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The Impact of the Westward Spread of Western Learning on Modern Chinese History

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Since the late Ming and early Qing Dynasties, Western politics, culture, religion, science and technology, and military affairs have continuously spread to China under the influence of Western countries. This has had a significant impact on China's feudal political system, gradually transforming its feudal autocracy. This process represents an important developmental stage and component in China's transition from a feudal autocracy to a modern democratic republic, as well as a crucial phase in the shift from a feudal economy to a capitalist national economy.

Keywords: Westward Spread of Western Learning, religion, culture, economy, politics, science and technology, military

The Spread of Western Learning in Religion

The Westward Spread of Western Learning initially arrived in China during the late Ming and early Qing Dynasties through the missionary work of Western missionaries, with figures such as the Italian Matteo Ricci and the German Johann Adam Schall von Bell being among the first. In 1582, the Jesuit missionary Matteo Ricci arrived in Macau and subsequently preached in Guangdong, Nanjing, Nanchang, Suzhou, and other places. In 1600, he and Diego de Pantoja arrived in Beijing, presenting the Wanli Emperor with images of God and the Virgin Mary, a world map, a chiming clock, and a Western harpsichord, which greatly pleased the emperor. He was ordered to reside within the Xuanwu Gate in Beijing and was permitted to establish a church there to preach. Based on the circumstances of the Ming government, Ricci devised three new methods for spreading Christianity: first, pursuing a top-down approach by befriending bureaucrats and scholars to gain the emperor's support and establish a foothold in China; second, learning the Chinese language and customs, studying Confucian classics, wearing Han clothing, and using Confucian texts to explain Christian doctrines, seeking common ground between Christianity and Confucianism to enhance persuasiveness. He even went so far as to modify Christian doctrines, allowing converts to perform sacrifices to Heaven and Confucius; third, introducing Western advanced science, technology, and cultural knowledge to bureaucrats and scholars as a means to facilitate missionary work, thereby gaining the support of the Ming government and the scholarly class.

In astronomy and calendrical science, he introduced knowledge of celestial bodies and explained solar and lunar eclipses. He authored the book *Qiankun Tiyi* (Principles of the Universe), transcribed by Li Zhizao. Xu Guangqi employed Schall von Bell and others to compile the *Chongzhen Lishu* (Chongzhen Calendar), which was more accurate than any previous calendar of the Ming Dynasty. In mathematics, Ricci and Xu Guangqi

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collaborated to translate *Jihe Yuanben* (The Elements), introducing Euclidean plane geometry and greatly enriching the mathematical knowledge of the Chinese people. Ricci and Li Zhizao co-translated *Tongwen Zhizuan* (A Treatise on Arithmetic), which introduced Western arithmetic, notably bringing in Western calculation methods previously unknown in China. In geography, Ricci created the *Kunyu Wanguo Quantu* (A Map of the Myriad Countries of the World) and introduced the concept of five continents. Additionally, works such as Diego de Pantoja's *Haiwai Yutu Quanshuo* (Complete Account of Overseas Maps) and Giulio Aleni's *Zhifang Waiji* (Records of Foreign Lands) greatly expanded China's geographical knowledge and broadened people's horizons. In firearms manufacturing, the book *Huogong Qieyao* (Essentials of Fire Attack), dictated by Schall von Bell and recorded by Jiao Xu, introduced various methods for casting and using cannons.

The Spread of Western Learning in Culture

After the Opium War of 1840, China's feudal rule transitioned from a feudal society to a semi-feudal, semi-colonial one. China's feudal society was opened by the gunboats and powerful cannons of Western nations under highly unequal and invasive circumstances. The reason for this situation was that after undergoing political system reforms, most Western countries had implemented democratic republican systems politically and adopted capitalist economic systems that matched their political structures. Driven by these democratic republican and capitalist economic systems, Western nations take the lead conducted the first two Industrial Revolutions, rapidly increasing national industrial productivity, continuously expanding primitive capitalist accumulation, and swiftly strengthening their economic power, thus embarking on the path to becoming powerful capitalist nations. Meanwhile, China remained immersed in the dream of being the "Celestial Empire", unaware of the vast gap that had emerged between itself and some Western nations, whose scientific, technological, and military strengths had far surpassed China's. Therefore, from the outset of the Opium War, China's military strength could no longer contend with that of Western nations, leaving it in a passive and beaten position. The disruption of China's peaceful state was entirely due to its far inferior economic, technological, and military strength compared to Western nations. Consequently, some progressive Chinese individuals recognized China's backwardness and began advocating for learning from the West.

