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Studying Abroad: The Mightiest Movement in Modern Chinese History

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After the 1980s, as China implemented its economic reform and open-door policy, Chinese interest in overseas education intensified among not only scholars but also the general public, and the number of Chinese students going abroad has grown sharply. Their increasing visibility also attracted scholars' attention and some works dealing with Chinese students were published. But even these studies and all studies on Chinese students and intellectuals in the West failed to provide a comprehensive picture of their contributions to China and leave a crucial lacuna in judging the extent and the influence of the movement.[1] Indeed,

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1. See, for example, China Institute in America, *A Survey of Chinese Students in American Universities and Colleges in the Past One Hundred Years* (New York, 1954); Rose Hum Lee, "The Stranded Chinese in the United States," *Phylon* 19 (Summer 1958); Chinese Y.C. Wang, *Chinese Intellectuals and the West, 1872-1949* (Chapel Hill, N.C. 1966); Derald Sue and Barbara Kirk, "Differential Characteristics of Japanese-American and Chinese-American College Students," *Journal of Counseling Psychology* 20 (March 1973); Leo A. Orleans, *Chinese Students in America: Politics, Issues, and Numbers* (Washington, D.C., 1988); Weili Ye, "Crossing the Cultures: The Experience of Chinese Students in the U.S.A. 1900-1925" (Ph.D. diss., Yale University , 1989); Jesse Chain Chou, "a Survey of Chinese Students in the United States, 1979-1987" (Ed. D diss., Columbia University Teachers College, 1989); Qingjia Edward Wang, "Guest from the Open Door: The Reception of Chinese Students into the United States, 1900s-1920s," *The Journal of American-East Asian Relations*, 3:1 (Spring 1994); Weili Ye, "'Nu Liuxuesheng' The Story of American-Educated Chinese Women, 1880s-1920s," *Modern China*, 20:3 (1994): 315-346; Yan Zhang, "Chinese Students in the United States." *China Today* 44:4 (Apr 1995): 20; Huping Ling, "A History of Chinese Female Students in the United States, 1880s-1990s," *Journal of American Ethnic History*, 16:3 (Spring, 1997); Michael Agelasto, Bob Adamson, *Higher Education in Post-Mao China*. (H.K.: Hong Kong University Press, 1998); Jiang Xin, *Zhongguo jindai liuxuesheng yanjiu* (A study of China's overseas students) (Jinlin Renmin chubanshe, 2013); Madeline Y. Hsu, "Chinese and American Collaborations through Educational Exchange during the Era of Exclusion, 1872-1955," *Pacific Historical Review*, 83:2 (May, 2014); Tobin, Kathleen. "Engineering Dreams." In *Chinese America: History & Perspectives*. San Francisco: Chinese Historical Society of America, 2014; Lu, Yixi; Jean, Jason; Lu,Zheng, "To Study Abroad or Not, and Why? Exploring University Students' Posthraguate Intensions." *Journal of Ethnic & Migration Studies* 49:18 (2023); Zhu, Tiejun, and Mengzhen Gu. "The Application and Implications of Science and Technology innovation in the Management of Education for Chinese Students Studying Abroad in China in the Epidemic Era." *PLOS One* 19:8 (8/16/1924); Yang, Tianyu, Wei Bao, Barbara Belfi, and Carla Haelermans. "Chinese University Students' Intention to Study Abroad in Times of Covid-19: The Important Role of Student Background Characteristics." *Higher Education*, 88:6 (Dec 2024; Yang, Pei; Xiangge Zhao, Xinxin Zhang, and Anren Li. "Intercultural Competence of Chinese Students Abroad: An Investigation under Sino-Foreign Cooperative Education Programs." *PLOS ONE* 20:2 (2/5/2025).

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despite its obvious significance, China's Study Abroad Movement has long been an under-researched subject. This paper will shed new light on its role and importance in modern Chinese history: The Study Abroad Movement has determined the trajectory of modern Chinese history; many of those who have returned from studying abroad were the leaders and escorts of modern Chinese political, economic, social and cultural developments. The current studying abroad policy was uttered by the late Chinese leader Deng Xiaoping who delivered a speech on March 18, 1978 advocating scholars and students studying abroad. Deng deeply believed that sending Chinese students to study overseas would help China grow stronger and better. Since the arrival of 52 Chinese in the United States on December 26, 1978, more than seven million Chinese have traveled abroad to study, which is the largest wave of studying abroad in the history of the world. Deng's policy, however, was old when it was articulated.

The Origin of the Movement and Its Early Influence

The Study Abroad Movement and its immense influence actually began in the mid-nineteenth century which was called by many Chinese the "Century of Humiliation" after the Opium Wars. A fortuitous figure Yung Wing happened to initiate this movement by more an accident than any design. Born to a poor peasant family in 1828 in a small village called Nanping not far from Macao, he was sent to a missionary school by his father who realized the value of a Western education for future opportunities. He later transferred to the Morrison Education Society School in Hong Kong because his original school suddenly closed. Yung was a smart student and when Rev. Samuel R. Brown, a Yale educated minister and the Principal of the school, returned to the United States in 1847, he brought Yung with him. Yung entered Yale College in 1850, and earned a B.A. degree four years later. He was exposed to Western ideas of democracy, science, and nationalism; his time in the United States was indeed transformative. When returning to China in 1855 he personally witnessed the devastation and humiliation of the Opium Wars and the treaty system. He wanted to help strengthen China and counter foreign domination and pressure. His life mission, as stated in his *My Life in China and America*, was to use the knowledge he gained in the United States for the benefit of his homeland. Soon after his returning he became one of the pioneer reformers in the Self-Strengthening Movement and helped Zeng Guofan establish the General Bureau of Machine Manufacture of Jiangnan or Jiangnan Machine Works for short in 1865, China's earliest industrial complex.[2] It in fact inaugurated modern industrialization in China. He then was appointed as a diplomat and China's spokesman in the

2. For more about the Jiangnan Machine Works, see Meng Yue, "Hybrid Science versus Modernity: The Practice of Jiangnan Arsenal, 1864-1897," *East Asia Science, Technology, and Medicine* 16 (1999), 13-52.

