in 1878 the Satsuma warriors, in their gorgeous robes and terrifying armor, brandishing steel swords that could cleave a body at a blow or slice a floating, gossamer piece of silk, pranced and bragged before the impassive, stolid ranks of a disciplined, uniformed peasant army equipped with muskets. And when the smoke cleared, the flower of Japanese chivalry lay dead.

23

The Meiji Restoration

Japan had a revolution in 1867–68. The shogunate was overthrown—really it collapsed—and control of the state returned to the emperor in Kyoto. So ended a quarter millennium of Tokugawa rule. But the Japanese do not call this overturn a revolution; a restoration rather, because they prefer to see it as a return to normalcy. Also, revolutions are for China. The Chinese have dynasties. Japan has one royal family, going back to the beginning.

It was in the 1180s that Japan was first ruled, not by the emperor but by a warrior chief called a shogun (literally, leader of the army). With some interruptions and interregnums, this rule by the strongest became the normal pattern. Such is the weakness of heredity kingship: even with the help of divine ancestry, a dynasty is hard-put to maintain competence indefinitely. Weak genes, bad marriages, whatever: strong men, mayors of the palace, will rise to power and sooner or later oust the legitimate monarch.

So it was in medieval France, where the Carolingians displaced the Merovingians and were pushed aside in turn by the usurper Capetians. In Japan, however, the solution was not to dethrone and expunge the dynasty, but to immure it. The emperor, his family, and his court were confined to their palaces and temples—under the Tokugawa shogu-

nate, in Kyoto. There the Mikado wrote poetry, performed symbolic religious acts (like planting the first rice), let himself be entertained and ministered to. That was the Japanese version of virtual divinity: ceremonial isolation and sacred haplessness.

The existence of an emperor, however—of a legitimate ruler, then, above the real ruler—made it possible for enemies of the Tokugawa shogunate to look to an honorable alternative. In a society that valued nothing higher than personal loyalty, disaffected elites could set higher authority—the emperor *(Tenno)* and the nation—above their lord and the shogun above him, without being disloyal. They could make a revolution without being revolutionaries.

Meanwhile the symbols of national unity were already there; the ideals and passions of national pride, already defined. This saved a lot of turmoil. Revolutions, like civil wars, can be devastating to order and national efficacy. The Meiji Restoration had its dissensions and dissents, often violent. The final years of the old, the first of the new, were stained with the blood of assassinations, of peasant uprisings, of reactionary rebellion. Even so, the transition in Japan was far smoother than the French and Russian varieties of political overturn, for two reasons: the new regime held the high moral ground; and even the disaffected and affronted feared to give arms and opportunity to the enemy outside. Foreign imperialists were lurking to pounce, and internal divisions would invite intervention. Consider the story of imperialism elsewhere: local quarrels and intrigue had fairly invited the European powers into India.

The Tokugawa shogunate was already breaking down before the middle of the nineteenth century. The old rules of place and rank were openly flouted. Needy *samurai* married merchant heiresses. Wealthy peasants became local notables, the equivalent of country gentry. Obedience dissolved. The wealthier *han* (those of western Honshu and southern Kyushu) undertook their own foreign policy, thinking to deal with these outrageous, insolent barbarians better than the shogunate could. Hiring foreign technicians and advisers, they bought arms from abroad, built arsenals and shipyards. Some of them even conscripted peasants for military service, and the *Bakufu* began to do the same. In a country where peasants were forbidden to bear arms and *samurai* lorded it over commoners by the sword, here was a gross breach of public order and social propriety, of immeasurable consequences. But how else to arm for war? The *samurai* hated to fight with guns, which they saw as demeaning and dishonoring.

At this point, one short-reigned, ineffectual shogun followed an-

other, fomenting intrigues over the succession, spawning cabals, inviting subversive appeals to Kyoto. And again and again, pressure from outside embarrassed the regime. In a society that had never admitted the stranger, the very presence of Westerners invited trouble. More than once Japanese bully-boys challenged and assaulted these impudent foreigners, the better to show them who was boss. Who was boss? Certainly not the shogunate. In the face of Western demands for retribution and for indemnities, the Japanese authorities could only temporize and, by waffling, discredit themselves in the eyes of foreigner and patriot alike.

But what was one to do? The outside powers *knew* they were stronger and would not yield to violence. In September 1862 a team of Satsuma warriors deliberately attacked some English merchants and a European woman; and when the *Bakufu* proved unwilling and unable to compel Satsuma to make reparation, the British sent a fleet in August 1863 to shell the castle town of Kagoshima. The lesson worked. Satsuma, confronted with reality, offered to establish direct trade and diplomatic relations with Great Britain—directly flouting the shogunate's traditional monopoly of foreign affairs. The same with Chōshū. On 25 June 1863, the date fixed by the imperial court in Kyoto for expulsion of the barbarians, impatient Chōshū patriots fired on an American ship passing through the Shimonoseki Straits. It took a year of palaver to come to a dead end; and then, in September 1864, a fleet of 17 British, American, French, and Dutch naval vessels with 305 cannon sailed into Shimonoseki Harbor and demolished all the forts. Chōshū capitulated and like Satsuma asked for direct and friendly relations with the Westerners. And Chōshū and Satsuma, traditionally antagonistic, now joined forces to get rid of the *Bakufu*.[1]

The *Bakufu* found itself fatally discredited by its weakness and ineptitude. Once it signed treaties with Townsend Harris (for the United States, in 1854) and then with the great European powers (1858), it lost honor and legitimacy. Meanwhile Japanese honor was not Western honor. The codes were different. One man's word was the other's prevarication. Twist and turn, the *Bakufu* might. It could send subordinates to negotiate, who would then plead the need of higher confirmation. It could sign but then argue that the agreement had not received the emperor's sanction. In short, it gave its word while withholding it; said yes while meaning no. Nothing could more envenom the conflict. The shogunate had better have succumbed to *force majeure* and said as much: You Westerners have the guns. All right, one day we'll have them too.

