

FORMATION OF THE MANAGEMENT SYSTEM IN MEIJI JAPAN: PERSONNEL MANAGEMENT IN LARGE CORPORATIONS

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I. WHAT IS THE JAPANESE WAY OF MANAGEMENT?

BEFORE World War II, few Western scholars tried to study Japanese business management. There was little interest in Japan itself, much less in its business management. Other than sporadic journals written by travelers to Japan, publications were limited to a number of well-informed studies on classical literature and history.

Rising from a war-ravaged rubble heap, Japan recovered miraculously and made rapid strides in economic growth which completely changed the picture. An increasing number of scholars in the West found studying the workings of the Japanese economy a worthwhile venture, especially the study of business and industrial establishments which were spearheading quick recovery and expansion. The surge of interest occasioned a considerable number of articles and books.¹ There are great amounts of literature by Westerners on Japanese enterprises if are included writings by Western businessmen working in Japan for a certain period of time and by journalists who visited Japan to write reports on the country. Common to all these publications is that they are comparative studies rather than being expressly studies of the Japanese corporation. Primary emphasis is on description and analysis of uniquely Japanese characteristics. During the early postwar period, differences were construed as coming from Japan's backwardness in industrialization or modernization. In the latter half of the 1950s, however, studies by Western scholars began to shift perspective, discerning characteristics of the corporation as part and parcel of cultural traits unique to Japan.

Japanese scholars before World War II were, for the most part, single-mindedly intent on studying business and industrial practices of the Western developed nations. Only after the end of the war, did they begin to focus attention on

¹ Some recent publications are: J. C. Abegglen, *Management and Worker: The Japanese Solution* (Tokyo: Sophia University Press, 1973); R. J. Ballon, ed., *The Japanese Employee* (Tokyo: Charles E. Tuttle, 1969); R. E. Cole, *Japanese Blue Collar: The Changing Tradition* (University of California Press, 1971); R. Dore, *British Factory—Japanese Factory: The Origins of National Diversity in Industrial Relations* (London: George Allen & Unwin, 1973); J. Hirschmeier, and T. Yui, *The Development of Japanese Business, 1600–1973* (Cambridge, Mass.: Harvard University Press, 1975).

business management in their own country. In the early postwar period, they were as strongly inclined as the Western scholars to see the distinguishing traits of the Japanese enterprise as a feature of backwardness. As they expanded their analytical framework to where business management was not simply an economic phenomenon but amenable to social and cultural analysis, it became increasingly relevant to view the Japanese enterprise not as something backward but as a manifestation of the nation's cultural heritage. What are now considered essential features of the Japanese management system are those which come mostly from this expanded analytical framework. The ideas presented in this paper come largely from what has been learned through the sociocultural approach to business management.

With recent progress in international comparison of corporations, some doubt has arisen on what really are the basic factors in the Japanese management system. The practice of life-long employment, for example, has for years been considered a typically Japanese characteristic. Yet, this view is not as firm as it used to be. A recent study shows that the management of the United States company IBM considers it important to have their employees work for a longer period of time, an attitude similar to the Japanese. In many Western countries, public sector employment is nearly life-long, similarly with the seniority order wage system salaries of civil servants and white-collar employees in large corporations are in high positive correlation with the duration of service. There is a good possibility that further detailed international comparison will find drastically different answers to the question of what are the unique components of the Japanese management system.

I intend to describe what the Japanese way of management is by limiting the discussion to rules and practices of employment relations, or, in a wider sense, the personnel management system in modern large-scale industries.

Employment relationships in the Western industrialized nations are based on economic contract to sell and buy labor and the equality of the participants is guaranteed by law. Needless to say, real businesses do not merely function as technical organizations producing goods and services but as social organizations of complex multi-sided human relations: a truism well-documented by various schools of modern organizational theory. Employees seek satisfaction of social (such as social recognition and self-realization²) as well as economic needs. Granted, it is a mistake to regard enterprises simply as economic organizations, but one cannot deny the fundamental fact that employment relationships are primarily framed by economic contract. Behind such contracts lies the ideology of modern individualism, relationships between employers and employees defined as control over the use of labor. (There are some enterprises in the West which have more "humane" employment relations: for example, paternalistic enterprises

² Earlier theory on modern organizations drew much from works by E. Mayo and C. I. Barnard. The current, influential theories are by F. Herzberg (*Work and Nature of Man* [London: Staples Press, 1966]), A. H. Maslow (*Motivation and Personality* [New York: Harper & Row, 1954]), and D. McGregor (*The Humanside of Enterprise* [New York: McGraw-Hill, 1960]), to name a few.

such as those run by Quakers³ and workshops of craftsmen. Such practices are, however, extremely rare in modern large-scale Western enterprises.)

Labor-management relations in modern large-scale enterprises of Japan are only weakly contractual cast in terms of a personal pledge. A new employee customarily signs a contract with his employer, but the contents are, in effect, a one-sided pledge by the employee. He swears in writing to obey minutely detailed office regulations such as not going home during hours without prior permission, while the employer gives in exchange simple notices of appointment stating posts and wages, but little else. These notices are usually extremely vague about employers duties or the rights of employees. The working relations between labor and management are personal and fashioned in patterns of patronage and obedience. Employers (superiors) have the right to use employee (subordinate) labor for production but at the same time are obligated to care for the employee's welfare. Employees are in turn expected to comply with the wills and wishes of their employers. Such multiple relationships are never explicitly spelled out in contract form for formal agreement; they are built on, above all else, mutual faith (or reciprocal expectations) between labor and management. This is an implicit contract form.

