year, so they do not accurately reflect the impact of the influenza epidemic. The numbers do, however, provide evidence of how influenza attacked people in the young age group; this suggests the direction in which future research should be directed.

Table 8-6. Drop-outs and Deaths of Keio University Students (1917–1921)

|      | Deaths | Illnesses | Other | Total | Students | Mortality |
|------|--------|-----------|-------|-------|----------|-----------|
| 1917 | 8      | 84        | 376   | 468   | 3,746    | 2.1       |
| 1918 | 24     | 95        | 325   | 444   | 4,111    | 5.8       |
| 1919 | 31     | 77        | 313   | 421   | 4,911    | 6.3       |
| 1920 | 32     | 73        | 391   | 496   | 4,954    | 6.5       |
| 1921 | 25     | 59        | 330   | 414   | 4,762    | 5.2       |

Source: Keiō Gijuku gakuji oyobi kaikei hōkoku/gakuhō, Keio University.

## The Imperial Academy: Decline in Attendance at General Meetings

Even the distinguished members of the Imperial Academy (Teikoku Gakushiin; president at the time Hozumi Nobushige, law scholar) were not immune to the influenza epidemic. Table 8-7 shows the rate of attendance at general meetings of the Academy from May 1918 through March 1920.<sup>24</sup> To compile this table I needed the current number of members for each year/month and the number who attended meetings. For the current number I consulted the *Nippon Gakushiin yōran* (Outline of the Japan Academy), checking the month/year of selection for the academy and month/year of termination of membership (upon death) to determine whether they were members when these meetings took place. Examining the figures in this way, I was able to determine that prior to the influenza epidemic, around May and June 1918, the attendance rate at general meetings was 75 percent or more, but from July onward, it fell to around 50 percent

<sup>23</sup> See Keiō Gijuku gakuji oyobi kaikei hōkoku/gakuhō and volumes 1 through 9 of Gakusekibo, both in the collection of Keio University.

<sup>24</sup> I am indebted to Ms. Kamada Momoko of the Japan Academy secretariat for her help in obtaining these figures on attendance at general meetings. The Academy had 60 members at the time of the epidemic and the members convened on the 12th of each month except for August and September.

and sometimes as low as below 40 percent. These figures would suggest that during the epidemic, members avoided going out either because they themselves or members of their families were ill with influenza or because they were afraid of catching influenza.

Table 8-7. Attendance at General Meetings of the Imperial Academy (1918–1920)

| Year | Month    | Members | Number of attendance | Attendance rates(‰) |
|------|----------|---------|----------------------|---------------------|
|      | May      | 50      | 40                   | 80.0                |
|      | June     | 52      | 39                   | 75.0                |
| 1010 | July     | 52      | 18                   | 34.6                |
| 1918 | October  | 52      | 28                   | 53.8                |
|      | November | 52      | 27                   | 51.9                |
|      | December | 51      | 23                   | 45.1                |
|      | January  | 51      | 19                   | 37.3                |
|      | February | 52      | 26                   | 50.0                |
|      | March    | 53      | 23                   | 43.4                |
|      | April    | 54      | 24                   | 44.4                |
| 1010 | May      | 53      | 29                   | 54.7                |
| 1919 | June     | 53      | 25                   | 47.2                |
|      | July     | 53      | 31                   | 58.5                |
|      | October  | 52      | 30                   | 57.7                |
|      | November | 50      | 20                   | 40.0                |
|      | December | 51      | 24                   | 47.1                |
|      | January  | 51      | 31                   | 60.8                |
| 1920 | February | 51      | 25                   | 49.0                |
|      | March    | 51      | 28                   | 54.9                |

It appears that one Academy member, Nakajima Rikizō, died of influenza on 21 December 1918. This is confirmed in a fairly substantial article in the *Tōkyō Asahi shinbun* published on the 23rd headlined "Dr. Nakajima Rikizō Died Suddenly Day before Yesterday Morning: Influenza Leading to Pneumonia." He was 61 years old. The comment included by Dr. Kuwaki Gen'yoku mentions that Nakajima had studied in the United States and Britain and was an authority on ethics. He had introduced the work of Thomas Hill Green (1836–1882; professor of moral philosophy, University of Oxford) to Japan and on the matter of free will was an advocate of a priori moral values. The announcement of the death of Dr. Nakajima in national newspapers around the country is a signal of the impact of his death. Those were the days in the world of Japanese philosophy when the "Kyoto School" led by Nishida Kitarō of Kyoto Imperial University was gaining influence, so for Tokyo Imperial University, the loss of Nakajima must have been a serious one.