(Compare here the misunderstanding over Japan's attack on Pearl Harbor: for the Americans, a day that would "live in infamy"; for the Japanese, an unfortunate error in timing. The Americans were apparently supposed to receive notice that the Japanese were "breaking off negotiations" a half hour before the attack took place; they got it afterward. To this day, the Japanese think this the heart of the matter: previous warning, however short and oblique [but diplomats are supposed to be able to read between the lines], would justify a long-prepared surprise attack. For the Americans, such notice would in no way have diminished the infamy.)

The pretensions of the outsiders were the heart of the matter. *Sonnō jōi*, went the pithy slogan: Honor the emperor; expel the barbarians. The leaders of the move for change were the great fiefs of the far south and west, Satsuma and Chōshū, once enemies, now united against the shogunate. They won; and they lost. That was another paradox of this revolution-restoration. The leaders thought they were going back to days of yore. Instead, they found themselves caught up in tomorrow, in a wave of modernization, because that was the only way to defeat the barbarians.

Now the true revolutionaries took over: the *rangakusha*, the technicians, the forward-looking bureaucrats. The year 1868 began with the opening of more major ports to foreign trade. On April 6 the new emperor swore a "Charter Oath" promising representative institutions and the creation of a new democratic civil society. (It proved easier to promise than to do, and this gesture may have been directed more to outside observers than to the Japanese people.) What mattered more was the transformation of the central government: the abolition of feudal institutions, the conversion of the fiefs *(han)* into prefectures *(ken)* administered by government appointees, the appropriation by the center of revenues that had gone to the old warrior elite. Here again Satsuma and Chōshū set an example: in March 1869 their *daimyō* offered their lands to the emperor, that is, to the nation. The other *daimyō* then fell into line, because that was the right and loyal thing to do. (This gesture recalls the voluntary surrender of feudal dues by the French nobility on the fateful night of August 4, 1789.) Meanwhile Japanese peasants no longer paid dues to their *daimyō*; they paid taxes to the imperial government.

The Japanese went about modernization with characteristic intensity and system. They were ready for it—by virtue of a tradition (recollection) of effective government, by their high levels of literacy, by their

tight family structure, by their work ethic and self-discipline, by their sense of national identity and inherent superiority.

That was the heart of it: the Japanese knew they were superior, and because they knew it, they were able to recognize the superiorities of others. Building on earlier moves under Tokugawa, they hired foreign experts and technicians while sending Japanese agents abroad to bring back eyewitness accounts of European and American ways. This body of intelligence laid the basis for choices, reflecting careful and supple consideration of comparative merit. Thus the first military model was the French army; but after the defeat of France by Prussia in 1870–71, the Japanese decided that Germany had more to offer. A similar shift took place from French to German legal codes and practice.

No opportunity for learning was lost. In October 1871, a delegation headed by Prince Iwakura Tomomi and including such innovators as Ōkubo Toshimichi and Prince Itō Hirobumi traveled to the United States and Europe to ask for rescission of the unequal treaties imposed in the 1850s. The Japanese wanted above all to (re)gain control over their tariff, the better to protect their "infant" industries. They ran into a stone wall: the Western nations had no intention of giving up their hard-won right of entry to the Japanese market. No matter. The delegation swallowed their pride and went about their calls, visiting factories and forges, shipyards and armories, railways and canals, not returning until September 1873, almost two years later, laden with the spoils of learning and "on fire with enthusiasm" for reform.

This direct experience by the Japanese leadership made all the difference. Riding on an English train and meditating on the industrial landscape, Okubo confided ruefully that, before leaving Japan, he had thought his work done: the imperial authority restored, feudalism replaced by central government. Now he understood that the big tasks lay ahead. Japan did not compare with "the more progressive powers of the world." England especially offered a lesson in self-development. Once a small insular nation—like Japan—England had systematically pursued a policy of self-aggrandizement. The navigation acts were crucial in raising the national merchant marine to a position of international dominance. Not until Britain had achieved industrial leadership did it abandon protection for laissez-faire. (Not a bad analysis. Adam Smith would not have disagreed.)

To be sure, Japan would not have the tariff and commercial autonomy that seventeenth-century England had enjoyed. All the more vexing was European refusal to renegotiate the unequal treaties. Here, however, the German example made sense. Germany, like Japan, had

only recently come through a difficult unification. Also Germany, like Japan, had started from a position of economic inferiority, and look how far it had come. Okubo was much impressed by the German people he met. He found them thrifty, hardworking, "unpretentious"—like Japanese commoners, one imagines. And he found their leaders to be realists and pragmatists: focus, they said, on building national power. They were the mercantilists of the nineteenth century. Okubo came back and gave a German orientation to the Japanese bureaucracy.[2]

First came those tasks ordinary to government: a postal service, a new time standard,* public education (for boys and then for girls as well),† universal military service.** The last two in particular defined the new society. General schooling diffused knowledge; that is what schools are for. But it also instilled discipline, obedience, punctuality, and a worshipful respect for (adoration of) the emperor.[3] This was the key to the development of a we/they national identity transcending parochial loyalties and status lines. The nation's calendar was homogenized around the *Tenno* cult. Every school had its picture of the emperor, and on every national holiday, the same ritual was performed in front of this icon throughout the country *at the same time.*

The army (and navy) completed the job. Beneath the sameness of the uniform and the discipline, universal military service wiped out distinctions of class and place. It nurtured nationalist pride and democratized the violent virtues of manhood. In Japan, this meant generalization of the right to fight—an end to the *samurai* monopoly of arms. (Not every former commoner applauded the change. War and violence had always been the business of the elite, who were duly rewarded with stipends. Many of those too old to have been formed by the new common schools asked why they were now expected to engage in such foolishness. But they would not do the fighting.)

