Why Was the 20th Century Not a Chinese Century?

Bradford DeLong, 2018

Kong Shangren (1699): White glass from across the Western Seas Is imported through Macao: Fashioned into lenses big as coins, They encompass the eyes in a double frame. I put them on—it suddenly becomes clear; I can see the very tips of things! And read fine print by the dim-lit window Just like in my youth…

The most interesting thing was not that the world was poor in 1870: the world had always been poor since the invention of agriculture. The interesting things were that a part of the world was just starting to become rich—and it was interesting which part was becoming rich. That part of the world was starting to become rich was odd. And that the technological and organizational edge of human civilization in 1870 was the North Atlantic rather than, say, China was distinctly odd.

1: Britons: Too Ignorant to Make Good Slaves

Two thousand years before 1870, people would have laughed at the idea at Britain as a leading economic power.

The first-century BCE Roman military-politician Gaius Julius Caesar thought that the Britons as among the most backward people he had ever conquered. When Marcus Tullius Cicero learned that Caesar was planning to invade Britain, his reaction was to snark to his friend Titus Pomponius Atticus. Caesar's invasion of Britain was completely pointless. Not an ounce of silver that could be stolen was to be found on the entire island. All that a Roman politician on the make could gain from an invasion of Britain was slaves—and not very good-quality slaves at that. Certainly nobody could expect from the Britons even a single slave smart and well-educated enough to have a useful skill like literacy or musicianship!

A thousand years before the 19th Century—in 800, say—the technological and civilizational cutting edges of humanity were to be found in the Caliph Haroun al-Rashid's capital of Baghdad and the Tang Dynasty's Chang'an rather than London or Bristol or Manchester or New York or Washington or Cleveland. Even three-hundred years before—in 1570—it would have taken a very sharp-eyed observer indeed to believe that northwest Europe was about to get its act together in a way that the Turkish Ottoman civilization around Constantinople, the Moghul Indian civilization around Delhi, and the Ming Chinese civilization around Beijing could not.

That the 20th Century was not a Chinese century was distinctly odd in the context of world history. For three millennia the overwhelming proportion of centuries had been primarily or at least secondarily "Chinese centuries". Those who did not feel that China was in some senses a civilization to be emulated thus betrayed their ignorance. But by 1870 this was no longer the case.

By 1870, however, the power and technology gradients across world civilizations were very clear. Real wages in England in 1870 were beginning to be substantially higher than past averages from the Middle Ages. Real wages in China and India remained extremely low by any standard. Travelers from western Europe to Asia in the 1600s and before had been impressed back then not just by the scale of the empires and the luxurious wealth of their rulers but by the rest of the economy as well. The scale of operations, the prosperity and industry of the merchant classes, the good order of the people, and the absence of extraordinary poverty among the masses frequently struck European observers as worthy of comment as striking contrasts with back home. But by the 1800s this was no longer true. Travelers' reports then focused as much on mass poverty and near-starvation as on high-craft and high-culture luxury. Assessments of the wealth of the court took on a sinister "orientalist" cast—a cruel corrupt ruling elite that simply did not care about the welfare of the people—when viewed against the background of the poverty of the masses.

2: What Had Happened to China?

The coming of the technology gradient favoring western Europe was indeed remarkably late. Before 1800 or so there was very little that European traders could offer to sell that Chinese consumers would wish to buy. For more than two thousand years China had been one of the leading, if not the leading civilization on the planet. It was not that the average standard of living was higher in China: Malthusian population pressures roughly equalized standards of living around the world. But China had a higher population density because more efficient technologies allowed a given plot of arable land to generate more food, better craftswork in most industries, a larger class of literati interested in high culture, and—quite probably—a higher standard of living for the landed and ruling elite.

Before 1800 European trade for Chinese goods was by and large trade of silver for China-made luxuries. And the transfer of technology flowed from east to west: it is still unclear to what degree the European development of items like gunpowder, printing, the compass, and noodles owed to the Chinese example. It is clear that all of these were known in China before they were known in Europe.

3: China's Relative Apogee

In the Tang Dynasty years before and the Sung Dynasty years after the year 1000, China had been the most progressive and innovative civilization in the world: innovative technologically, organizationally, and militarily. Its population—60 million? 80 million? 100 million?—was one of the most rapidly growing and best-fed populations in the world, thanks to the development of strains of rice that could be wet-planted, irrigated,

and produce three crops a year in the fertile soil of China from the Yangtze basin south. China then led the world in non-agricultural technologies as well. At the start of the seventeenth century the British savant, politician, and bureaucrat Francis Bacon had marveled at three inventions that he said had utterly transformed Europe: gunpowder, printing, and the compass. China had developed all three, and had developed all three before 1000.

China in the twelfth century at its pre-industrial relative apogee produced more iron and saw a greater share of agricultural production sold on markets than Britain would produce and market in the eighteenth. Zheng He's mid-fifteenth century voyages of exploration sailed four times as far with twenty times as many sailors as Columbus, and could land ten times as many soldiers at Dar es Salaam and Trincomalee as Cortez would land at Vera Cruz. China had long had the capability of launching its own “voyages of discovery.” Its governments had chosen not to, with that one exception. Zheng He’s fleet reached Zanzibar, and touched Africa, bringing back a giraffe. Annoyed at their treatment by a Sri Lankan king, they captured him and brought him back to China to make his apology to the emperor. But the political balance in the Ming court changed, the follow-up expeditions were cancelled, and the exploration program abandoned.

Trade between China and the rest of Eurasia was overwhelmingly one-way. Places from India west wanted silks, porcelains, teas, and the other valuable and lightweight products of the craftworkers of China’s high civilization. In return, China wanted… silver. Demand for curiosities aside, nothing made in the countries to China’s east were worth the cost of carrying them to China for what they could be sold there.