An article in the *Yomiuri shinbun* on 15 December 1919 offers a glimpse of what the December meeting of the Academy (the last meeting of the year) must have been like. The article says 26 members attended (this is two different from the 24 recorded in the Academy records, but perhaps the two left early), with the assembled group rather small at just under half of the membership, and the article mentions that the impact of the influenza epidemic had been felt in the Academy. Many members, it says, were down with the flu and even among those present, many were sniffling and sneezing. After the formalities of the meeting, it says, they withdrew to the dining room for the meal. While scraping their knives over the porcelain, the members could be seen wheezing and sniffling. President Hozumi was at a loss to respond to the many solicitous queries about his wife, who was suffering from a cold. Some of the more cautious could be seen downing tablets of a flu preventative medicine called "Veenat."

## Influenza in the Literary World

The 1918–1920 influenza pandemic permeated into every corner of Japanese society, and the literary world was no exception. This section introduces prominent authors and an upcoming artist who were victims, and some of the literary works that took up the subject in their pages.

One of the most famous victims of the influenza epidemic, as mentioned in Chapter 4, was Shimamura Hōgetsu (1871–1918), author, playwright, and leader of the Shingeki (New Theater) movement then flourishing in Japan. He contracted influenza at the end of October 1918 and died on 5 November at the Geijutsuza Theater's Art Club. His death became even more well known after Matsui Sumako, the actress he had encouraged and who was his mistress at the time, committed suicide in January of the following year.<sup>25</sup>

The story of Hōgetsu's death carried in the 6 November edition of the *Tōkyō Asahi shinbun* was typical of the various articles about him published in other newspapers. The banner copy under the headline "Shimamura Hōgetsu Passes Away" noted that he had come down with influenza, taken a sudden turn for the worse while resting on the second floor of the Geijutsuza Art Club and died before Matsui or any of the other members of the troupe could be at his side. The text indicates that he contracted influenza on 29 October and had been convalescing in an upstairs room of the Geijutsuza Art Club in Ushigome (a district of present-day Shinjuku ward). On 4 November, he had seemed somewhat better, but that evening his condition suddenly worsened, apparently having developed into pneumonia, and he had died at 2:00 a.m. on the 5th. Only his doctor and a nurse were with him. The period from the end of October to early November 1918 was

<sup>25</sup> As the diary of Akita Ujaku (see section below) indicates, Matsui's suicide was probably not due only to Hōgetsu's death.

the peak of the influenza epidemic in Tokyo when many people contracted the virus and the number of deaths was large.

Among others who perished in the epidemic was an upcoming artist named Murayama Kaita (1896–1919) who died in February 1919. He is not that well known, but he had won prize for a watercolor work entered in the 1st Nika Exhibition in 1914 at the age of 18. He also received the Academy Prize at the 4th Japan Art Academy Exhibition in 1917. The bold colors and brushwork of his paintings asserting his personal style represented a forceful new presence in Japan's art world, and it was a great loss that he died at the young age of 23.<sup>26</sup>

In the world of Japanese literature, critic and writer Sekikawa Natsuo says, the only contemporary authors who treated the 1918–1920 influenza epidemic in their writings were members of the Shirakaba (White Birch) coterie:

From the fall of 1918 through the beginning of 1919 was the time of the "Spanish influenza" epidemic. [Author Shiga] Naoya was so concerned that his baby daughter, Tomeko, then one and a half years old, might catch the influenza that he often severely scolded the girl who had been hired from the village to look after his children, and wrote about that in his story 'Ryūkōsei kanbō to Ishi' (Ishi and the Influenza; later the title was changed to simply "Ryūkōsei kanbō"—"The Influenza"), published in the April 1919 issue of the *Shirakaba*.<sup>27</sup>