In June 1839, Lin Zexu destroyed opium at Humen, becoming the first person to resist the aggression of Western imperialist powers against China and the first to open his eyes to the world. In early 1842, Lin Zexu wrote the 50-volume *Sizhou Zhi* (Records of the Four Continents), which was later expanded by Wei Yuan to 100 volumes at Lin's request and renamed *Haiguo Tuzhi* (Illustrated Treatise on the Maritime Kingdoms). Its purpose was to "learn the superior techniques of the barbarians to control them", making it the first monumental work compiled by Chinese people introducing the situations of various countries worldwide. In 1897, the bourgeois ideological enlightener Yan Fu founded the *Guowen Bao* (National News), advocating for emulating Western nations to achieve strength through reform. In December, he published his translation of the British scholar Thomas Huxley's *Evolution and Ethics*, which he had translated in 1895. The book's ideas of "survival of the fittest" and "natural selection" played a positive role in inspiring the domestic reform and modernization movements of the time.

In 1862, to meet the need for talent, the Imperial Court approved the establishment of the Tongwen Guan in Beijing, which included English, French, and Russian language schools. In 1867, a school of astronomy and mathematics was added, focusing on foreign languages and offering courses in mathematics, physics, chemistry, astronomy, world history and geography, and international law. During the Self-Strengthening Movement, the

Qing government established the Tongwen Guan Press, which, in addition to translating and publishing books on foreign languages, Western law, history, geography, and other humanities and social sciences, also published many important works on astronomy, calculation, chemistry, medicine, and other fields. In 1863, Li Hongzhang petitioned the court to establish the Guangfanguan in Shanghai. The following year, General Rui Lin of Guangzhou and Viceroy Mao Hongbin of Liangguang established a Tongwen Guan in Guangzhou modeled after the Guangfanguan. In 1893, Zhang Zhidong founded the Ziqiang Xuetang (School of Self-Strengthening) in Wuchang, which included a School of Languages specifically for studying foreign languages and scripts. In 1897, Xia Cuifang, Gao Fengchi, Bao Xian'en, and Bao Xianchang founded the Commercial Press in Shanghai, primarily publishing school textbooks, ancient texts, scientific works, literary reference books, and establishing printing, compilation, distribution, and research departments. In 1898, the Shanghai Mathematics Book Bureau published a "Collection of Ancient and Modern Mathematical Works", which included 97 Chinese and Western works ranging from the Han Dynasty's *Zhou Bi Suan Jing* (The Arithmetical Classic of the Gnomon and the Circular Paths of Heaven) to the Qing Dynasty's *Dai Wei Ji Shi Ji* (Elements of Differential and Integral Calculus), becoming China's largest mathematical series. In 1902, Zhang Baixi formulated the "Imperial School Regulations" promulgated by the Qing government, known as the "Renyin School System", which was not implemented. In 1903, Zhang Baixi and Zhang Zhidong redrafted the "Memorial on School Regulations", which was officially promulgated nationwide by decree. This educational system was modeled after the Japanese system and stipulated dividing education into three levels: elementary and higher elementary schools, middle schools, and higher schools.

The Spread of Western Learning in the Economy

After China's defeat in the Opium War, advanced Chinese intellectuals and officials realized that relying on the Qing government's current scientific, technological, and military strength was insufficient to defeat Western powers. Consequently, the "Western Affairs Faction" (Yangwu Pai) emerged, advocating for learning Western science, technology, and culture without altering the political system, with the principle of "Chinese learning as the foundation, Western learning for practical use" and "learning the superior techniques of the barbarians to achieve self-strengthening". Concurrently, there was the "Conservative Faction" (Wangu Pai), which opposed the methods of the Western Affairs Faction, adhered to old ways, blindly repel foreign things, and harbored hostility towards all Western Affairs Movement initiatives. The Western Affairs Faction was represented by Yixin at the central level and by Zeng Guofan, Li Hongzhang, Zhang Zhidong, and Zuo Zongtang locally. From the 1860s to the 1870s, under the slogan of "self-strengthening", they adopted advanced Western technology to establish some modern military industries. Notable examples include the Anqing Arsenal founded by Zeng Guofan; the Jiangnan Arsenal, Tianjin Machine Bureau, Jinling Machine Bureau, China Merchants' Steam Navigation Company, and Kaiping Mines founded by Li Hongzhang; the Fuzhou Shipyard founded by Zuo Zongtang; and the Hubei Arsenal founded by Zhang Zhidong.