China led the world in political organization as well. The four greatest—by some average of size and durability—empires of all history were, fourth, the johnny-come-lately seaborne empire of the British; third, the Persian produced by the lucky adjacency of the horse-and-rider country of the Iranian plateau and the agricultural boomland of the Tigris-Euphrates valley; second, the Roman trans-Mediterranean; and first, the Chinese. Both the Roman and Chinese were launched more than 2000 years ago. Both fell apart after 650 and 450 years, respectively. In the case of Rome, the memory and the goal of empire and the name of the founder echoed down through history, so that even in 1917 George V Windsor called himself “Caesar of India” (Kaiser-i-Hind), Nikolai II Romanov called himself “Caesar of All the Russias” (Tsar' Vsekh Rosiy), Wilhelm II Hohenzollern called himself “German Caesar” (Deutscher Kaiser), Karl I Habsburg called himself “Kaiser von Österreich” (Caesar of Austria) and Mehmed VI called himself “Kaisar-i-Rum” (Caesar of Rome). But nothing like the empire was ever reestablished.

Not so in China. The memory of the Chin-Han empire drove its reestablishment by the Tang (618-907), the Sung (960-1127 or -1279), the Yuan (1206- or 1279-1368), the Ming (1368-1644), and, last, the Qing (1644-1912). No other ruler's writ ran a third as far or had even a third as large a chance of being obeyed as that of China's emperor. Tang

Dynasty cavalry had skirmished with Persians on the shores of the Aral Sea. The Sung Dynasty river navy was the only military force to even temporarily stymie Ghengis Khan's Mongols before his descendants took to fighting each other rather than expanding the empire. No pre-industrial central government anywhere ever managed to match the reach, extent, and power of the landlord-scholar-bureaucracy mode of domination invented under the Tang and developed under the Sung. The Sung Dynasty capital, Hangzhou, was before the Mongol conquest the largest city in the world—larger than Baghdad or Constantinople or Cordova or Delhi—with perhaps half a million inhabitants: the closest thing to an economic, cultural, and political capital the twelfth-century world had.

4: China's Post-Sung Relative Stagnation

By the second half of the nineteenth century China's relative apogee was three-quarters of a millennium past, and the government and the people were in crisis. The people were in crisis because they were more than three times as numerous as their predecessors at the pre-industrial apogee, because they were ruled by a rapacious landed aristocracy, and because progress in agriculture and industry to counterbalance rising population had been nearly absent for most of the second millennium. In 1100 the Chinese people were rich, or at least as rich as pre-industrial peasant societies get. At the start of the second millennium development of new types of crops and new strains of rice had greatly boosted agricultural productivity and triggered the centuries-long spread of China's heartland from the Yellow River to the Yangtze and further south, to Hunan and Guangzhou.

And by the second half of the nineteenth century Malthus was having his revenge. China had filled up, with more than 300 million people, which left average farm sizes less than a third of what they had been three quarters of a millennium before. The bulk of peasant families were close to the edge. It is virtually certain that the average Chinese peasant family in the second half of the nineteenth century had less food than its predecessors in the twelfth: think of 1300 calories per person per day as a rough guess.

The technological dynamism and organizational relative edge that China had possessed in the twelfth century was gone as well. Chinese producers still had substantial technological edges in limited industrial segments: high end silk textiles, high-end porcelain, tea. But there had been little internally-driven technological progress in any industry for more than half a millennium. And the bureaucracy that in 1150 had looked efficient and powerful compared to a Europe—a place where no king would even think of asking an Earl of Pembroke to explain anything—by 1870 looked corrupt and incapable.

Why this 750 year relative stagnation is a great mystery. There are many potential suspects to take the blame as the root cause.

Perhaps the root problem was that emperors, grand secretaries, and landlords feared their own generals more than they feared their neighbors' soldiers. European kings, ministers, and landlords sought a strong military to protect them and theirs against the next William the Conqueror or Friedrich II or Francois I or Napoleon. In China there was little to fear from outside the empire as long as the Mongols were kept divided, but a great deal to be feared inside the empire from your own generals—men like the ninth-century An Lu-Shan or the seventeenth-century Three Feudatories. Thus the military-industrial-metallurgy-innovation complex that drove so much of pre-industrial and early-industrial European technological progress was absent.

Perhaps the root problem was that with triple-cropping rice strains the wet-rice fields were too fertile, the governmental bureaucracy too effective, and the avenues of establishment-oriented upward mobility to the striving and aggressive too open. After making a little money the logical next step was to buy some land. Because the land was rich, because labor was plentiful and cheap, and because the empire was (most of the time) strong internally, one could live well after turning one's wealth into land. One could also easily make the important social contacts to pave the way for one's children to advance further. And one's children could do the most important thing needed for upward mobility: study the Confucian classics and do well on the examinations: first the local shengyan, then the regional juren, and then the national jinshi. Those who had successfully written their eight-legged essays and made proper allusions to and use of the Confucian classics would then join the landlord-scholar-bureaucrat aristocracy that ruled China and profited from the empire. In the process of preparing for the examinations and mastering the material needed to do well on them, they would acquire the habits of thought and values of a Confucian aristocrat landlord-scholar-bureaucrat. Entrepreneurial drive and talent was thus molded into an orthodox Confucian-aristocratic pattern and harnessed to the service of the regime and of the landlord class: good for the rents of the landlords, good for the stability of the government, but possibly very bad indeed for the long-run development of technology and organization. Carlson (1957) quotes an imperial edict of 1724 condemning mining as a potential source of disorder and treason:

Miners are easy to recruit but hard to disband. If mining is left to the initiative of merchants there will be danger of crowds assembling and harboring treachery...