Multiple relationships between persons of unequal rank were omnipresent in various occupational groups in Japan during the feudal period, when society was divided into four strata ranked hierarchically in terms of ascribed status: samurai, farmers, craftsmen, and merchants in that order. The above-mentioned paradigm of implicit unequal contract was found, for instance, between a feudal lord and his retainers, a landlord and his tenant farmers, a master craftsman and his apprentices, and among a master, his managers, clerks, and errand boys in the merchant class. It is necessary to point out, however, that large-scale mercantile houses, such as Mitsui and Sumitomo, expressed in writing a considerable amount of the implicit relationships of patronage and obedience.

In the 1850s the Tokugawa shogunate was forced to rescind its long-standing policy of national isolation and begin diplomatic and trade relations with the foreign powers. After the Meiji Restoration, the new government adopted a national policy geared to accumulate national wealth (*fukoku*) and strengthen military power (*kyōhei*) to cope effectively with external political and economic pressure. As a measure for increasing national economic strength, the government proclaimed a policy of productive industry promotion (*shokusan-kōgyō*) by which a vigorous attempt was made to rapidly introduce modern economic institutions and production technologies from the Western countries. Young trainees were sent abroad to acquire advanced skills and knowledge, and engineers and workmen in various technical fields were invited from overseas. A new educational system was instituted to train qualified manpower necessary for developing modern manufacturing industries. When Japan was taking its first steps toward industrialization, large-scale factory system production had been already

³ See, J. Child, *British Management Thought* (London: George Allen & Unwin, 1969); R. Martin, and R. H. Fryer, *Redundancy and Paternalist Capitalism: A Study in the Sociology of Work* (London: George Allen & Unwin, 1973).

firmly established in the West, especially in Great Britain where the industrial revolution started nearly a century before. Manufacturing in Japan was far behind its Western counterpart in operational scale, production technique, and variety and quality of products. The first priority objective for the new Meiji government was to narrow the wide gap between Japan and the Western powers. The government decided to rapidly create large-scale industries by offering direct guidance and ample financial assistance, rather than waiting for rich merchants and farmers to gradually take the initiative of development.

Technology introduced to Japan was generally the most advanced by contemporary Western standards. Consequently, Japanese engineers and workmen had to take great pains to overcome the glaring gaps between the modern and the traditional production techniques they were well-acquainted with. The difficulties were not limited to production technologies. Introduction of new technologies presupposed an equally new organizational set-up. In the sphere of commerce, the limited number of big mercantile houses, such as the Mitsui, managed to develop large organizations with markets all over Japan during the feudal period. In industry, however, there existed only home crafts in rural areas and workshops of highly specialized artisans in urban areas. The government had the difficult task of organizing labor on a scale adequate to accommodate for modern large-scale production.

Once modern large-scale production was launched, both employers and workers experienced a sort of cultural shock, such as the language barrier with foreign engineers and workmen giving on-the-job training. Likewise, both sides had to contend with a wide gulf of habits and customs, what to wear, eat, and what type of housing to live in, and difference in weights and measures had to be adjusted.⁴ The government assiduously tried to assimilate as many products and institutions as possible from the West under the national slogan of civilization and enlightenment (*bummei-kaika*). Another obstacle in the process of technology transfer were the ingrained mutual racial prejudice bred on the part of Japanese during the long period of Japan's self-imposed international isolation. The racial feelings were not all that bad in hindsight, for the Europeans' unwarranted contempt offended proud Japanese sensibilities so much that every effort was made to master modern technology and, to a lesser extent, the organizational pattern in a surprisingly short period of time. Nevertheless, the virtually diametrical confrontation of behavioral patterns between the West and Japan was manifest not only on the individual level but on the institutional management level as well. The outcome was compromise: traditional Japanese employment relationships were incorporated emerging as inextricable components of the modern Japanese management system.

Japan was less developed as a modern nation-state. Different from other Asian countries, Japan did not come on to the international scene as a colony of a powerful Western nation; it was not subjected to the overwhelming influence of some other sovereign country introducing Western technologies and institu-

⁴ There was, for example, no concept of the week in Japan, nor of Sundays as regular time-off, nor weekly wage payments.

tions, as with the case of India and Great Britain. Contemporary Japanese leaders introduced the institutions and technologies of Western nations selectively as befit Japanese conditions. This helped the relatively unobstructed acceptance and diffusion of Western institutions and technologies in Japan. But, it also created a certain measure of confusion and incongruity, because these institution and technologies were developed as an integral part of divergent sociocultural heritages such as the United States and Prussia.

II. INTRODUCTION OF THE WESTERN-STYLE FACTORY SYSTEM— THE CASE OF A MODEL GOVERNMENT FACTORY

Thus, there was a great gap between Japanese traditional industries and modern Western ones. Other than a very limited number of ex-samurai intellectuals, no one in Japan at the time had any idea of what modern industry was like. It was hardly expected, under the circumstances, for big merchants or farmers, even with sizeable assets, to begin introducing modern industries into Japan. Instead it was the government which recognized the urgent need and took the responsibility for establishing the earliest Western-style factories. The government introduced factory system production into virtually all industries: machinery, chemicals, textiles, mining, and so forth. The primary objective was to build models to motivate private individuals to start similar establishments on their own. Government factories were more like training workshops than entities purely for large-scale production.