Higher authority saw a citizen army as a prerequisite of power, and power was the primary objective—power to be free, power to talk back to the Europeans, power to push others around the way Europeans

* Bringing equal hours and the Gregorian calendar. Even so, it remained customary to number years by the dates of the emperor's reign, a practice that has not been entirely abandoned over a century later. For foreigners, it makes for a crash course in Japanese political history.

† Minimum four years at first, six years from 1907. Given the difficulties of Japanese script, three or four years were needed to impart literacy.

** Exceptions were made initially for married men and only sons. One effect was to encourage early marriage.

did. In September 1871, the new Japan negotiated a treaty with China. The treaty did not accord Japan extraterritorial and commercial privileges like those already granted to the Western powers; but it was signed as between equals. A momentous "first"; inequality would come after. This was followed in 1874 by an expedition to Formosa (Taiwan), which in effect affirmed Japanese sovereignty over the Ryukyu Islands and laid the basis for a later claim to Formosa itself. Then, in 1876, a naval expedition to Korea extracted Chinese recognition of Korean independence. This poisoned gift removed Korea's cover against eventual Japanese aggression, while securing for Japan extraterritorial and commercial privileges that would whet the Japanese appetite and lead to further gains. New Nippon, bursting with energy and force, knew a victim when it saw one. Great China lay wounded, and the very largeness of its earlier pretensions invited attack.

Earlier, in November 1873, the imperial cabinet had already divided between a peace party, which wanted to concentrate on modernization and reconstruction at home, and a group of hawks calling for war against Korea. Five of the new oligarchs resigned, chief among them Saigō Takamori of Satsuma, one of the leaders in overthrowing the shogunate. That was not the end of the story. Now these ex-warriors, projecting their personal discontents onto the national stage, cried out against the Japan-China-Korea treaty of 1876, however advantageous. They had preferred to stay on in Korea, thereby realizing an old dream of mainland conquest.

Their disappointment was compounded by two acts of aggression against the *samurai* class. First, the traditional stipends, now converted to pensions, were commuted to a single payment of the capitalized equivalent. The *samurai* got state bonds instead of an annual revenue, and the value of the paper was hostage to monetary policy and the value of the yen. It was not long before inflation compelled the *samurai* to work for a living. Some did, and well indeed. Others sank into poverty and nursed their grievances. Still others tried to convert pride and sometime status into good jobs and marriages. That is what declassed aristocracies everywhere try to do: turn blue blood, patrician profiles, and grand manners into coin.

The second measure was even more painful in its symbolism: the ex-*samurai* were prohibited from walking about with their two swords. These weapons had made commoners tremble for their lives. Most commoners still trembled out of habit, but now even peasants might own a gun. Meanwhile statesmen and politicians vied in salutes to westernization. They went about in formal European dress more suit-

able to a Paris wedding than to everyday business in Tokyo; wore absurd top hats on cropped polls; brandished umbrellas in rain and shine; rode about in carriages; sat in chairs around tables; met in newly built stone structures that rebuked the paper-and-wood buildings of Japanese tradition.*

Samurai resentment boiled over into political assassinations. The most spectacular was the killing in May 1878 of Okubo Toshimichi, home minister and a principal builder of the new Japan, on his way in foreign horse carriage and Western regalia to a meeting of the Council of State at the Akasaka Palace in Tokyo.† The six assassins, five of them ex-*samurai*, defended their action by denouncing the waste of precious funds on economic trivia while warriors suffered want. But the symbolism also mattered. Many years later, the wife of the Belgian minister, then resident in Okubo's old house, wrote in her diary: "I am told that one of the reasons [for Okubo's] unpopularity, and incidentally the cause of [his] political murder was . . . the construction of this very European house."[4]

These murders changed little. Nor did the rebellions. Old met new—and old lost.

Meanwhile state and society went about the business of business: how to make things by machine; how to do more without machines; how to move goods; how to compete with foreign producers. Not easy. European industrial nations had taken a century. Japan was in a hurry.

To begin with, the country built on those branches of industry already familiar and changing even before Meiji—silk and cotton manufacture in particular, but also the processing of food staples immune from foreign imitation: sake, miso, soy sauce. From 1877 to 1900—the first generation of industrialization—food accounted for 40 percent of growth, textiles 35 percent.[5] In short, the Japanese pursued comparative advantage rather than the will-o'-the-wisp of heavy industry. Much of this was small scale: cotton mills of two thousand spindles (as against ten thousand and up in western Europe); wooden water wheels

* These symbols held immense importance to a society that had systematically cultivated its particularities as virtues. Cf. the petition to the emperor in 1875 of Shimazu Hisamitsu, member of a powerful Satsuma clan, asking him to ban the wearing of Western clothes, among other things. The memorial was rejected, and Hisamitsu left Tokyo to sulk and plot. Cf. Brown, "Okubo Toshimichi," p. 189, n. 21.