Perhaps the root problem was the absence of a new world rich in resources to exploit and helpless because of technological backwardness, or the lesser weight attached to instrumental rationality as a mode of thought, or the absence of dissenting hidey-holes for ideological unconformity, or the fact that the merchants and hand-manufacturers of China's cities were governed by landlords appointed by the central government rather

than governing themselves, or that large muscled animals like oxen and horses turned out to be powerful productive multipliers for temperate rain-irrigated wheat-based agricultural but not for sub-tropical paddy-irrigated rice-based agriculture, or some combination of these, or any of a host of other possibilities over which historians will struggle inconclusively (but thoughtfully and fruitfully) for the rest of time.

Perhaps there were many root problems.

5: China as of Mid-Nineteenth Century

Whatever the cause, the result was China's extraordinary relative stagnation through much of the second millennium. The country and region that had been the world's leader—culturally, economically, organizationally—in 1200 was poor, economically backward, and organizationally decrepit by 1770, and much more so by 1870.

The poverty struck eighteenth-century British moral philosopher Adam Smith hard, for in his view China had been for a long time "the richest… most fertile, best cultivated, most industrious, and most populous" country in which even landless peasants were relatively rich: “the wages of labour had ever been more than sufficient to… enable him to bring up a family.” Smith had a theory as to why the China he saw in his day—the late eighteenth century—had become poor. Because China would not trade with outsiders and so learn and adapt their ideas, it was bound to stagnate: “a country which neglects or despises foreign commerce… cannot transact the… business which it might do with different laws and institutions.” A stagnant economy, Smith thought, was headed for desperate poverty through a Malthusian population crisis. Population would continue to grow while the economy did not. Without technological progress and with increasing population “competition… would soon reduce [wages] to this lowest rate which is consistent with common humanity.” At that lowest rate of wages, children would be so malnourished as to be easy prey to disease and women's body fat levels would be so low that ovulation was hit-or-miss.

By 1870 it looked like that Malthusian crisis had arrived. The more than 300 million people of late nineteenth-century China had no mechanized farm machinery and no industry-produced nitrogen fertilizers. They were crowded into the wet, arable eastern slice of what is “China” on today's maps, with the median family of 6 farming perhaps 4 acres at a time when the Radical Republicans were still hoping to somehow find 40 acres plus a mule for each family of American ex-slaves. Average adult height was, we think, significantly under five feet.

After 1800 British merchants did discover one commodity besides silver that Indian producers could supply and that Chinese consumers were eager to buy: opium. By the end of the 1830s the Chinese government was beginning to worry about the consequences of opium addiction on the country, and the exchange of European silver

for Chinese goods had turned around: the bulk of the China trade was the exchange of Chinese silver for Indian-grown opium. The Chinese government attempted to suppress the opium trade and opium smuggling. The result was the 1839-1842 "Opium War," in which the British fleet intervened on the side of free trade, the sale of opium, and drug addiction. The British Empire acquired the then nearly barren island of Hong Kong as a base, European influence was established in a substantial number of "treaty ports" along the Chinese coast, and the division of China not into European colonies but into regions in the "spheres of influence" of different European powers began.

Thus the first iron-hulled ocean-going steamships called on a country where the government and the economy were in crisis for three reasons:

The first reason is that China's government in the late nineteenth century was the ethnically Manchurian Qing Dynasty, and the Qing Dynasty was weak because it had always been weak. It had seized power in the mid-seventeenth century. An ethnic clan of non-proper-Chinese military adventurers from beyond the Great Wall, from Manchuria, struck at the moment when the previous Ming Dynasty was paralyzed by peasant revolts and hamstrung by a run of bad emperors and more-than-usually-corrupt bureaucrats. The Manchu were unified because they were not Han Chinese: what Manchu prince or mercenary could expect to long survive a victory by any alternative faction? The Manchu were weak because they were not Han Chinese: how many of the 300 million Chinese would give how much loyalty to a ruling dynasty in which the top places were reserved for others?

It was the classic problem of colonial rule. The Manchus tried to solve it by (a) presenting themselves as ideal Confucian sage-kings (presenting themselves as more righteous Confucian rulers than Kung-Fu-Tze himself), (b) giving the landlords through which they ruled free rein throughout central and southern China (curbing rapacious landlords in the interest of protecting the Old Hundred names of China was not on the Qing Dynasty agenda, ever), and (c) opposing all change for change threatened to cause instability and the Qing Dynasty knew that it was unstable already.

This worked as a political strategy: the Qing Dynasty had a run of 250 years, and the last Qing emperor still sat a throne—albeit as a puppet of the Japanese army—in 1945. But it meant that the kind of national and nationalist appeals that those who in Japan spoke for the Emperor Meiji or that Mongkut and Chulalongkorn used to try to preserve the independence of Thailand were impossible for China's late nineteenth-century government. You cannot rally a people against foreign colonialists with the slogan "revere the emperor and expel the barbarians!" when for more than 200 years the emperor has defined himself as non-Han—as a barbarian.

Even in the days of its peak strength, the Qing Dynasty found it wise to tolerate dominant currents of thought that viewed its coming to power as a tragedy and its rule

as profoundly illegitimate. Jonathan Spence's In Search of Modern China notes the performances at the court of the Kangxi emperor, the first strong and long-lived Qing dynasty emperor, of "The Peach-Blossom Fan" by Kong Shangren—an author still loyal to the previous Ming Dynasty, and hostile to the idea that a scholar-official could win honor by helping the Manchu conquerors rule China: “[A]t the play's end, with the Ming resistance in ruins, the lovers agree to take monastic vows… the surviving virtuous officials retreat deep into the mountains to escape a summons from the Qing that they take up office.”