Tomioka Silk Mill is a good example of a government factory.⁵ When restrictions on external trade were removed toward the end of the Tokugawa period, the most important export commodities of Japan were raw silk, silk products, and green tea, and they remained so until the middle of the Meiji period. During the 1868–72 period, raw silk's share of total export averaged 38.0 per cent, and with cloth and other silk products accounted for as much as 56.9 per cent. The relative importance declined somewhat from 1873 to 1877, but was still 37.0 for raw silk and 44.3 per cent for all silk products. Raw silk and its products were not uniform in quality, because in early Meiji they were produced by traditional rural cottage industries. Quality dropped sharply when production was rapidly expanded to meet external demand. As a result, the price in the world market dropped year after year and export earnings plummeted. The government deplored this and decided to establish Tomioka Silk Mill to supplant traditional industries, thus introducing Western technology, improving product quality and increasing output.

The construction plan was drawn up in 1867 and the silk mill started operation two years later. Nine French engineers and workmen were invited

⁵ This government factory initially started as Tomioka Seishijō (Tomioka Silk Factory) but since 1876 it was known as Tomioka Seishijo (Tomioka Silk Mill). Information used in this section was taken mostly from: *Tomioka seishijo-shi* [History of Tomioka silk mill] [1], *Tomioka-shi-shi* [Town history of Tomioka] [13], and *Tomioka seishijō-shi* [Earlier days at Tomioka silk factory] [12].

to supervise construction work and give on-the-job training. The site chosen was in Tomioka, in present-day Gumma Prefecture, one of the major silk producing areas of the time. Tomioka is located far from urban centers and the area was predominantly rural. Therefore, the first obstacle the government had to overcome was the ignorance and superstition of the local people; they had not the slightest inkling of what a modern factory was, nor had they ever seen a foreigner. For example, no inn would agree to accommodate the French engineers visiting the area for a pre-construction inspection of the building site. Only after forcible persuasion by an accompanying Japanese official, did one of the local leaders reluctantly consent to offer his residence "in light of the national importance of the project." The decision to obtain timber from a nearby forest met vociferous resistance from the locals, who believed the guardian spirit of the forest would surely curse them with some calamity, angered not only by the unthinkable violation of the sacred area but by the use of timber for housing infamous aliens. When the factory made its trial run, they were frightened by the enormous clouds of black smoke from the chimneys and the roaring noises of many strange machines in operation. The local people firmly believed these were acts of magic conjured up by fearsome Christian sorcerers. A rampant rumor said the French engineers and workmen were drinking fresh human blood, someone apparently thinking red wine was blood. Everything the Frenchmen did or even what they looked was detested and feared by the distrustful populace. When the government tried to recruit female factory workers, it was almost out of question to expect applicants to come from the area. In the beginning, therefore, the Japanese management had their wives and daughters work at the factory to alleviate the misunderstanding.

The primary objective of government factories was, as already mentioned, the transfer of modern Western technology to Japan. No significance was attached to profit-seeking by factory operation, an imperative with any private enterprise.⁶ The factories functioned above all as industrial training schools. Many male and female trainees were sent to Tomioka Silk Mill from other counties and prefectures, and after several years of training went home to teach, in their turn, what they had learned. Striking, indeed, was the speed with which Japanese counterparts managed to adapt to entirely new production techniques. At Tomioka, the French engineers and workmen were gone by the end two years after the operation was begun. All went home long before the expiration of their contract for a stay of four years. Some left because of illness, breach of contract, and failure to culturally adapt. But Japanese engineers and workmen somehow

⁶ Disregard of profit-seeking was evidenced in the following incident in 1876. Atsutada Odaka, then factory manager at Tomioka, found out that the output of cocoons declined considerably in China and France in that year, while the price in Japan was falling due to a good harvest. Immediately he dispatched his staff to producing areas to buy up as many cocoons as possible. When the price of cocoons eventually soared in the world market, Tomioka Silk Mill could have made a handsome profit, but an official of the supervisory government agency heard of this, and officially reprimanded Odaka saying it was grossly improper for a government factory to engage in such speculation. The manager was then forced to resign.

managed to learn the minimum skills necessary to continue factory operation after departure of the French experts.

Tomioka Silk Mill and other model government factories no doubt played a pivotal role in the diffusion of Western technology, but they were not as effective in transferring a new, more efficient management system. On the one hand, though Japanese engineers and workmen quickly adapted to the new technology, their abilities were still short of the skill and labor productivity levels necessary for profits. The personnel organization and management system was, on the other hand, far from efficient. All government factories had, to be sure, a formally structured organization from the beginning. But it was fashioned partly after traditional bureaucratic structures of the Tokugawa period, and partly after fully developed large-scale factories in the West. One result was an inordinately high proportion of clerks, supervisors, and foremen vis-à-vis regular factory workers.⁷

Labor conditions in the early period of operation were relatively good, because they were originally set up for the foreign experts. At Tomioka, for instance, a day's work started at 7:00 in the morning and ended at 4:30 in the afternoon with a 30-minute break at 9:00 and one hour for lunch at 12:00: altogether eight work hours. Sundays were off-duty. According to records, the factory operated 228 days in 1875, considerably lower than the contemporary figures for private mechanized silk mills or 288 days at traditional silk spinneries using improved manual instruments. Pay by day rate rather than piece work was one reason the productivity of female workers did not rise appreciably at Tomioka.