† The Home Ministry was concerned not only with police and public order but also with economic development, working through its Bureau for the Promotion of Industry.

that were generations behind European technology;* coal mines whose tortuous seams and hand-drawn baskets made the infamous British pits of an earlier time look like a promenade.[6]

The economist's usual explanation for this inversion of the late-follower model (late is great and up-to-date) is want of capital: meager personal resources, no investment banks. In fact, some Japanese merchants had accumulated big fortunes, and the state was ready to build and subsidize industrial plant. As it did. But the long haul to parity needed, not so much money as people—people of imagination and initiative, people who understood economies of scale, who knew not only production methods and machinery but also organization and what we now call software. The capital would follow and grow.

These early decades of groping experiment saw many failures. In the early 1880s, the government sold off its factories to private enterprises. This decision did it much credit: bureaucrats rarely admit mistakes or give up power. The state mills were ceded on easy terms, usually to friends and connections—not the best arrangement, but one that in effect subsidized businessmen and permitted a fresh start. Around the same time, cotton merchants turned from hand-spun yarn to machine spinning.† Between 1886 and 1894, thirty-three new mills were founded, over half of them in the Osaka area; and from 1886 to 1897, total value of yarn output increased fourteen times, from 12 million to 176 million yen. By 1899, Japanese mills were producing some 355 million pounds of yarn; by 1913, 672 million pounds. The effect was to close out imports and move over to exports. In 1886,

* And yet exquisitely ingenious. The Japanese had to cope with special constraints on water use, in particular the inviolable rights of riparian cultivators to water for irrigation. The answer was found in anchoring boats in midstream, with water wheels that turned spinning machinery aboard—in effect, small floating factories—Minami, *Power Revolution*.

† And yet hand spinning survived in Japan far longer than elsewhere. One reason was the industriousness and patience of Japanese women (more on this later). Another was the invention of tube *(gara)* spinning in 1876 by a Shinto priest, Tatsuchi Gaun. This technique consisted of packing raw cotton into tinplate tubes, one inch in diameter and about six inches long, then rotating the tube while winding the cotton on to a spindle and thereby imparting twist. It was in effect a poor man's throstle or flyer and testified to Japanese ingenuity under capital scarcity. The *gara* technique increased the daily output of a woman spinner from 40–50 to 650 *monme*—some fifteen times. Even so, hand spinning could not compete once water wheels were installed, many of them on spinning boats. Output of this primitive branch continued to grow into the 1930s, partly owing to low capital costs and low wages, partly by making coarse yarns for use in carpets, blankets, flannel, soles for *tabi* (Japanese socks, for use with *geta* sandals), and the like.

some 62 percent of yarn consumed in Japan came from abroad; by 1902, just about nothing. In 1913, one fourth of the world's cotton yarn exports came from Japan, and Japan—along with India but more so—had become a major threat to Britain in third markets.[7]

It was one thing to spin and weave cotton; quite another to make the machines that did the work. Cotton spinning was a relatively easy gateway into modern industry, as shown by precocious performances in Catalonia, Egypt, and Brazil. One had only to buy the machines, normally from some British manufacturer, who would then send out the technicians to get them started and if necessary keep them running. Such mills could then supply domestic handloom weavers, and hocus-pocus, the deed was done: one had the simulacrum of an industrial revolution.

Early on, the Japanese determined to go beyond consumer goods. If they were to have a modern economy, they had to master the heavy work: to build machines and engines, ships and locomotives, railroads and ports and shipyards. The government played a critical role here, financing reconnaissance abroad, bringing in foreign experts, building installations, and subsidizing commercial ventures. But more important were the talent and determination of Japanese patriots, ready to change careers in the national cause; and the quality of Japanese workers, especially artisans, with skills honed and attitudes shaped by close teamwork and supervision in craftshops.

This legacy paid off in quick learning. Waterpower for industrial use did not come in until the last years of Tokugawa, when the Japanese adapted it to textiles particularly. Yet waterpower was never so important as in European or American industry, because the Japanese were already moving on. Steam technology was available, with electricity close behind. Electric power especially suited light industry and small, dispersed workshops; no other form of energy delivered such small amounts as needed. To be sure, electricity called for large-scale generation and distribution. This did not pose a problem in urban areas. In remoter country districts, beyond the grids, internal combustion engines did the job.

Japan, then, moved into the second industrial revolution with an alacrity that belied its inexperience, generating and using electricity almost before it had gotten used to steam.* Arc lamps in Japan first lit up in 1878. Participating in this experiment was one Ichisuke Fujioka,

* One exception: chemical manufacture, not yet perceived as crucial to national power. But one should not expect Japanese economic policy to be complete and con-

a teacher at Kobu University, an engineering school founded in 1877 and later merged into Tokyo University. From his mix of study and practice, Fujioka saw the need for a central power station and sought private backing. When the first businessmen he approached declined, he went to a high government official from his home province. The official brought him together with a venture capitalist, and the two put together a syndicate of some sixty-four investors—former aristocrats, businessmen with official connections, and wealthy provincial merchants. So was born the Tokyo Electric Light Company (TELC). At first TELC built small private generating and lighting facilities for factories, business firms, and shipyards. It went on, beginning in 1887, to supply electricity to the general public. That same year similar companies started up in Kobe, Kyoto, and Osaka; two years later in Nagoya and Yokohama—thirty-three companies in all by 1896. By 1920, primary electric motors accounted for 52.3 percent of the power capacity in Japanese manufacturing. The comparable American figure was 31.6 percent in 1919, reaching 53 percent only in 1929. Great Britain was even slower, with 28.3 percent in 1924.[8] In respect of energy and power, then, Japan confirms the catch-up model: It pays to be late.