The second reason that China in the late nineteenth century was in crisis was that Confucian landlord-bureaucrat-scholar aristocracy through which the Qing Dynasty ruled was not only potentially disloyal but trained to be incapable. As long as the Mongols were kept divided through bribes and the ruling dynasty uncorrupt, no Chinese emperor faced any outside existential military threat. Internal disorder was the main worry. So the central government had discouraged military skill among its bureaucrats and notables since the Tang dynasty rebellion of An Lushan, and discouraged any liking for change—a potential cause of disorder—since the first Ming dynasty emperor had expelled the Mongol descendants of Genghis Khan in the fourteenth century.

Seventeenth-century China was well aware of growing European technological developments. Yet neither Kong Shangren nor any of his relatives and descendants ever thought that the optical glass business was worth studying or researching or entering or even financing. It was simply not the kind of thing that a Confucian gentleman would do. One consequence of this lamentable uncuriosity was extraordinary ignorance about the outside world. During the first Opium War of 1840 the staff of High Commissioner Lin, the Qing plenipotentiary on the spot in Canton, appears to have debated whether an embargo of rhubarb exports might be enough all on its own to win the war for China.

The third reason China's government was in crisis was that the people were in crisis. As I noted above, China's population was on the downswing of a Malthusian population cycle. Compared to the aftermath of the great wave of agricultural technological development nearly a millennium before, the threefold growth in population meant that yields per person were low, farms small, and peasants poor—hence malnourished, and with relatively little energy. Population growth also meant larger clans of landlords to be fed off the rents. Combined with an alien ruling dynasty that feels weak and threatened by its own upper class and tells its bureaucrats that it is justice when the landlords win, this means that the peasants have very little to lose. Thus peasant revolts—like those that everyone remembered had brought down dynasties before—burned through China in the mid-nineteenth century.

The greatest was the Taiping Rebellion of 1850-1864 that ravaged central China for fifteen years, aided by the fact that the imperial court feared successful generals (as potential usurpers) at least as much as it feared the rebels. There were enough landless

and other desperate peasants that perhaps ten million joined Hong Xiuquan, who had hoped to become a bureaucrat-scholar-landlord but failed the shengyan examinations several times. He then had visions that convinced him that he was the younger brother of Jesus Christ. The Manchu banner-armies proved useless when Hong proclaimed the “Heavenly Kingdom of Great Peace,” and promised his followers not only the Kingdom of Heaven in the hereafter (where he would reign alongside his elder brother Jesus Christ) but that land would be equally divided after all the landlords were killed down here—meaning a roughly fifty percent increase in median peasant standards of living. And Hong Xiuquan supplemented his brand of theocratic landlord-free authoritarian communism with anti-Manchu nationalism: "Ever since the Manchus poisoned China… the poison of corruption has defiled the emperor's throne…” 1300 calories per day versus 2000 plus God on your side plus revenge against the oppressive landlords plus the expulsion of the barbarian Manchus.

The fifteen-year march of the Taiping through south-central China and reign from Nanjing had echoes not just of previous peasant rebellions (like the one that had given the Manchus their opening in the 1640s at the end of the Ming dynasty) but of what Mao Zedong and company would do from 1925 to 1945. Move into a village, get the peasants' hands dirty by having them kill a couple of landlords, divide up the land so all the small peasants are much richer, point out that if the landlord-backed authorities return they will all be in big trouble, and ask for volunteers to join the army and come along to the next village.

The Taiping prohibited opium, foot-binding, prostitution, and female servitude. They instituted equal shares for all, vaccination, low taxes, and encouraged tea and silk exports. Hugh Deane quotes American missionary E.C. Bridgeman's report that the Taiping "appear[ed] like a new race of warriors… well-clad, well-fed, and well-provided for… content and in high spirits, as if sure of success," and asserts that twentieth century Communist leaders like Mao Zedong, Zhu Te, and Peng Dehaui drew inspiration from the stories of the Taiping heroes that they had grown up with in Hunan, Sichuan, and Nanjing.

Outside observers like Karl Marx were impressed enough that they thought that the World Revolution was starting in the late 1850s in China, and that the last moments of the Chinese empire had come. But they did not win.

Competent local landlords organized pickup militias, some of which grew into competent—but non-Manchu—battalions and brigades. The merchants and bankers of Shanghai and other ports in contact with and profiting from European trade were desperate for help and knew how to draw on European military-technological competence. The thirty year-old Frederick Ward Townsend—with, Deane reports, two years' experience as a military cadet in Norwich, Vermont followed by service as a Texas Ranger, a Mexican army drill instructor, and in the Crimean War—organized an army on

the British Indian sepoy model: officers from Europe and America, rifles and carbines and cannon supplied by the British government, high pay, and river mobility through steampower. The Qing court heard such good things about his army from Li Hongzhang, their commander on the spot, that they named Ward's army “The Undefeatables.” Ward was killed at Ningbo in 1862, but his successor the British General Charles “Chinese” Gordon's army proved equally capable.

Perhaps 10 million people, 3% of China's population, died in the war. The Taiping were crushed in 1864. China's political revolution was postponed for half a century, and the Qing Dynasty continued to rule until 1911.

6: No Equivalent of the Meiji Restoration

Western China specialists sometimes see and can almost touch an alternative history—one in which late-nineteenth century China stood up economically, politically, and organizationally. Japan, after all, won its short victorious war against Russia in 1905, negotiated as an equal with Britain and the U.S. over warship construction in 1921, and was perhaps the eighth industrial power in the world by 1929. Jonathan Spence, for example, sees:

Confucian statesmen [like Li Hongzhang] whose skill, integrity, and tenacity helped suppress the [Taiping and other] rebellions… showed how imaginatively the Chinese could respond to new challenges… managed to develop new structures to handle foreign relations and collect customs dues, to build modern ships and weapons, and to start teaching international law and the rudiments of modern science…. It was true that there remained complex problems… rural militarization… local autonomy over taxation… landlord abuses… bureaucratic corruption… bellicose foreign powers…. But with forceful imperial leadership and a resolute Grand Council, it appeared that the Qing Dynasty might regain some of its former strength…