Although Tomioka Silk Mill was equipped with advanced machinery and facilities, it was running in the red almost every year since the start of operation, due to high prices for cocoons, inefficient and unskilled female factory labor, and rising expenditures, according to an American who visited it in 1874. Practically the same applied to all other government factories which, although quite effective in diffusing technology, were anything but good models for profit-seeking corporations.

Government factory deficits were an increasingly heavy burden on the national budget, and it was decided to transfer most to private ownership once the dissemination of technology was sufficient. The 1880 General Ordinance for the Transfer of Government Factories placed the factories in three categories: those

⁷ According to records, the number of employees according to position at Tomioka Silk Mill in 1873 were as follows.

Male office workers	14
French engineers and workmen	9
Male trainees	12
Male regular factory workers	18
Female office workers	16
Female factory foremen and supervisors	24
Female regular factory workers	556
Others (guards, cooks, mechanics, etc., all male)	12

producing goods indispensable to government (armaments and the mint), those requiring large capital outlay and advanced technology (gold, silver, copper, and iron smelting, printing, and electric and telegraph wiring), and those important only as models. Fourteen factories in the third category (Tomioka Silk Mill among them) were first to be transferred to private owners. No entrepreneurs, however, were interested in factories so deeply in the red, and instead asked for government-run metal and coal mines not in any of the three categories. The government subsequently agreed in principle and started to hand over mines in 1884. Due to considerably softened terms of transfer, almost all initially undesirable factories in the third category, such as textile, cement, carbolic acid, and sugar, and even some smelters in the second and shipyards in the first category were in private hands before the turn of the century.⁸

Needless to say, not all Western industrial technology came into Japan via the model factory route. A copper mine at Besshi owned by the Sumitomo family continued to expand with the introduction of new technology, while most other major mines were taken over by the government either before or during the Restoration. Even with private ownership, however, entrepreneurs either hired foreign experts or went to government factories for on-the-job training themselves. Not infrequently engineers and workmen who learned new techniques at government factories later started their own companies. In this respect, the model government factories did have far-reaching importance for early Japanese industrial development, by disseminating basic Western technology all over the nation. However, Japan had to wait until the twentieth century for the emergence of industrial enterprises efficient both in profit-making and in the deployment of new technology.

III. DEVELOPMENT OF PRIVATE ENTERPRISE AND PERSONNEL MANAGEMENT

Full-scale industrialization was launched in Japan after the turn of this century. Victory in the Sino-Japanese War of 1894–95 was a decisive impetus for fostering the rapid development of Japanese capitalism. A huge war indemnity from China was eventually channeled into the nascent modern industrial sector. Furthermore, Japan managed to secure a strong foothold in China and Korea for the marketing of Japanese goods, which became a springboard for later colonial rule over these countries.

Nonetheless, it was not easy for Japan to expand manufactured exports in competition with Western advanced nations. The Meiji government had a basic twin policy of increasing national wealth and strengthening military power (*fukoku-kyōhei*) as well as vigorously working to promote export. Japan, however, has few natural resources. It had an extremely limited number of commodities to export and relied on an expansion of manufactured exports. Heavy

⁸ Transfer of government factories is well documented by Masaaki Kobayashi [8].

and chemical industries in Japan had only an incipient technology, and export was out of the question; these industries could not even satisfy rising domestic demand. Textile goods were almost the only products which could compete in the world market. Raw silk and silk products, a leading export commodity since the late Tokugawa period, were produced both by relatively large-scale mechanized factories (like Tomioka Silk Mill) based on modern Western technology and by small-scale enterprises using the improved conventional loom *zakuri*. The small-scale sector had a larger share in total output up to about 1890, when the modern sector started to take over. Consonant with the expanding share of the modern sector, total output increased by 42 per cent from 1893 to 1901 and the export share of total output increased from 48 to 79 per cent during the same period [5].

The rapid growth of output was partly due to more factories, but also attributable to scale expansion of modern factories and their improved efficiency of management. Tomioka Silk Mill is an example here [1] [13] [12]. The mill had an almost continuous deficit until turned over to Mitsui in 1893. It showed some profit in the year after transfer and then ran in the black most of the time. In 1895, particularly, profit was equivalent to over 60 per cent of the company's capital, so successful a feat that Mitsui decided to construct new factories. The following rationalization policies contributed to the drastic change. First, the cocoon purchasing policy was made more efficient; the company bought up as many cocoons as possible when prices were low, and refrained from purchasing otherwise, even if it meant letting machines lie idle. Second, management organization was rationalized by reducing the number of white-collar posts and minimizing the cumbersome procedures involved in writing and circulating office papers. Third, labor management was rationalized to increase profitability. Female factory workers were paid on an incentive basis rather than by day rate and the food allowance for commuting workers was stopped. Moreover, the work day was increased to about twelve hours, with workers getting only one or two days off a month.