Ishi is the name of the maid Shiga had hired, and as he was living in Abiko (Chiba prefecture, suburbs of Tokyo) on the banks of the Teganuma marsh at the time, the maid was probably a farm girl from the nearby countryside. Shiga's first son had died, making him even more worried about his children, swearing that he would never let his daughters go away from home and fretting over the slightest ailment they might suffer. In the story, one night when a theater troupe is performing in the town, the protagonist suspects that "Ishi" has gone out of the house. When it turns out that she did, he is about to dismiss her, only to be persuaded by his wife to relent. The spread of influenza gradually lost momentum, but not before a gardener whom he had hired to tend his garden contracted it. After that the protagonist, his wife, a nurse they had called in from Tokyo, another maid, and after all the baby daughter, all come down with influenza, leaving only one other nurse and the maid "Ishi" healthy. The story continues until "Ishi" is about to leave the employ of the house to get married, and Shiga records his feelings throughout those times and his disgust with his own behavior for scolding and pitying her.

<sup>26</sup> See his works shown on the Tokyo National Museum of Modern Art website.

<sup>27</sup> See Sekikawa 2003, p. 351. The story "Ryūkōsei kanbō to Ishi" (later renamed "Ryūkō kanbō") can be found in *Shiga Naoya zenshū*, vol. 2, pp. 253–74.

Another influenza-related work by a Shirakaba-member writer is the story *Ai to shi* (Love and Death) by Mushanokōji Saneatsu (1883–1976). The story was published more than 20 years after the epidemic,<sup>28</sup> and is still read today. Leaving his girlfriend in Japan, a young man goes on a trip to Europe. In Hong Kong on his way home, he is plunged into grief upon learning of her death from influenza. With its sudden scene change from a world of happiness and bliss to darkness and grief, *Ai to shi* did much to bolster the reputation of Shirakaba-coterie literature of the sensibilities. Just as in the story by Shiga Naoya, however, there is not even a passing mention of World War I that was going on at the time. Whether for better or worse, awareness of contemporary events in society, which can be observed in most English and American literature, seems to be completely absent, reflecting the estheticism that is the undercurrent of Japanese literature in those days.

Another work that has come to my attention is the postwar story *Kai* (The Oar) by Miyao Tomiko. Miyao depicts the efforts of the protagonist Iwago to help the poorest of the poor in the midst of the influenza epidemic that hit the city of Kōchi on Shikoku Island, revealing an awe-inspiring aspect of a protagonist with a fierce temperament.<sup>29</sup>

Finally, although it does not depict the epidemic within Japan itself, there is a story by Akizuki Tatsurō *Maruta no hi* (Monument in Malta) that centers on events involving Japan's Second Special Fleet on duty in the Mediterranean Sea during World War I. Part of the story is that after the signing of the World War I armistice several members of the crew in the fleet die from the Spanish influenza epidemic at Malta, Britain, and elsewhere and some members are parted from their lovers by death.<sup>30</sup>

If these are indeed the only works of Japanese literature that mention the influenza epidemic of 1918–1920, it must be said to have been practically ignored. The only works that continue to be in print are the Mushanokōji and Miyao books, and apparently there is nothing to compare to Katherine Ann Porter's *Pale Horse, Pale Rider*, one of the important works of its era that still has a large readership. One wonders why it was that the scourge of an epidemic that took the lives of some 450,000 people in this country did not seem to capture the imagination of Japanese writers.

<sup>28</sup> The current edition is a Shinchō Bunko paperback published in 2000 (first published in 1952). According to the commentary by Odagiri Susumu, authority on modern Japanese literature, the story was first released in the journal *Nihon hyōron* in 1939 and then published by the Seinen Shobō; Mushanokōji wrote the story as he was urged to write something like his well-received *Yūjō* (Friendship) published in 1919.