And he laments how due to the chances of politics:

Forceful leadership was not forthcoming… the empress dowager Cixi… coregent for her son Tongzhi from 1861-73… coregent for her nephew Guangxu from 1875-89…. [A]bsolute political authority… while Guangxu [was imprisoned in the palace]… on her orders from 1898-1908…. Cixi had clashed badly in 1869 with Prince Gong…. Zeng Guofan died in 1872… Wenxiang died in 1876… Zuo Zongtang remained preoccupied with the pacification of the Muslims in [Xinjiang]…. The grand councilors… worthy… with distinguished careers… lacked the skill or initiative to direct China on a new course. Although self-strengthening programs continued to be implemented… a disproportionate number of them were initiated by one man, Li Hongzhang… governor-general of Hebei… commissioner of trade for the northern ports…

We economists are much more skeptical. We note that the "new structures" were things like the Qing Imperial Maritime Customs Service built up in the 1860s under Robert Hart—no Chinese officials allowed, largely out of fear that their corruption would have been impossible to moderate given the ties to Qing Dynasty high politicians they would have had to have possessed in order to get appointed in the first place. We note the corrupt and incompetent bureaucracies that failed to manage the Yellow River dikes and the Grand Canal. We note that the Qing could not get their local officials to collect the salt tax.

In the mid-1880s the Qing Dynasty, having bought foreign metal-working machinery and built a navy, arsenals, and docks, thought it was strong enough to oppose the French conquest of Vietnam. The fleet was destroyed in an hour. Jonathan Spence reports that the Chinese navy lost 572 dead, while the French lost five. In 1895 the Qing Dynasty thought it was strong enough to oppose the Japanese extension of their sphere of influence to Korea. It was wrong. The Treaty of Shimonoseki added Taiwan, Korea, and southern Manchuria to Japan's sphere of influence. In 1929 China produced 20K tons of steel—less than two ounces per person per year. It produced 400K tons of iron—that's 1.6 pounds per person per year. It mined 27M tons of coal—that's 100 pounds per person per year. Compare this to America's 700 pounds of steel per capita in 1929 or 200 pounds in 1900, or to America's 8000 pounds of coal per capita in 1929 or 5000 pounds of coal per capita in 1900.

We do not find it satisfactory to attribute China's stagnation through the first decade of the twentieth century to poor choice of ministers by the Dragon Lady, the Dowager Empress Cixi. Jonathan Spence is following in a long tradition that treats her as the original mold for the figure of the Evil Dragon Lady. But one manipulative and malevolent female is rarely the cause of the decline of empires.

6.1: The Disproportionate Man

Recall Jonathan Spence's "[of] self-strengthening programs… a disproportionate number of them were initiated by one man, Li Hongzhang…" who we have just seen as a man-on-the-spot during the Taiping Rebellion. But he was not the only loyal servant of the Qing Dynasty. It had many—skilled scholars, administrators, and military politicians who might well have seen it as their duty to do for China what those who restored the Emperor Meiji were doing in Japan and what the servants of Mongkut and Chulalongkorn were trying to do in the Kingdom of Siam—now Thailand. Why were there not others? Let us look at Li Hongzhang's career:

Li Hongzhang (李鴻章, 1823-1901) was born in 1823 in Qunzhi, Modian, ten miles northeast of the Anhui Province capital of Hefei. He was of the scholar-gentry class: like his father one of the literati-landlord-officials who combined their intellectual,

plutocratic, and bureaucratic power to rule China under the emperor in Beijing—but since “the mountains are high, and the emperor is far” the emperor’s theoretically absolute power was very limited in practice. With the leisure to study—and the focus because only by studying hard could he rise and secure the future fortunes of his family—he flourished. Tutored by prominent military politician Zeng Guofan (曾國藩, 1811-72), in 1847 he obtained the highest examination degree, the jinshi, and two years later saw him admitted to China’s Harvard or perhaps its Ecole Normal Superieur: the Hanlin Academy.

But rather than rising through the Beijing-based bureaucracy, a few years later sees him detached from the Beijing bureaucracy and back in his home lower Yangzi Valley: the Taiping Rebellion had led him to return home and, outside the Imperial administrative system, raise a unit of local militia to defend their homes and their property from the rebels. The governor trying to contain the rebellion, his former tutor Zeng Guofan, noticed him—and took Li Hongzhang on as one of his protégés.

He rose, becoming an ace troubleshooter.

Soon after the 1864 final suppression of the Taiping, he was sent to Shandong to deal with the Nien Rebellion. 1870 sees him promoted to Viceroy of Chihli, at the age of 47 one of the very highest-ranking administrators in China. And from that perch he was to spend the rest of his life trying to salvage the situation for the dynasty he served.

Li Hongzhang’s achievements at economic development—self-strengthening (洋務運動)—were indeed impressive: bureaucratic prime mover behind the 1877 Kaiping coal mine, the 1878 cotton mills in Shanghai, the Tianjin arsenal, the telegraph between Tianjin and Peking, a seven-mile railroad to ship from Kaiping to the river and then downriver to Tianjin, and so forth.

Moreover, what successful self-strengthening programs were undertaken by Li Hongzhang appears likely to have been undertaken by only one other: Zhang Zhidong, governor-general of Hunan-Hubei for two decades: the railroad from Hankou to Beijing, the Wuhan Han-Ye-Ping heavy industrial complex. In the last generation of the Qing empire, individual governors-general who made economic development a top priority could make some things happen—elsewhere it didn't, save to some degree in and next to the foreign concessions and treaty ports: Qingdao, Tientsin, Shanghai, Guangdong, Hong Kong. In the late nineteenth and early twentieth centuries, in the last years of the Qing empire and the first years of the Republic of China, economic growth and development took place around China's coastal fringes in and near foreign enclaves, but not elsewhere.