When Mitsui took over the silk mill, female factory workers were no longer trainees sent from various parts of Japan; most were young women from impoverished rural families who had to work to help their families live. They came not only from Tomioka and neighboring areas but from all over eastern Japan. The company profited at the expense of the workers. After adoption of a piece work wage system, there was great income disparity among female factory workers according to skill. The overall level of income considerably declined, because punitive provisions were introduced for fine of any work rule infraction. Living conditions in dormitories for female workers deteriorated many falling victim to tuberculosis, beriberi, and other diseases caused by malnutrition, overwork, and lack of sanitation.

Before World War II, cotton yarn and cotton products as well as raw silk and silk products were Japan's major export commodities. As with the silk industry, the Meiji government set up two model cotton spinning mills in Aichi and Hiroshima Prefectures in 1878. These factories were equipped with spinning

machines from Manchester and they were a great impetus to the subsequent rapid development of private mills all over the country. Domestic output of cotton products was always lower than imports before 1890, but then it started to pick up rapidly. Cotton product export exceeded import levels in 1897, as Japan managed to oust Indian cotton from the Korean and Chinese markets. Japan's export in the late nineteenth century was largely cotton yarn, which was replaced by cotton cloth sometime after the Russo-Japanese War (1904-5). It was well into the twentieth century before cotton caught up and surpassed silk. After that cotton was the most important Japanese export commodity.

There are several important differences between the silk and cotton industry in the early history of Japan's textile industry. The silk industry relied chiefly on domestic raw materials, and processing factories were usually built near cocoon-producing areas. Except for a few large factories, the industry was small-scale, the majority of companies employing less than 100 workers. In addition, weaving companies were separate from spinning mills. The cotton industry did use domestic lint in the early days but soon found the supply insufficient and quality unsatisfactory. Eventually, the industry relied almost exclusively on raw materials from China, India, and the United States. Scale of operation remained small until around 1880; the larger mills equipped with only about 2,000 spindles. However, Osaka Cotton Spinning started operation in 1883 with 10,500 spindles, and spurred on by this large-scale development more and more factories of similar size were built, sometimes through the absorption of smaller ones. Large factories were, in some cases, deliberately established in rural areas to recruit the great numbers of workers required. But more frequently they were built in or near big cities with better transportation, for these mills depended on imported raw materials.

Japan's cotton industry developed through the use of British technology. The majority of spinning jennies were the mule type before 1889, and then ring jennies became dominant and continued to increase. As Japan's cotton industry expanded operations by using ring jennies, demanding less physical labor by workers, the labor force was made up more and more of women. At Osaka Cotton Spinning, for instance, women were 54.3 per cent of the 311 factory workers at the start of operations, and rose to 66.2 per cent of the 4,551 workers in 1892 [11, pp. 138-39]. How were these factory workers recruited to meet rising demand? By the time the Meiji government officially assumed power, there was a considerable number of impoverished people living in the big cities such as Tokyo and Osaka, more than ready to work at the cotton mills. But it did not take very long before the big city labor supply fell short of a rapidly expanding demand. An increasing number of young women were recruited from far afield, mainly from poor farming families. One major problem the early entrepreneur in the industrialized nations faced when first establishing large factory production systems, was the organization of sizeable numbers of workers and disciplining their work. Japanese management in both light and heavy industry had to contend with the same problem, but one was exacerbated all the more in the cotton industry with its large numbers of women workers

almost equivalently minor and adult.⁹ It was customary for women to quit when they got married. A dormitory system was then instituted as part of personnel management; young women and girls recruited from various parts of the nation were lodged in the dormitories and given around-the-clock supervision. Resident superintendents posted in the dormitories, closely watched over from the time the women got up in the morning, checked in at the factory, ate meals, went on outings until they were in bed at night. Management could prevent workers housed in dormitories from being absent or late for work, a fairly common practice among the few commuting workers at the time.¹⁰ Workers were captives deprived of freedom of movement, so to speak, or as a contemporary popular song went, "birds in a cage." On the factory floor, women were still under strict supervision. Rest periods were cut to the minimum, and any failure to obey the rules was harshly punished, usually by wage reduction. Labor management in cotton spinning mills before 1905 was much like prison administration. The situation was similar in silk spinning mills employing many women.

Few male factory workers were housed in dormitories, and were less subject to the company's close supervision than the women. Even then, those who were assigned by the company to live in private lodging houses or in one of the company-owned houses had far-reaching restrictions placed on them extending into their private lives.

According to a report submitted by a Ministry of Agriculture and Commerce

⁹ According to a survey conducted in 1897 by the Association of Cotton Spinners (Bōseki Rengōkai) on sixteen factories in the Kyoto-Osaka area and two factories in Tokyo, the age distribution of factory workers was:

	(%)
Under 11	1
11-14	15
14-20	42
Over 20	42

Sources: [4] [6, Vol. 1, p. 15].