In the 1870s, a new form of enterprise called "official supervision and merchant operation" emerged, meaning enterprises were managed by merchants while officials were responsible for supervision and management. This form met the needs of social development and promoted the growth of China's capitalist economy. During the Self-Strengthening Movement in the 1870s, national capitalism emerged, and a large number of merchant-run enterprises appeared. Between 1869 and 1894, approximately 70 private capitalist enterprises were established, including well-known ones such as the Shanghai Fachu Machinery Factory,

Jichanglong Silk Filature, Tongwen Shuju, Tianjin match Company, Tongjiuyuan Cotton Ginning Mill, Dasheng Cotton Mill, Zhangyu Winery, Nanyang Brothers Tobacco Company, and Qixin Cement Company. In the early 20th century, with the development of China's national capitalist economy, two major capital groups emerged: the Northern Zhou Xuexi capital group based on the Qixin Cement Company and the Southern Zhang Jian capital group based on the Dasheng Cotton Mill, collectively known as "Southern Zhang, Northern Zhou".

The Spread of Western Learning in Politics

After China's defeat in the First Sino-Japanese War (1894-1895) and the signing of the humiliating Treaty of Shimonoseki, China ceded Taiwan Island to Japan, paid an indemnity of 200 million taels of silver, opened inland river port cities, and allowed Japan to establish factories in treaty ports. This greatly deepened China's semi-colonial status, increased the tax burden on the Chinese people, and triggered a frenzy among Western powers to carve up China. Faced with this situation, some enlightened and patriotic intellectuals embarked on a path to save the nation from subjugation.

In 1886, Kang Youwei wrote "Min Gong Pian" (On the Merits of the People), expressing his advocacy for emulating the ancient sage kings Yao, Shun, and Yu to implement reforms. In 1888, Kang Youwei submitted the "First Memorial to the Emperor" (Shang Qingdi Diyi Shu), proposing three suggestions: "change established laws, communicate the sentiments of the people, and be cautious of those around you". Although this memorial did not reach the Guangxu Emperor, it was circulated among patriotic individuals and gained support from officials. He subsequently wrote two books, *Xinxue Weijing Kao* (A Study of the False Classics of the New Learning) and *Kongzi Gaizhi Kao* (A Study of Confucius as a Reformer), which demonstrated that Kang Youwei used Confucius as a figurehead to advocate for reforming the Six Classics, thereby providing a basis for his reform efforts. In 1895, Kang Youwei and Liang Qichao led thousands of imperial examination candidates in jointly submitting a memorial to the Guangxu Emperor, opposing the Qing government's signing of the humiliating Treaty of Shimonoseki. In 1898, Kang Youwei submitted the "Memorial on Overall Planning for the Whole Situation Upon Imperial Summons" (Yingzhao Tongchou Quanju Zhe), his "Sixth Memorial to the Emperor" (Shang Qingdi Di Liu Shu), requesting the formal implementation of reforms, the selection of talented individuals, and the reform of government institutions. He proposed three main ideas: widely recruiting talented individuals, establishing a Bureau of Institutional Reform, and redrafting regulations. He advised the Guangxu Emperor to emulate Japan's economy and establish 12 bureaus for law, finance, education, agriculture, industry, commerce, railways, postal services, mining, associations, army, and navy to promote central government reforms and implement new policies. In essence, the goal of the Reformists was to initiate a bourgeois political movement for a top-to-bottom revolution within the Qing government, aiming to reform the existing feudal system into a bourgeois constitutional monarchy. However, the Hundred Days' Reform failed. Facts proved that under imperialist interference, implementing a constitutional monarchy in a semi-feudal, semi-colonial Qing government was unfeasible in China.

In 1912, Sun Yat-sen established the Republic of China through the Kuomintang, adopting the political system of Western capitalist nations and implementing a democratic republic with the core principle of separation of powers. However, after the fruits of the Xinhai Revolution were usurped by Yuan Shikai and other landlord-comprador classes, China's democratic politics entered a period of regression. This demonstrated that pursuing a capitalist path in a China lacking internal democratic institutions and external national independence was unworkable. Only by completely overthrowing the rule of feudalism, imperialism, and bureaucratic capitalism in

China was there hope for achieving genuine democracy. Therefore, only the Communist Party of China, founded on Marxism-Leninism, could save China. Establishing a new China and implementing socialism was the only way to enable the broad masses of people to achieve genuine democracy and freedom.

The Spread of Western Learning in Science and Technology

In 1841, artillery expert Ding Gongchen arrived in Guangzhou to specialize in the study of Western artillery. He adapted the British artillery's "sighting method" to Chinese cannons, significantly improving their accuracy. He also learned from Western methods to create a pulley and windlass system, allowing cannon barrels to rotate vertically and horizontally for easier and more flexible operation by gunners. Additionally, Ding Gongchen absorbed the advantages of Western cannon-casting techniques, improved the casting methods, and cast Western-style cannons with short barrels and large muzzles. He also wrote the book *Yanpao Tushuo* (Illustrated Explanation of Cannon Drills), which comprehensively introduced the structure and firing principles of Western cannons, as well as methods for gunpowder preparation, fort construction, and cannon casting.