It seems to us here and now today that, in the years before World War I, the example of the industrial core seemed easy to follow. Inventing the technologies of the original industrial revolution—steam power, spinning mills, automatic looms, iron- and steel-

making, and railroad-building—had required many independent strokes of genius. But copying the technologies did not, especially when you could buy and cheaply ship industrial capital goods made in the same New and Old England machine shops that supplied the industries of England and of America. If Ford could redesign production immediately after World war I so that semi-skilled assembly line workers could do what highly-skilled craftsmen used to do, why couldn't Ford also—or someone else—redesign production before World War I so that it could be carried out by low wage Peruvians or Poles or Kenyans rather than by Americans, who were extraordinarily expensive labor by world standards eve back then?

6.2: Li Hongzhang's Kaiping Coal Mine

Let us look at one of Li Hongzhang's major projects, the Kaiping coal mine. We are lucky in that we can draw on Ellsworth Carlson's 1957 Harvard east asian monograph to understand how and to what extent Li Hongzhang could midwife modern coal-mining technology in late-nineteenth century China. In 1877 Li Hongzhang—a senior scholar-landlord-bureaucrat high in the confidence of the Qing court—joined forces with Tang Tingshu—a prominent, experienced, and wealthy treaty port comprador-merchant who had managed Jardine, Matheson's interests along the Yangtze—to establish a modern, industrial, large-scale coal mine in Kaiping, in Chihli. Li Hongzhang and Tang Tingshu faced unusual forms of opposition to their mining plans. Carlson quotes a British cable of 1882 stating that mining work had been stopped because Chi Shihchang, a vice-president of the Board of Civil Offices, had declared that "foreign mining methods angered the earth dragon… [and so] the late empress could not rest quietly in her grave" sixty miles away from Kaiping:

Foreign mining methods angered the earth dragon… [and so] the late empress could not rest quietly in her grave…. The Governor-General has been ordered to make inquiry and report… work has partially ceased…. Either he must throw over a company… formed with his direct sanction… [and] a very large quantity of capital, or he must… declare the mines harmless with the knowledge that he will then be considered responsible for any bodily ailment or other ill which may befall the Emperor or his family…

Given the size of the imperial family and mortality and morbidity rates in the late nineteenth century, it would be a brave bureaucrat indeed who would respond to this by certifying that there was no geomantic danger to the grave of the late empress sixty miles away from the mine works.

Li Hongzhang was a brave bureaucrat indeed.

Tang Tingshu had originally proposed to build a steam railway to get the coal from the mines to the port of Tientsin, but dropped that idea and replace it with a proposal for a seven mile mule-drawn tramway to be connected to a twenty-one mile canal. Shen Pao-

chen had in 1877 dismantled China's first railway—the Shanghai-Woosung. According to David Pong, Li Hongzhang was furious, blaming the destruction on Shen's narrow-mindedness and his desire to curry favor with anti-foreign elements. Moreover, the Manchu court had just rejected Liu Mingchuan's request for permission to build railways.

When the mining began and the tramway started up, however, there were no mules: there was a locomotive—the "Rocket of China" with, engineer Claude Kinder reported, a boiler from "a portable winding engine, the wheels had been purchased as scrap castings, the frames... made of cast iron." Ellsworth Carlson believes that Li Hongzhang and Tang Tingshu were able to get their steam railroad going because of three reasons. First, it was built in a remote and sparsely populated area with no Confucian scholar-landlord-bureaucrats around. Second, Li Hongzhang used all his political skills to keep the existence of the steam railroad. Third, Carlson believes that Li had the blessing of the empress dowager Cixi to proceed—and thus her protection from his superiors on the Grand Council and elsewhere.

Production began with modern machinery—for the day—in 1881 excavating coal up to 500 feet down. By 1889, 3000 workers in three shifts were producing 700 tons of coal a day using steam lifts underground coal cars on rails, and pneumatic drills. By 1900, 9000 workers were producing 200 tons a coal a day, with average pay 6 dollars per month and with at least some Chinese-born technical employees making 60 dollars. About four miners died each year. As Herbert Hoover (yes, that Herbert Hoover: at the time a 26 year-old mining engineer on the make, later to become the architect of food relief to Europe after World War I to prevent mass starvation, the wonder-working Commerce Secretary during the Roaring Twenties, and president during the slide into the Great Depression) reported:

The disregard for human life permits cheap mining by economy in timber [supports].... The aggrieved relatives are amply compensated by... 30 dollars per man.... Cases have been proved of suicide for that amount...

Hoover's judgment was that the miners were producing 1/4 of what was expected of miners in America or Australia. The rate of production was nearly 500 pounds per worker per day, but still only six pounds a year for every person in China. There was still no railway all the way to Tientsin. The railway had been built down to Taku, but Chief Engineer Claude Kinder reported:

High officials who detested the railway... foster[ed] trouble with the junk people.... So great was the clamor... that the Viceroy... gave the order for the nearly completed bridge [over the Peiho to Tientsin] to be destroyed, although hundreds of the largest junks had already safely passed through...

Without the aegis of Li Hongzhang and his position as governor, the enterprise is unlikely to have survived. Ellsworth Carswell quotes Tang Shouchien on the difficulties

that merchants and entrepreneurs had outside the coastal foreign concessions: “The officials have rights; the merchants have no rights; their influence does not go beyond the bringing together of capital; and naturally the profits of the merchants are lost to the officials ceaselessly…”

Even with his aegis, not everything went smoothly. Carswell quotes the North China Herald of June 24, 1887 as pessimistic about the future of Kaiping as a capitalist economic enterprise: “if a mine is at a promising state, Kaiping to wit, the kinsmen of the Director, Managers, and officials, come in shoals, and without the slightest regard to competence are provided with posts and fatten…” But as long as Li Hongzhang was in control and his attention was focused on making the mine a successful economic enterprise, Tang Tingshu, his team, and his specialist foreign engineers could do their work.