¹⁰ Some cotton spinning mills did not have a dormitory system and relied exclusively on commuting workers. Factories which had dormitories generally employed a certain number of commuters. Commuting workers were often required to live in private lodging houses assigned by the company called *shitei-geshuku*. Landlords were entrusted with the same tasks as dormitory superintendents and closely watched lodgers to get them to work on time and prevent them from running away. The distribution of dormitory residents and commuters varied according to the company. The composition of workers by sex and domicile in sixteen cotton mills in the Kyoto-Osaka area in 1901 was:

	(%)	
	Men	Women
Dormitory	0.3	50.4
Assigned lodging	21.5	3.6
Commuters from elsewhere	53.0	33.1
Company-owned housing	25.2	12.9

Source: [6, Vol. 1, p. 139].

official in 1901, Japanese cotton spinning mills employed from 3.5 to 8 times more workers than in Great Britain. The official commented on the difference in efficiency where "workmen in the spinning mills of Europe and the United States are like regular troops trained by years of military drills, Japanese workmen are a milling crowd" [6, Vol. 1, p. 39]. Such Japanese factories could hardly be expected to manufacture products of high quality. In order to compete with England and other developed nations and to increase export volume, there was no alternative except making every effort to lower cotton product prices. Since price reduction was impossible through reducing the cost of imported raw materials, it was achieved at the expense of workers made to live on the lowest wages, work long hours well into the night, and live in unsanitary factory and dormitory conditions.

Such deprivations was not peculiar to Japan; it was common to all developed nations in the early phase of industrial revolution. Nevertheless, around-the-clock supervision of workers as seen typically in the textile industry dormitory system was unique to Japan's early industrial management. Workers were forced, in the worst situations, to live like prison convicts. Their daily life at factory and dormitory was under the strict control of the company. Fear kept the workers producing under punitive provisions which harshly punished those who failed to meet the prescribed quota, made goods inferior to the set standard, or damaged factory machines and tools. It was not uncommon for people incapacitated from illness to be made to work, and for workers to be kept under surveillance by a chaperon during their holiday outings to keep them from escaping. Even in better cases, workers still lived under strict military-like discipline, with around-the-clock supervision and extreme regulations on the factory floor and in dormitories. Although there were as many punitive sanctions in the better factories, more emphasis was put on motivating employees to work hard than on scaring them: a complex incentive system rewarded daily work attendance, completion of contract period, seniority, good performance, and special achievements.¹¹

Heavy industry was still in an extremely underdeveloped state compared with the textile industry, now at a point where it could nearly satisfy domestic demand and export the great bulk of its product. Government arms factories were in the majority in the heavy industry subsector and total output only met a fraction of domestic demand. The situation at the time is partially shown in the following figures on industrial establishments and employed workers. In 1904, heavy industry was only 22.2 per cent of the total for all industry and 77.8 per cent for light industry. Similarly, 29.6 per cent of the workers were

¹¹ Attendance awards (*kaikin-shō*) were given to those who were not absent from work for one or three consecutive months. Workers were rewarded when they completed the period of service stipulated in their contract (*manki-shō*). Awards for consecutive service (*kinzoku-shō*) were given for continuing work even after contract expiration. Good performance awards (*seigaku-shō*) were granted to workers who manufactured their quota of products with high quality in a stipulated time period. Special awards (*tokubetsu-shō*) went to those superior in skill and conduct, judged as good models for emulation, or who contributed to the company by invention or other special achievement [6, Vol. 1, pp. 84-85].

in heavy industry, and 70.4 per cent in light. The situation stayed more or less the same throughout the Meiji period. According to the government's 1899 National Statistics on Industrial Establishments, there were only thirty private machinery-building companies with more than 100 workmen, with a worker total of 11,437. Although the relative share for heavy industry remained small, the composition of the subsector registered significant change after the beginning of the Meiji period: with a gradual increase in private sector large-scale factories. Nagasaki Ship-Building of Mitsubishi Ltd., for example, employed 4,486 workers, whereas Kawasaki Ship-Building had 1,675 and Osaka Iron Works 1,371 workers at the turn of the century [7] [6, Vol. 2, pp. 5-6].

Labor management in larger enterprises was vastly different from that in light industry due to differences in technological requirement and in a labor force consisting chiefly of men. There was no dormitory system as that which played such an important role in textile industry development. It is important that in Japanese heavy industry the bulk of workmen were not directly employed by the respective enterprises. They worked, instead, for subcontractors called *oyakata* ("bosses"), and it was with these *oyakata* that company management negotiated work terms. Therefore, the management organization of the corporations was very simple, with a mere skeleton office staff. At Nagasaki Ship-Building of Mitsubishi Ltd., then largest of the private heavy industry establishments, the ratio in 1902 between office workers and workmen was 1 to 23 [10, Tabs. 3 and 7]. Large enterprises did have some workmen in their employ, but in almost all cases relied on labor supplied and controlled by the *oyakata*. Accordingly, they did not need as many office workers as would be normally required for personnel management. Once factory engineers agreed with *oyakata* on work programs, costs, and fees, carrying out the job was entirely the responsibility of the *oyakata*. Management took its greatest pains in securing as many efficient and trustworthy *oyakata* as possible.