<sup>29</sup> Miyao 1978. The influenza is just part of the story told in *Kai*, but it vividly portrays the city at the time the epidemic hit.

<sup>30</sup> See Akizuki 2002.

## The Epidemic in Personal Diaries

The diaries I will introduce here are all printed and published. Other than these, there are no doubt countless diaries, including handwritten copies, in private and public libraries around the country as well as personal accounts that people treasure in their families. The historian would want to find and study such primary documents along with published or public accounts, but an immense amount of time and money would be needed for such research. What is presented here is limited to those private journals that I was able to peruse in libraries in my vicinity.

## Hara Takashi Diary<sup>31</sup>

Known as the "commoner prime minister," Hara Takashi formed a cabinet in September 1918 and, in domestic affairs, led regional development in Japan in the last phase of the economic boom of World War I. In international affairs, he was popular for his pro-U.S. policies, and he contracted influenza not long after he became prime minister. His 26 October 1918 entry says: "Caught a cold and fever rose to 38.5 degrees C at night." On the 29th, the diary records, "Returned to Tokyo from Koshigoe [villa in Kamakura] before noon; my cold seems to be the flu (known as the "Spain flu") that has been spreading around the country. Fever came down for the first time in two days . . ." On the 30th, he writes, ". . . although there was a Privy Council meeting, less than a week has passed since I caught the flu, so decided not to appear before the Emperor and did not attend."

On 1 November he writes, "A set of additions to the Imperial Household Law was brought to the Privy Council for deliberation. I myself was worried as not even a week had passed since I had recovered from the flu, so I excused myself from attending. But they pressed strongly that my presence was needed since the Emperor would not be present, so I attended." On the 9th, he says, "Since I haven't gotten over this flu that I caught the other day, I took leave and came to the Koshigoe villa."

On 4 December he writes, "I have been home with the flu, but I received an invitation from the federation of union organizations in Tokyo, and it was a promise I made earlier, so I forced myself to attend and gave a speech to the assembled members." On the 5th: "Stayed home all day trying to heal the flu." On the 15th, "Flu still not cured and it was also Sunday, so I stayed at the Koshigoe villa." The prime minister was not the only patient. On the 19th, he notes, "Minister of War Tanaka absent with a high fever."

After the passage of two months, in March 1919, we find, on the 1st, "Headed for the Koshigoe villa because my condition is still no better." On the 9th, because of the absence of Foreign Minister Uchida Kōsai, who had contracted influenza and been absent frequently, Hara went to the Ministry of Foreign Affairs to listen to such

<sup>31</sup> Hara Takashi nikki, pp. 31-80.

<sup>32</sup> He returned to Tokyo on the 4th. In the meantime, the March 1st (Samil) Movement occurred in Korea.

important matters as the situation of opposition in the U.S. Senate to joining the League of Nations and the dismissal of ambassador to the United States Ishii Kikujirō. The entry of the 22nd includes, ". . . the flu is still not better, so headed for the Koshigoe villa in the morning. I have a slight fever and a very bad sore throat."

Based on the entries above, it is hard to be certain that Hara's "cold" was influenza, but, as he was 61 years old, he may have been particularly apprehensive about possibly having caught the dreaded flu. That advisors of the Privy Council and several cabinet ministers had contracted influenza is also reported in the newspapers at the time. It is possible that Hara's various plans did not go smoothly because of the epidemic unfolding at a time when Japan had so much to do in domestic and international affairs.

## Akita Ujaku Diary<sup>33</sup>

Writer Akita Ujaku (1883–1962) was on close terms with the above-mentioned Shimamura Hōgetsu, who was his teacher at Tōkyō Senmon Gakkō (predecessor of Waseda University), and he also knew Matsui Sumako well, so Hōgetsu's death and Matsui's suicide feature frequently in his diary. His diary includes an indication that he may have contracted influenza at the time of the "herald wave" outbreaks that were known as the "sumo flu." On 16 May 1918, there is an entry that says, "I have a slight fever." On the 17th, he writes, "I had a slight fever, but after sweat poured off me, I felt much better."