The traditional account of Japan's successful and rapid industrialization rings with praise, somewhat mitigated by distaste for the somber and intense nationalist accompaniment—the ruthless drive that gave the development process meaning and urgency. This was the first non-Western country to industrialize, and it remains to this day an example to other late bloomers. Other countries sent young people abroad to learn the new ways and lost them; Japanese expats came back home. Other countries imported foreign technicians to teach their own people; the Japanese largely taught themselves. Other countries imported foreign equipment and did their best to use it. The Japanese modified it, made it better, made it themselves. Other countries may, for their own historical reasons, dislike the Japanese (how many Latin Americans like *gringos*?); but they do envy and admire them.

It is a good, even edifying story. Yet one aspect of the Japanese achievement has not caught the attention of celebratory historians: the pain and labor that made it possible. The record of early industrialization is invariably one of hard work for low pay, to say nothing of

sistent. On the typically overoptimistic judgment of Japanese policy, see Okimoto, *Between MITI and the Market*.

exploitation. I use this last word, not in the Marxist sense of paying labor less than its product (how else would capital receive its reward?), but in the meaningful sense of compelling labor from people who cannot say no; so, from women and children, slaves and quasi-slaves (involuntary indentured labor).* The literature of the British Industrial Revolution, for example, is full of tales of abuse, especially of those so-called parish apprentices who were assigned to textile mills to relieve the taxpayers of welfare burdens. But not only the mills; the coal mines were a place of notorious travail; likewise many small metallurgical shops and even cottage workplaces. "When I was five, my mother took me to lace school [everything can be called a school] and gave the mistress a shilling. She learned me for half an hour, smacked my head six times, and rubbed my nose against the pins." Taskmasters and parents connived at this precocious enslavement: "Six is the best age, you can beat it into them better then. If they come later, after they have been in the streets, they have the streets in their minds all the while." And the more frightened the better, in the words of a lacemakers' ditty:

> There's three pins I done today,
> What do you think my mother will say?
> When she knows I done no more,
> She'll take and turn me out of door,
> Never let me come in any more.[9]

The most common ailment of these wretchedly unhappy children was a nervous stomach. Small wonder that many fell victim to sexual predators and went on to prostitution. It seemed a promotion.

The high social costs of British industrialization reflect the shock of unpreparedness and the strange notion that wages and conditions of labor came from a voluntary agreement between free agents. Not until the British got over these illusions, in regard first to children, then to women, did they intervene in the workplace and introduce protective labor legislation. When they did, they wrote it all down, so that social

* The Marxist term is one of the most misleading and abused words in the vocabulary of social science. It refers to a universal and inescapable condition of wage labor, whether in capitalist or socialist economies, hence has no meaning as a distinctive phenomenon; and in its attempt (pretension) to quantify a rate of exploitation by dividing wages by product (wage hours by total hours), it anomalously makes progressive, innovative capitalists—those who enhance labor productivity by investment in equipment and plant—the more exploitative for their enterprise.

historians have a library of reports and testimony to work with. Was England as bad as these records say? Or do we just have fuller records?

The European countries that followed England on the path of modern industry had their own labor problems and scandals, though less serious, largely because they had had warning and were able to introduce protections by anticipation. By comparison, Japan rushed into a raw, unbridled capitalism. As in England, but more so, cottage industry was already the scene of shameful exploitation. Why do I say "more so"? Because the Japanese home worker was able and willing to put up with hours of grinding, monotonous labor that would have sent the most docile English spinner or pinmaker into spasms of rebellion. The Japanese, for example, had no day of rest, no sabbath. Why did they need one? Animals did not get a day of rest. Nor was the backward-bending labor supply curve—the preference for leisure over income—a serious problem in Japan.

Why not? The answer lay partly in a more intense sense of group responsibility: the indolent, self-indulgent worker would be hurting not only himself but the rest of the family. And the nation—don't forget the nation. Most Japanese peasants and workers did not feel this way to begin with; under Tokugawa, they had scarcely a notion of nation. That was a primary task of the new imperial state: to imbue its subjects with a sense of higher duty to emperor and country and link this patriotism to work. A large share of school time was devoted to the study of ethics; in a country without regular religious instruction and ceremonial, school was the temple of virtue and morality. As a 1930 textbook put it: "The easiest way to practice one's patriotism [is to] discipline oneself in daily life, help keep good order in one's family, and fully discharge one's responsibility on the job."[10] Also to save and not waste.

Here was a Japanese version of Weber's Protestant ethic, the more effective because it jibed so well with atavistic peasant values. The classical peasant is a miser who saves everything, and plans and schemes and works accordingly. He lives for work and by work adds to his holding; that is his reason for being. (The precocious separation of British cottage workers from the soil and agriculture was an advantage to industry, but in some ways the attitudinal effects were negative. The landless industrial worker works to live. When he has enough, he stops to enjoy.)

The Japanese pushed this peasant mentality to the limit. This was, in the old days, a very poor society, squeezing out a mean subsistence. One lived on rice or, in colder climes, on millet and buckwheat. The

Keian edict of 1649 forbade peasants to eat the rice they grew, ordering them to make do with "millet, vegetables, and other coarse foods." Little animal protein—some chicken maybe and seafood. Not so much fish (including head, skin, bones, and tail) as the scavengings of the ocean: seaweed, plankton, little tidal creatures. Even now, the Japanese show a catholicity of taste that testifies to the privation and improvisation of yesteryear.