IV. FORMATION OF THE JAPANESE WAY OF MANAGEMENT

The international market for manufactured products was firmly in the control of the Western developed countries, when Japan, still a backward nation, began to industrialize. It was and still is a nation with few mineral or other usable natural sources of raw materials. At a distinct disadvantage, Japan succeeded in taking off as a modern industrial nation in a comparatively short period of time. What factors contributed to this takeoff? As A. Gerschenkron points out Japan had the advantage of a less developed country in transfer of technology on the one hand, and on the other a strong-willed government which, as a powerful organizer, promoted modern industrial development in a short period of time [2]. Japan's success undoubtedly owed a great deal to these factors, but one cannot ignore the all-pervasive influence of nationalism. In late Tokugawa period and the first years of Meiji, Japan had a great deal of domestic confrontation and conflicts from differences in political, economic, and religious interest and outlook. On the whole, however, Japanese people, from the upper

classes to ordinary farmers and laborers, were united in the feeling that the crisis of some Western power colonizing Japan was imminent. The strong nationalism bred by such a widely held fear was a compelling reason for government *fukoku-kyōhei* policies to have the unabided attention of the people and for rapid industrialization to be achieved by resourceful entrepreneurs.

The textile industry played the most important role in the policy of increasing national wealth (*fukoku*); it was the first to succeed in technology transfer, quickly satisfying most domestic demand and helping Japan to earn sizeable amounts of foreign exchange. However, as seen in the preceding section, Japan's textile industry in Meiji had not fully assimilated modern technology, compared to textile industry in the West. This was especially true in the cotton industry, about to take over from silk as Japan's leading exporter. Productivity remained extremely low and the product quality inferior. The reason Japan began to oust British and Indian cotton goods from the Korean and Chinese markets in the late nineteenth century, was solely cheaper export prices. The policy of manufacturing cheap and inferior goods was, however, destined to reach an impasse in two ways. First, poor quality products have limited marketability, making it increasingly difficult for Japanese cotton to expand its external market. In fact, Japan depended on British imports for quality cotton goods. Second, there is a definite limit to how far working conditions can be lowered and still tolerated. In order to produce cheap goods despite low productivity, workers, especially young women, had to take the brunt of cost reduction. Many young girls' health was ruined from long work hours under strict supervision in unsanitary factories, their lives after work fettered in unhygienic dormitories, and paid the lowest of subsistence wages. As word of the harsh realities at the cotton spinning mills spread, applicants from rural and urban poor families dwindled. The cotton industry found it increasingly difficult to exploit women workers as if they were disposable washcloths.

Faced with such problems, foresighted entrepreneurs began to change their personnel policy. Steps were taken to solve simultaneously all problems confronting them; they switched production from the manufacture of cheap, inferior goods to quality goods. It was now crucial to upgrade workers' skills to accommodate this change, and executives decided to improve labor conditions.

The Kanegafuchi Spinning Company (sometimes abbreviated and now known officially as Kanebō) is a good example of the changes in personnel management. Kanebō established its first factory in Tokyo in 1888, and, by the end of the Meiji period, after new construction and amalgamation with other companies, owned about twenty factories for spinning and weaving cotton and silk. The company switched its policy to manufacturing quality goods at the turn of the century. Change in worker treatment was strongly advocated by Kanegafuchi Executive Director Sanji Mutō. Although cotton spinning and weaving did not require so higher skills than those of the machinery industry, Mutō considered improved worker skills a prerequisite to upgrading the quality of goods produced. The company had installed the most advanced machinery from Great Britain, so further quality improvement was sought by using better raw materials and

production techniques. Kanebō stopped buying inferior Chinese cotton and used Indian cotton mixed with better qualities from the United States.

A remaining problem was how to improve production techniques, especially workers' skills. As already mentioned, textile companies exploited women under extremely harsh working conditions. Women workers usually had a three to five year contract, but a great many actually stayed less, often becoming ill or running away from unbearable working and living conditions. According to a survey report submitted to the Ministry of Agriculture and Commerce in 1901,

...Workers in the cotton spinning factories have an extremely high turnover in our country; the labor corps is almost completely replaced within a year on the average. At a factory with 1,000 workers in Osaka, for example, inflow and outflow of workers is 1,200 per year. The company therefore had to recruit 1,200 new workers every year. A great many of these newcomers leave their jobs after one or two months of employment...[6, Vol. 1, p. 40]

It has to be remembered, however, that many women workers quit only to get jobs at other spinning mills, so that their years of experience were not always as short as appeared from their years of service in one company. Nonetheless, the unusually high mobility was a great obstacle to improving workers' skills. At Kanebō, an attempt was made to retain women workers longer and to raise their years of experience in specific job categories. It was expected that, in so doing, the skill level could be upgraded to produce better goods. To improve the company's retention of women workers, Kanebō introduced a series of measures, the start of the labor management system which was later to be known as "Kanebō one big family." The personnel management system had far-reaching influences on other enterprises, and was in fact the forerunner of the present Japanese management system.