Their position, however, was shaky, for the mine was both a public governmental project and a private capitalist enterprise: shang-pan kuan-tu: official supervision and merchant management. This meant that each manager of the mine wore two hats: on the one hand, they were intendants in the Qing administrative bureaucracy, with jurisdiction not over a town and its villages but over a mining enterprise, and on the other hand they were employees of the shareholders. Should push come to shove, it would turn out that they worked for the governor of Chihli rather than the shareholders of the company.

6.3: Herbert Hoover Takes a Hand

Mine director-general Tang Tingshu died in 1892. His successor was a very different man. Tang Tingshu was a merchant. Chang Yenmao was not a merchant or an industrialist or an engineer. Chang Yenmao was a bannerman—a hereditary retainer of Prince Qun. Tang Tingshu was a merchant who had worked extensively for British bosses. Chang Yenmao was a political fixer for the Empress Dowager Cixi. In The Making of Herbert Hoover, Rose Wilder Lane claims that Chang Yenmao had played a key role in Cixi's coup of 1885, when she placed the Gwangxu emperor on the throne.

Chang Yenmao had little education. In spite of his lack of literary attainment, he had acquired official rank. He was slotted to become an intendant in Kaingsu when the director-generalship of Kaiping fell vacant. his replacement, but rather a hereditary retainer of Prince Qun and a political fixer for the Empress Dowager Cixi.

By 1900 Chang Yenmao was perhaps the wealthiest man in Tientsin.

When Herbert Hoover looked at the books he reported that the 9000-worker payroll had been padded by 6000 names, and that the director of personnel doing the padding and collecting the wages had paid Chang Yenmao £10000—50,000 dollars—for the post.

Chang Yenmao's company paid £20000—100000 dollars—a year in dividends. Herbert Hoover took over in 1901, and was able to pay out £150,000—750,000 dollars—a year—to the shareholders as dividends.

Herbert Hoover? you say. Yes, Herbert Hoover: at the time a 26 year old mining engineer on the make, later to become the architect of food relief to Europe after World War I to prevent mass starvation, the wonder- working Commerce Secretary during the Roaring Twenties, and president during the slide into the Great Depression.

What happened was this: Herbert Hoover, mining expert, arrived in Tientsin in 1900 just in time to be besieged in the city by the Boxers (a better translation for this grassroots uprising influenced and encouraged but not controlled by the Forbidden City would have been "Fighters United for Justice"). In Tientsin Hoover met Gustav Detring of the China Maritime Customs Service, a friend of Chang Yenmao's. He also met Chang Yenmao. Chang had fled to Tientsin as well, fearing that the Boxers would execute him as a corrupt puppet of the Europeans; in Tientsin, however, the Europeans arrested Chang—fearing, probably correctly, that he was passing intelligence to the besieging Boxer armies as a way of hedging his bets. The British charge d'affaires on the scene later said that Chang "ought to have been shot in 1900."

Somehow Detring and Hoover, probably, got Chang released from prison. Somehow Chang decided to reincorporate the Kaiping mines as a British-flag enterprise incorporated in London in order, he said, to make it easier to raise capital to expand the mines and to provide some political cover: Russian or Japanese proconsuls would love to confiscate a working Chinese-flag industrial property as reparations or indemnities, but would not dare touch a British-flag industrial property. Chang commissioned Detring and then Detring and Chang commissioned Hoover and then Hoover commissioned his boss C. Algernon Moreing back in London to do the deal.

Chang's old Kaiping Mine Company had owned the mine works, had little spare cash, and had owed £250,000—1.25 million dollars—in bonds that paid 12% per year interest. Hoover's new Kaiping Mine Company borrowed £500,000 at 6%, paid off the old bonds, and had £250,000 in cash to expand. Herbert Hoover, his bosses, and his friends somehow owned 62.5% of the new company, without having committed any funds to the enterprise at all, leaving the shareholders of the old company owning 37.5% of the new company. The old company had been controlled completely by Chang Yenmao in his dual status as director-general both elected by the shareholders and appointed by the governor of Chihli. The new company was controlled completely by Herbert Hoover as the representative on the spot of the London-based majority shareholders. The old company had a management and advanced technical staff of 620 Chinese managers and 10 foreign-born engineers and foremen. The new company had a management and advanced technical staff of 170: 120 from china and 50 from abroad.

The new company also had a Europeans-only club.

The local judgment of those on the spot was that Hoover and company had:

made a pretty pile at the expense of the Chinese…. legally the Board of Directors were unassailable… but… morally they were in the wrong…. [Britain should not] give its countenance to a financial transaction which had fleeced Chinese shareholders… lined the pockets of an Anglo-Belgian gang…

And Chang Yenmao and his associates were "wild… [because] they thought themselves rather smarter… and got themselves fairly had by a Yankee man of straw [Hoover]."

We can try to read Herbert Hoover's mind: Perhaps Herbert Hoover thought that the old shareholders should be grateful that Hoover and his partners had only charged them only 62.5% of the company because:

- The alternative was for the Russians to have confiscated the entire mine as war reparations, leaving old shareholders with zero.
- Chang Yenmao was a corrupt thief, untouchable because of his status in the Qing court. He was stealing from the company by padding the payroll with 6000 extra workers at 50 dollars a year. That's 300,000 dollars a year stolen. We got that back for the shareholders.
- Hoover would make the mine run productively and profitably. Chang Yenmao, neither a mining engineer nor a merchant, could not
- The old shareholders' 37.5% of the post-Hoover 750,000 dollars a year in dividends is about 270,000 dollars—that is nearly three times the 100,000 dollars a year in dividends the old company had paid: Hoover had thus nearly tripled the value of the old stockholders' shares.