Everything counted. You had to relieve yourself? Rush home and empty your bowels on your own land. Division of labor? Mother's time and work were too precious to waste on babies and self-indulgence—up after childbirth! Older children could care for younger; small children would learn early to perform light industrial tasks. The smallest threads, even lint, could be saved and sold to rag-pickers for a few sen (100 sen = 1 yen). Old folks, too old to labor, represented mouths to feed; better to turn them into ancestors. Such households were miniature textile factories, a mine of profit to the energetic merchant putter-out.

We have the personal story of one such workhorse, an orphan married to a clever peasant who wanted to avoid military service and needed a wife.* She brought nothing into the marriage except that military exemption, the strength to fetch water from a well eighty-six feet deep, uncommon manual dexterity, and the humility and patience of a saint before a mother-in-law from hell. Her father-in-law lived for nothing but work: "I have no wish to see anything. I have no hobby. Making the soil produce better crops is the only pleasure I have in life."†

The mother-in-law told her right off that she would have to earn her keep. "I don't intend to work hard by myself and let you, the young wife, have an easy time of it. Now that you've joined our family, I want you to work hard and skimp and save with me." They put her to work at the loom, making cloth for the merchant, and she and her three

* The story comes to us in semifictional form: the prose poem *Fuki no tō (Bog Rhubarb Shoots)* by Yamashiro Tomoe, a left-wing militant for agrarian reform, married to a Marxist labor organizer and imprisoned from 1940 to 1945 for "harboring dangerous thoughts." It was in prison that she apparently learned the story of the woman recounted above, which I take from the version of Hane, in *Peasants, Rebels, and Outcasts*, pp. 85 ff. This last is a very important book, which deserves more attention from students of Japanese economic history.

† Again, the Keian edict: "Peasants must rise early and cut grass before cultivating the fields. In the evening they are to make straw rope or straw bags. . . . The husband must work in the fields, the wife must work at the loom. Both must do night work"—Leupp, *Servants, Shophands*, p. 7.

sisters-in-law would send the shuttles flying from early morning, before light, to midnight, day in, day out, in cold weather and hot. No sabbath; no day of rest. No time even for cleaning: "This isn't the temple or a doctor's house," the harridan would scold. "If you have time to clean house, go out and work." And they worked. Three bolts of plain striped cloth per day. No English weaver could have come close. Sometimes, when they did some weaving for another peasant family, they were able to stretch the cloth and eke out an ell for themselves—no doubt everybody did it. Mother-in-law made sure that such "perks" also ended up with the merchant: no indulgences for the young women. The neighbors called the young weavers the moneybags of the family. Mother-in-law took all the credit.

The daughter-in-law was the best weaver of the household, the best in the village. Even her mother-in-law had to admit this, although she found reason to complain nevertheless. When the daughter-in-law gave birth, no one coddled her. No three days in bed. A piece of pickle to keep her going. And no one told her she'd done a fine job; that's what mothers are for. So the young mother got one meal a day, and when she nursed her babe, the mother-in-law would mutter about time lost: "I sure hate to see a young wife wasting her time feeding the baby. She could be working the loom and making some money."

The harder and better she worked, the harder they squeezed and the more they begrudged her time. Naturally; her marginal value was rising. "Our young mother takes a lot of time in the toilet"; or, "She sure takes a long time feeding the baby"; or, "She's so stupid, she's doing the washing again." She had better use for her time, and what matter if she could not wash herself or her clothes. The Japanese are renowned for their passion for cleanliness, but greed brings money closer to godliness.* And what if her underwear was soiled? Her husband was now away, serving as a border guard in northern Korea to earn one of those niggardly pensions that were the dream of poor peasant families. No need to be fastidious. (He never told her when he left how long that might take. It took twenty-four years.)

So the family saved the sen and the merchant-manufacturer made his yen and the Japanese textile industry flourished; and the day came when the family had put enough money aside to rebuild the house,

* On the importance of cleanliness for the Japanese and the urgent need for European visitors to learn these habits ("one will accept no failing in this regard"), see the strictures of the Jesuit Alessandro Valignano in his advice of 1583 to his brother missionaries—Valignano, *Les Jésuites au Japon*, p. 200.

with a tile roof this time. After all, what is more important than a house? "In this world what counts is the house. The house fixes the family's standing in society. It fixes a person's worth." When you call a doctor, he looks over the house while he takes your pulse. When you hire a priest for a funeral, he looks over the house and fixes accordingly the place of the deceased in the netherworld. The in-laws could talk of nothing else. They'd always been looked down on; people were not even polite. Well, they'd show them. And the daughter-in-law wove away—alone now, because her sisters-in-law had been married off; and she got thinner and thinner because she had to work for four and eating took time. And her son grew up and was sweet consolation, because her husband off in Korea in his dark uniform with gold stripes had forgotten her.

But then the boy went to school, and the mother never had time to see him take part in sports or in school plays because that would have kept her from the loom; and when teachers visited the house, Mother-in-law would tell her to sit away in the back room, because all she knew was how to weave and she would disgrace the boy if she spoke to the teacher. And then the boy graduated and sang with the other children: "Nothing can match the happiness we feel!" This was the first and only time the mother went to the school, in the spring, the yard full of peach blossoms; and ever after the mother would weep when she saw the peach blossoms in flower and remembered the children's graduation song.

So the mother wove and the merchant bought and the mother-in-law saved and the textile industry prospered; and the son went off to middle school because that was what his father the police captain in Korea wanted for him. And the mother saw him off and climbed through the gate and put her head on the rail to hear the diminishing hum of the train after it disappeared from sight.