In July 1840, artillery expert Gong Zhenlin was ordered to Hangzhou to oversee cannon casting at the casting bureau. He used Schall von Bell's cannon-casting methods to manufacture over 120 new cannons. He also improved the casting methods and wrote *Tiepao Tiemo Tushuo* (Illustrated Explanation of Iron Cannon and Iron Mold Casting), which became one of the earliest scientific works in the world discussing iron mold casting techniques. Based on the construction of British warships, Gong Zhenlin also replicated a small steamship powered by human-driven paddle wheels and created a wheel-driven warship propelled by a similar paddle-wheel mechanism. In 1842, four such ships participated in the defense of Wusong against British aggression.

In 1876, John Fryer and Xu Shou founded the *Gezhi Huibian* (Chinese Scientific Magazine), a monthly science journal, to popularize scientific knowledge. This was the first modern Chinese science journal. Its content mainly covered natural sciences, scientific theories, scientific methods, scientific instruments, applied science and technology, various industrial machinery, and Chinese inventions. The journal allowed readers to widely understand new achievements in Western modern science and technology and, to a certain extent, promoted the development of the Self-Strengthening Movement.

In 1898, during the Hundred Days' Reform, the Guangxu Emperor promulgated the "Regulations for Encouraging Crafts and Awarding Prizes" (Zhenxing Gongyi Geijiang Zhangcheng), the first modern Chinese patent regulation encouraging technological and craft inventions. Its promulgation marked the beginning of modern Chinese patent law, but it was aborted due to the failure of the Hundred Days' Reform.

The Spread of Western Learning in the Military

In 1866, Zuo Zongtang established the Fuzhou Shipyard and concurrently planned the Fuzhou Navy Yard School to cultivate specialized naval personnel. The school opened in 1867, and its educational system was modeled after British and French naval academies, focusing on teaching shipbuilding technology and training a cohort of shipbuilding talents for the nation. In 1874, the Qing government planned coastal defenses and established the Naval Yamen in 1885. In 1888, the navy was formally organized, with bases at Lushunkou and Weihaiwei. The fleet consisted of 22 ships and over 4,000 officers and soldiers, controlled by the Huai Army leader Li Hongzhang, who appointed Ding Ruchang as admiral. In 1894, the Beiyang Navy engaged the Japanese fleet in a fierce battle in the Yellow Sea, with both sides sustaining losses. In February 1895, under Li Hongzhang's erroneous orders, the Beiyang Fleet retreated into Weihaiwei Harbor and was prohibited from

engaging in battle. Ultimately, Ding Ruchang refused to surrender and committed suicide, leading to the complete annihilation of the Beiyang Fleet.

In December 1895, Yuan Shikai reorganized and expanded the Dingwu Army into the New Army. This army was trained following the German military system, employing over 20 German officers. Its branches included infantry, artillery, cavalry, and engineers, initially totaling over 4,000 men and later expanding to 7,000. The New Army held an important position in the late Qing military reforms and was a crucial stage in the development of the late Qing New Army. After Yuan Shikai became the Viceroy of Zhili and Beiyang Minister in 1901, he gradually expanded the New Army into six divisions, known as the "Beiyang Six Divisions", which ultimately became an important tool for Yuan Shikai to control the Qing court. Viceroy of Liangjiang Zhang Zhidong trained a new army called the Ziqiang Army. This army was also trained according to Western military models, initially learning from Germany and later from Japan. The Ziqiang Army consisted of 13 battalions of infantry, artillery, cavalry, and engineers, totaling over 2,000 men, and was later incorporated by Yuan Shikai and renamed the Right Army of the Martial Guard.

The late Qing government placed great importance on establishing military academies to cultivate military talent. Three major military academies were founded: the Beiyang Army Officer Academy, the Dongsansheng Military Academy, and the Yunnan Army Military Academy. The establishment of these three academies promoted the modernization of China's military and cultivated a large number of new-style military talents.

Conclusion

In modern China, countless patriotic and ambitious individuals sought to learn from the West and develop themselves through various means to change the country's backward and impoverished state. The Qing government, aiming to preserve its rule and ensure its continuation in China, ultimately saw all its efforts and attempts end in failure. Although these efforts could not save the Qing government from its eventual demise, from the perspective of the long river of modern Chinese history, these endeavors to learn and change were not in vain. These learning experiences precisely conformed to the laws of historical development and provided a solid foundation for China's subsequent rise and strength.

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