62.5% of the company, Hoover would perhaps have said, is a bargain price for the old shareholders to pay for all we have done and will do for them.

Chang Yenmao, however, had to explain to Yuan Shihkai, the new Governor-General of Chihli, that he had conspired or western sharpies had tricked him or something had happened by which what Yuan Shihkai thought was the strategic imperial government enterprise of the Kaiping mine was now the property of a British-Belgian investors' syndicate. Yuan Shihkai was displeased:

The mines had not been started… [until] Li Hongzhang had… obtained imperial approval… they could not be alienated without imperial approval…. Chang, said Yuan, was a person of humble origins to whom the country had given great favors, but he had not been properly grateful… [had sold] mining land [to foreigners] without authority… deceived the throne… about Chinese-foreign joint management…. If unpunished,

Chang's action might become a precedent… losses of the country's mines, the merchant's capital, and the dynasty's ports…

Chang Yenmao, ordered to recover the mines, went to London and sued.

In the process of browbeating Chang Yenmao, Herbert Hoover had signed a "Memorandum of Understanding" that the change of corporate form would not alter Chang Yenmao's status: that he would remain director-general of the mine "as before." That Memorandum was then ignored.

One British judge was shocked at the deception and dishonor, and ruled that the "Memorandum" was a valid instrument that had to be followed by the new company. Other British judges in London ruled that the "Memorandum" was a valid instrument only insofar as the powers granted Chang by the memorandum were legal according to British corporate law, but that those powers weren't.

So British judges in London ultimately ruled that Hoover, as a mere employee of the new shareholders, had no power to sign a memorandum giving up the shareholders' power to choose the director-general they wanted. LLater on, Herbert Hoover scrambled as he launched his political career to buy up and destroy all copies of the trial record containing his testimony—missing the one in Oxford's Bodleian Library.

In the end Yuan Shihkai started up another coal company with rights to much more extensive deposits in the area, and the two were amicably merged.

As Albert Feuerworker summed up the story of Kaiping in the 1959 Journal of Asian Studies:

Despite its pioneering achievements, Kaiping faltered… [like] other kuan-tu shang-pan enterprises in the late nineteenth century. The first was the lack of sufficient capital and the inability to raise more from domestic sources. The second was the unpropitious political environment into which it was born. Little aid could be expected from the tottering Manchu regime either in the form of financial assistance to compensate for the reluctance of private investors, or protection from foreign encroachment such as eventuated in British domination of this enterprise.... [T]he contrast with the history of early industrial efforts in Meiji Japan is a striking one…

Feuerworker sees three things going wrong: no private capital, a poor cash-strapped government that could not contribute public capital, and a weak government that could not protect incipient enterprises against rapacious foreigners. These three were certainly important, yes, but I see three others that were even more important:

- a social-economic structure that could not find and promote executives, but instead replaced Tang Tingshu with a corrupt political fixer like Chang Yenmao

- a political-ritual culture that required that a modernizing governor focus his attention constantly on the enterprise and run interference to protect it from anti-modernizers
- an educational system that continued to turn out literati instead of engineers and thus required foreign technical personnel for everything

The fact is that, outside the charmed circles created by the extraterritorial foreign concessions, and to a slight degree the immediate span of control of the few modernizing governors, modern industries did not develop and modern technologies were simply not applied in late imperial China. The typical Qing bureaucrat was hostile. But the typical Qing bureaucrat was also interested. There was rough equilibrium in how much money Qing bureaucrats were expected to squeeze from landlords (not that much), merchants and traders (significant but limited), and others who needed government action (as much as they could grab).

New people doing new things had no customary, social, or countervailing power protections against their overlords. And overlords with limited intelligence, limited types of experience, and limited official tenure could not be expected to nurture economic growth when there were loose assets to be stripped. And, as the shareholders of Kaiping and Chang Yenmao discovered, to flee into the arms of foreign legal systems was to flee from Scylla to Charybdis.

7: The End of Imperial China

The loss of the Japanese-Chinese War in 1895 brought matters to a head: was the government going to make a more serious effort to mobilize the country for modernization and progress or not? The Guangxu emperor said yes: he allied himself with reformer Kang Youwei and launched the "hundred days of reform" of 1898. The rest of the Qing power structure, especially the dowager empress Cixi—who we have seen before as patron and protector of modernizer Li Hongzhang—said no. she imprisoned the emperor inside the palace and encouraged the grassroots “Fighters United for Justice” to see what would happen.

The attempt to mobilize anti-European sentiment to support the conservative regime failed, as an all-European expeditionary force relieved the besieged European embassies in Beijing, exacted indemnities, and wreaked destruction.

A tack back to the left was not possible. Kang Youwei's memoranda on such things as the partition of weak-government Poland by Russia, Prussia, and Austria and on the successful Meiji reforms in Japan could still be read, but Cixi had executed Kang Youwei's younger brother and other reformers in 1898. And when Sun Yatsen had offered his services to Li Hongzhang in 1894, Li had sent him away.

Sun Yatsen built up a financial and propaganda network among Chinese emigrants beyond the reach of the government. Military politicians like Yuan Shihkai came to the conclusion that working with the Manchu court was useless. And at the beginning of 1912 the last Chinese imperial dynasty fell, as Yuan Shihkai and his peers refused to suppress Sun Yatsen's rebellions. The six-year-old emperor abdicated. But the new Chinese republic's president was military politician Yuan Shihkai. And his authority over his peers and near peers—army commanders, provincial governors, and other would-be warlords—was nil. China descended into near-anarchy.

With China thus hors de combat and with the high civilizations of India and Islam in no better shape, the world—that in 1870 the submarine telegraph cable and the iron-hulled ocean-going screw-propeller steamship were about to make a very small world after all indeed—would become a North Atlantic-dominated world for quite a while.