And still the husband did not return. He would not have the privilege of building the new house. So they went ahead and had it built anyway, and relatives brought gifts, and Mother-in-law smiled and fawned on those who brought many gifts, and the others, even her own children returning her generosity, got nary a word. Her brother-in-law, a rich ox dealer, brought her many things, and while he was at it took the opportunity to tell the old grandmother off: "Old woman, aren't you dead yet?" You never did much, he told her; it was your daughter-in-law who made the money, bought rice paddies, paid for the house. The old woman laughed and nodded, and the ox dealer exclaimed, "Good thing she's deaf!" And then the old woman told the whole

thing to her granddaughter-in-law the weaver (whom else to talk to?): "Did you hear what he said? It makes me feel bad." And the granddaughter-in-law consoled her: "Grandma, don't let it bother you. No one has worked so hard as you. I was able to keep weaving without having to get off the loom only because you wound the thread on the spindles for me. The money from weaving has gone into building the house. You must know that. Don't feel bad about it." And she took her grandmother-in-law's hands in hers and wept. And the old woman said, "What you say makes me feel better." Soon after, the grandmother died. She looked like a withered tree.

And then the husband Uichi came back, in gold-striped uniform, with gold-rimmed eyeglasses and upturned mustachios. And he built an annex to the house. And then he began staying away in town—with a woman, rumor had it—and stayed away longer and longer. And the rumor was true. Uichi's wife was afraid to ask—he was so quick to anger—but in a village community such things cannot be kept secret.

Nor did Uichi try to hide anything. He had known the woman in Korea. She was Japanese and had been sent to Korea to work as a "hostess." There a prominent government official had taken her for a mistress, and she had become rich and had made her family rich on his gains. And now she was Uichi's lady friend, like no one else in the peasant village, with her silk kimonos, a different one for every day, and her silk bed sheets. And Uichi had no patience for his wife and beat her, and his parents made no move to intervene, and his father even took pleasure in his son's brutality: "Unless a person has that kind of willpower, he cannot go out in the world and get ahead." And his mother agreed: "That's how he scared the Koreans. No wonder they were afraid of him. He really can be rough."

And then one day Uichi brought his mistress home, with her fancy chests and dressers filled with costly silks. His mother knew of his plans and told her daughter-in-law to clean the new annex. But when she started wiping the new tatami mats, Uichi rushed up to her and kicked her out: "You animal! How dare you step on the tatami with your frostbitten feet!" And when the dazed woman staggered off, calling to her long-gone son, away in China with the army: "Mii! Mii! On what battlefield . . . ?" her mother-in-law drove her off: "Go away, you crazy woman. We have no use for you." No use: they no longer needed the income from the loom.

The women of the neighborhood understood: "He won his gold stripes by doing brutal things to the Koreans. He did shady things to get wealthy." No good would come of this, they said. But when they

saw Uichi's wife, moaning and whimpering in distress, they offered neither company nor sympathy. Toward evening, Uichi's mistress and her maid arrived from town in a rickshaw. She was wearing pure white silk socks, another product of Japanese looms. All Uichi's wife could remember after that was the closed door of the annex and the laughter that came from within.

So she set the house on fire—and Japanese houses burn fast and brightly. None of the woman's chests and dressers and silk kimonos could be saved. And how much paper money gone with them? Then Uichi's wife slid down into the deep well to disappear from the world, but they found and revived her. She was tried for arson, aggravated by the fact that the fire violated the blackout; one had to be prepared for nonexistent Chinese bombers. She was sentenced to ten years' imprisonment, reduced to eight by extenuating circumstances.

No one came to see her in prison. She sat there huddled against the cold and the wind and comforted herself with songs about rhubarb shoots pushing through the snow—the same shoots she once picked for her own mother when she was a little child and her mother in her illness got comfort from them. Her son Mii wrote her only once: a family that brutalizes its women does not make men of virtue and gratitude. It was a prison mate, Yamashiro, who heard her out and preserved her story. The orphan mother and wife was then fifty years old.

Of course, cottage outwork was the old; the mill and factory were the new. The leading sector of Japan's industrial revolution was textiles, silk and cotton above all, and there one had to create a new workforce. As in Britain, these early mill hands were often women. One difference divided the two experiences: whereas in Britain early factory labor included many children, beginning with the ill-famed parish apprentices, this was less true of Japan, which instituted compulsory education soon after the Restoration. Children were in principle not available for factory work. I say "in principle" because reality often differed. As in Britain, we have in Japan much evidence of deliberate lying about age; also less than perfect school attendance.[11] The parents needed the money, and schooling was not free.

In fairness, one should note that so poor was farm life, so hard the work, that life in the mills could be attractive by comparison. The water was cold on the farm and came from the bottom of a well; it was both hot and cold in the mill dormitory and came out of a faucet. The food was plain, coarse, and spare on the farm, fit for pigs more than humans; the mill provided rice three times a day—foreign rice no doubt, not the

traditional sticky rice that Japanese are said to prefer. But just as other nations seem to like these other species, poor Japanese factory girls also found them tasty, nourishing, and habit-forming—as the Japanese would no doubt find today if they opened their home market to rice from abroad.