Starting on 26 October, however, the story is more dire:

26th: "[Caught] cold. What a high fever! It is agonizing. My whole body aches."

27th: "[My] cold is even worse. My whole body hurts. Fever (influenza).

30th: "I've recovered from my cold, but Shimamura-sensei is suffering from the influenza with Sumako. His heart is weak, so Shimamura-sensei finds it difficult to breathe, I hear. They have called a doctor to take care of him. Sumako seems to have gotten much better."

31st: "... Shimamura-sensei is really bad, and cannot go to the Meiji Theater."

2nd Nov.: "... Shimamura-sensei is still in grave condition ..."

4th: "Around 2:00, heard that Shimamura-sensei is in critical condition. Assailed by an inexpressible dread."

5th: "At seven minutes to two in the morning, Shimamura Hōgetsu-sensei died in a room in the Geijutsuza's Art Club. By the time everyone came back from the Meiji Theater, his life had completely ebbed away."

Later entries describe the funeral, the placing of Shimamura's body in his coffin, visiting Shimamura's grave, and the division of Shimamura's assets between the Shimamura

<sup>33</sup> Akita Ujaku nikki, pp. 142-207.

family and Matsui Sumako, and the Geijutsuza. On the 14th, Akita writes, "When I got home, there was a telegram saying that Ide Shōichi had died, so I quickly changed my kimono and went to pay my respects (the more I see people dying, the less I am surprised by death)."

Matsui Sumako's suicide on 5 January the following year is not directly related to influenza, so I will not go into detail here, but Akita's diary mentions the affair she had after Hōgetsu's death and relations with the Matsutake company in the theater-related business (later Shōchiku, the major film company).

Around the same period the next year, 1919, Akita caught a cold. He records (19 January 1920) the news of the death of an acquaintance from the influenza.

## Zenji nisshi<sup>34</sup>

The *Zenji nisshi*, one of the rare diaries kept by a farmer (in Shōnai), includes some entries relating to the Spanish influenza epidemic. The 9 February 1920 entry goes: "At around 2:00 this afternoon, had a flu preventive shot and then went to the Kinouchi Teacher's Housing . . .," letting us know that Zenji himself got a vaccination shot. Zenji's 15 March entry has, "Keishirō [a family member] went to Semi for a hot-spring cure a week ago, but because the flu is going around there he came back by noon . . ." Then on the 17th, we find, "[Keishirō seems to have] caught a cold in Semi, so went to see Dr. Ōi accompanied by our servant." Then, on the 18th, he writes, "Keishirō caught a cold and is coughing, so he went to visit the divine image of the Stop-Coughing Priest south of Kannonji village, to pray he would get over his cough.

Not only Keishirō had influenza. On 20 March, Zenji writes, "Day off. Caught cold, so sleeping." The 21 March entry is the same, ". . . day off. Have a cold, so sleeping," indicating he was in bed for two days. Zenji himself had fairly light symptoms, it seems, but it is not until 2 May that Keishirō's name is mentioned again, "Keishirō got over his cold; today he's plowing the field with his horse." It appears that Keishirō could not tend his fields for about a month and a half.

There are a number of other diaries that mention the influenza, but the entries are quite brief, so there is no point of detailing them all here. They include the diary of the writer Mori Ōgai (1862–1922), who was also a doctor,<sup>35</sup> of writer Nagai Kafū (1879–1959),<sup>36</sup> and Chinese poet and writer Lu Hsün,<sup>37</sup> among others. Curiously enough we find that there is absolutely no mention of the pandemic or influenza in the diary of a man like Gotō Shinpei, administrator and government official, who had previously been extremely

<sup>34</sup> Zenji nisshi, vol. 2.

<sup>35</sup> *Ōgai zenshū*, vol. 35, pp. 764, 791.

<sup>36</sup> Nagai 2001, vol. 1, pp. 43-48.

<sup>37</sup> Rojin zenshū, pp. 220-334.

#### CHAPTER 8

interested in population and hygiene, conducted various surveys, and implemented many sanitation policies. Perhaps the reason was partly that at the time when the Early Epidemic was at its peak, he was not in Japan.