Before briefly examining the measures at Kanebō, it is necessary to again mention the general characteristics of the women labor force at Meiji period cotton mills. At the turn of the century, a great majority were young unmarried women of 15–20 years old. They came from either farming or fishing families, and had completed compulsory education or its equivalent before being employed.¹² They left home to work at spinning mills in urban centers and often quit at the time of or a little prior to marriage. What effective measures were devised to get them to stay longer with the company? Most effective would

¹² According to a 1902 survey on the main Kanebō factory, the youngest male employee was 12 years 6 months and the youngest woman worker was 10 years 10 months, while the oldest man was 57 years 5 months and the oldest woman was 53 years 7 months. The age distribution of woman was:

	(%)
Below 14	2.3
15–20	70.6
21–30	21.6
31–40	4.8
Over 41	0.7

Source: [6, Vol. 1, pp. 8–9].

naturally have been improvement of wages and other conditions of employment. Although Kanebō had a comparatively better performance record, it was nonetheless one enterprise in an industrially backward nation and could not afford to have employment conditions far above the prevailing standard. The actual steps taken were to, first, attempt to improve factory and service facilities for a sanitary, comfortable working environment. Second, to alleviate worker dissatisfactions, complaint boxes were installed and regular interview sessions instituted for direct communication with management to air demands for improvement and grievances. Third, baths, recreation and reading rooms in dormitories were improved so that workers could rest and refresh themselves adequately after work. Fourth, food was improved to better the lives of women workers, who had few other pleasures in the dormitories, and the hygienic standard of living conditions was raised. Fifth, the company set up various after-work educational programs for general culture and domestic skills such as cooking and sewing useful in marriage. Sixth, Kanebō introduced better relief provisions for sickness and accident. Last, Kanebō started publishing a company periodical to provide information to workers and establish better communication between families at home and the company. For commuting married men and women workers, Kanebō adopted a principle of not firing employees (called *fukaiko-shugi*), except in case of criminal acts, gross insubordination, irrecoverable illness, and the like. The company also provided its workers with inexpensive housing, shopping facilities to buy daily necessities almost at wholesale, and set up nurseries and kindergartens to care for infants while their mothers worked in the factory. Kanebō also held regular athletic meetings and garden parties and organized theater excursions to provide recreational opportunity for employees who could not afford such luxuries. The company also established a training school for young male workers [3, pp. 310–21]. All these "facilities to further workers' happiness" were established from 1902 to 1907.

Kanebō was not any different from other large enterprises in the textile industry in terms of wage level and working hours. The company excelled over others by providing a happier environment. The new facilities and services offered a familistic setting for young women who had to live far from home. Married workers, both male and female, were assured of stable employment by the company's non-separation principle, and could live more comfortably with cheaper daily necessities from company shops. They were able to work with a sense of security, having relief provisions in case of unexpected illness or accident. All measures adopted by Kanebō were aimed at providing security and stability to employees with varying living requirements. The keynote of management attitude was in caring for the entire life of the employee. When Kanebō institutionalized its happiness inducements, the personnel management staff increased considerably.

Were these measures really effective? In August 1902, Kanebō had 11,503 factory workers, hiring 1,407 with 1,385 employees leaving. Monthly mobility measured by ratio of leavers to total labor force at the beginning of the month was a little over 12:100. In January 1906 after the adoption of the happiness

inducing policies, the company had 13,212 workers at the beginning of the month, 565 leavers and 570 newcomers. That is, labor mobility decreased to a little over 4:100, a two-thirds reduction. Consequently, recruitment costs were cut by 50 per cent from 7,732 yen in the latter half of 1903 to 3,276 yen in the latter half of 1905 [9, pp. 54-55].

In addition to Kanebō, several corporations attempted similar measures at the time. In heavy industry, Nikkō Electric Copper Smelting of Furukawa Mining Co. is a notable example. I mentioned earlier that model government factories played a pivotal role in introducing modern Western technology in early Meiji period and that these government factories functioned as models strictly for technology transfer, offering little in the way of profit-making vital to private enterprise. But Kanebō and Nikkō Electric Copper Smelting differed in this respect because they were private enterprise models for effective personnel management.

Japanese model private enterprises took what they could from worker welfare policies of the Western nations. Kanebō, for instance, copied the practice of NCR Co. in the United States on complaints boxes and company journals. The company's mutual benefit association was pattern after that of Krupp in Germany. Other enterprises looked at examples of paternalistic enterprises in the West, like Cadbury in Great Britain. Less developed countries with low labor productivity and distinct disadvantages in marketing have no other method at their disposal than to manufacture large amounts of cheap goods, pay low wages and make their employees work longer hours, in order to catch up and effectively compete with advanced nations. It is especially noteworthy, in this respect, that large Japanese enterprises devised personnel management to change the manufacturing orientation from cheap, inferior goods to inexpensive, good products and succeeded. The actual steps taken were not to approximate Western-style contractual relations but to establish personal relations between labor and management so that employees would work conscientiously under a benevolent protection for their entire lives. The development of personnel management along these lines cannot be judged irrational, at least in view of the results it achieved in a once-backward Japan. As best exemplified in Kanebō's non-separation principle and other measures geared to worker welfare, Japanese-style personnel management contributed in no uncertain terms to stabilizing the labor force, upgrading workers' skills, and producing inexpensive, quality goods.

Successes at Kanebō and other forward-looking corporations eventually had a strong influence on the rest of the large companies. Improved personnel management systems initiated by a few advanced companies were adapted elsewhere, though details varied according to industry and enterprise type. General use of the improved management had to wait until the Taishō period, but its prototype had been formed during Meiji. Management attitudes toward labor exemplified in the model private enterprises at the turn of the century remain largely unchanged even to this day. Life-time employment, seniority system (valuing age and length of service), various welfare facilities and services extending beyond the factory compound, and other institutional characteristics of the

Japanese management system have their forerunners in the model private enterprises such as Kanebō and Furukawa.

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