The wages in these mills were a pittance: it took years for a girl to save enough after deductions for food and lodging to pay the debt incurred by her father when he accepted the advance. (Lodging was often a pallet between the machines or a cot in a crowded dormitory that gave each sleeper the space of a tatami, that is, three by six feet—casket room.) A survey of sixty-two cotton plants in 1898 showed average monthly pay for women as 4.05 yen, as against 6.83 for men—4.67 yen for both sexes taken together. Even Indian workers made more, indeed almost double: wages equivalent to 8.07 to 9.18 yen a month in a sample of seven major textile plants.[12]

The heart of the story lay not so much in the low wages, however, as in the marginal product: Japanese labor worked well. It has been argued that low wages in newly industrializing and preindustrial countries reflect low productivity, but this does not seem to have been true for Japan. As long as the farm sector released hands to industry, factory enterprise had the best of both worlds: labor cheap and yet industrious, committed to task, to group, to family. One woman recalled:

> From morning, while it was still dark, we worked in the lamplit factory till ten at night. After work we hardly had the strength to stand on our feet. When we worked late into the night, they occasionally gave us a yam [to eat]. We then had to do our washing, fix our hair, and so on. By then it would be 11 o'clock. There was no heat even in the winter, and so we had to sleep huddled together. Several of the girls ran back to Hida. I was told that girls who went to work before my time had a harder time. We were not paid the first year. In the second year I got 35 yen, and the following year, 50 yen. . . . The life of a woman is really awful.[13]

The quotation tells much of the story: low pay, poor living conditions, the commitment to personal cleanliness, the gradual improvement. To which should be added unhealthful working conditions: humidification (to prevent static electricity), air filled with lint (hence a high rate of tuberculosis), a deafening din. Balzac, writing of business morals and the character of enterprise, put it well: no child comes into the world without dirty diapers. No industrial nation, either. Some young women ran away; chasers and catchers brought them back to

punishment and humiliation before resuming work. Others made good their escape but came back anyway—because their family made them go back, or because they missed the poor creature comforts of the factory.

The point was, farm life and work were harder, at least physically. And then family loyalties ruled: the poor young women who worked in the silk filatures and cotton mills around Lake Suwa (today a center of electronics manufacture) saved desperately to give something to their parents and walked home through deep snow along treacherous mountain tracks, roped together against falling into bottomless gorges. Years later, when interviewed about these terrible years, many of them remembered only the good aspects. This is a natural survival reaction—we want to forget the pain; we want to "accentuate the positive." *"Haec olim meminisse iuvabit,"* said Aeneas to his desperate, discouraged comrades: some day you'll be happy to remember these things.

The men did better. Their wages were higher; their bargaining power greater. Japan was no different in this respect from European industrializers—a little worse perhaps, at least in the beginning. Factory workers, indeed industrial workers in general, were seen as a lower breed, like the ***burakumin*** outcasts, and indeed many of them were probably ***burakumin*** themselves.* They stood apart: "low class," "inferior," "base," "the defeated," "the stragglers." Mothers scared their children with the factory worker as bogeyman and exhorted them to do well in school for fear of falling into this slough of lowliness.

The workers fought back for status and dignity—not rights so much as dignity. "Don't despise a miner," went their slogan; "coal is not grown in a grain field."[14] (And when one could not get Japanese to work in the mines, especially when fighting wars, one could always conscript Koreans and Chinese. It is no accident that, so often in history, miners are slaves. With Japan's defeat in 1945, these slaves just walked off the job, and coal production, Japan's primary source of energy, fell from 3–4 million tons a month to 1 million. Needless to say, one could no longer get Japanese to do the work. They were used to

* Since the *burakumin* are indistinguishable from other Japanese, they have tended over time to pass into the larger society, although many continue to live in slum and crime neighborhoods. To this day, Japanese will employ detective agencies and genealogists to check on the possible *burakumin* ancestry of a prospective spouse. To counter this, authorities have closed certain official records. See N. D. Kristof, "Japan's Invisible Minority," *N.Y. Times*, 30 November 1995, p. A-18.

better and they were free. Japan, like other advanced industrial countries, eventually solved the problem by turning to oil.)*

Along with government initiatives and a collective commitment to modernization, this work ethic and these personal values made possible the so-called Japanese economic miracle. It was as though an entire population subscribed to bygone ***samurai*** values—the banalization of ***bushido***. It would be a mistake of course to see this belief system as universal, but any serious understanding of Japanese performance must build on this phenomenon of culturally determined human capital. It was the national ***persona*** that generated a harvest of ingenious adaptations of Western technologies, that made much of little, that drew extraordinary output from people who, in other societies, would have resorted to massive sabotage and exit. Those who wonder at the resistance opposed by Japanese armed forces in the closing months of World War II and ascribe it to fanaticism or suicidal impulse are missing the point. This is a society whose sense of duty and collective obligation, in all realms, sets it apart from the individualism cultivated in the West. Individualism was an enormous advantage in the pursuit of economic wealth in the centuries preceding the Industrial Revolution, not only in Europe but, as we have seen, in Tokugawa Japan. But once the Japanese saw the path they wanted to follow, their collective values proved a fabulous asset. (And a gross temptation.)

A common mistake of would-be scientific history is to assume that today's virtues must also be tomorrow's and that a given factor, if positive once, must always pay. History doesn't work that way. The requirements of start-up and breakthrough economies are not the same as those of front-runners and cruisers. Japanese success lay in the successful fight against petrification and nostalgia under Tokugawa and the pursuit of a national effort under Meiji and successors. Different strategies in different circumstances.

* Reading, *Japan*, p. 51. Japan does not have the oil, but has the money to buy it. Russia does have the oil, but it does not have the money to install oil burners; or to pay the coal miners for that matter. As of December 1996, wages were seven months in arrears.