United States while China in its foreign relations transformed from the traditional tributary system to the modern nation-state system.[3]

Yung Wing further took more action on the Studying Abroad Movement. In 1867 Yung Wing's proposal to Zeng Guofan and Li Hongzhang for sending children to acquire Western knowledge in the United States, in the hopes of strengthening China against foreign powers, was accepted by the Qing government. Being appointed the Deputy Commissioner of the newly established Chinese Educational Commission, he presided over the selection of 120 young Chinese students for that purpose. It was the first wave of the Chinese Study Abroad Movement.[4] When studying abroad, these young Chinese boys were anxious to learn not only new knowledge but also new ideas. They began to address in Western styles abandoning their Manchu-style robes, and many of them cutting off their queues and even becoming Christians. Due to the Westernization of their thoughts and actions against Chinese traditions—a direct threat to the core values of the dynasty, they were forcibly recalled by the government.

Although the Chinese Educational Mission was cut short in 1881, its impact on China was far-reaching. Returning students brought back Western habits, including Western-style uniforms and suits. These Chinese youths actually foreran one of the biggest social transformations in Chinese history to stop dressing in traditional Chinese clothes and cut off Chinese queues at the beginning of the twentieth century. Before and after the 1911 Revolution, this social remodeling swept across the country. Clothing became more than fashion; it was a symbol of modernization vs. tradition. On 1 May 1922, even Puyi, the final monarch of the Qing dynasty, removed his own queue. Chinese and Western costumes complemented each other, and "hundred flowers" bloomed for a while. The change in the traditional concept of foot binding also liberated Chinese women's feet. This social transformation was an important turning point in the history of Chinese clothing which greatly changed the concept and the form of Chinese dress. From then on, Chinese clothing began to converge with that of the West; the first step towards the international community has been taken. This transformation, which was started by the young Chinese students in the United States, is undoubtedly one of the biggest social revolutions in Chinese history.

Some of these students also introduced advanced knowledge and technology to China and became leaders in modernization. Zhan Tianyou, one of the young students, is known as the Father of China's railway and the Father of China's

3. For Yung Wing, see, "Yung Wing Papers," Archives at Yale; Edmund H. Worthy, Jr., "Yung Wing in America," *Pacific Historical Review* 34:3 (Aug., 1965): 265-187; Paul W. Harris, "A Checkered Life: Yung Wing's American Education," *American Journal of Chinese Studies* 2:1 (April, 1994): 87-107.

4. Thomas E. LaFargue, "Chinese Educational Commission to the United States: A Government Experiment in Western Education," *The Far Eastern Quarterly* 1:1 (Nov., 1941): 59-71; also see, Edward J. M. Rhoads, *Stepping Forth into the World the Chinese Educational Mission to the United States, 1872-81*, Hong Kong: Hong Kong University Press, 2011.

modern engineering.[5] After graduating from Yale University in 1881, he returned to China. As the chief engineer, he presided over the construction of China's first railway, the famous Beijing-Zhangjiakou railway, which shocked China and the rest of the world. This is the earliest of China's advanced railway system in today.

The Study Abroad Movement did not stop because of the miscarriage of the Chinese Educational Commission to the United States; in fact, one wave after another of the movement surged high and swept forward after 1881. At the turn of the 20th century, the push for "Self-Strengthening" was more urgent than ever. The self-strengtheners who believed China must learn from the West to resist the West, continued to send young Chinese students to study in Europe which offered another model for study. The first Sino-Japanese War was a shock for many Chinese and it created a sense of urgency for deeper reforms. Many Chinese concluded Japan's reform was a model China should study and the Qing dynasty began to send students to study in Japan, and after the Russo-Japanese War, the number of students studying in Japan reached a climax. Furthermore, in 1908, for more American cultural, political, and economic influence in China, the U.S. Congress passed the Joint Resolution to return to China the excess of the Boxer Indemnity. President Theodore Roosevelt's administration decided to establish the Boxer Indemnity Scholarship Program to educate Chinese students in the United States, which promoted another climax of the Study Abroad Movement. After the 2nd Sino-Japanese War (War of Resistance against Japan), due to the need to rebuild China, the Nationalist Government continued to send a lot of Chinese students abroad, especially to the United States. After 1949, when the People's Republic of China was founded under Mao Zedong, the relationship between communist China and the United States declined sharply. Studying in the United States stopped, but the People's Republic of China selected students to study in the Soviet Union because of the communist solidarity. After 1878 Deng Xiaoping launched the open door policy and economic reforms, and encouraged studying abroad because China was in deep crisis after decades of central planning and the Cultural Revolution. From 1978 to present, nearly 100 years after the late Qing program for children studying abroad, the biggest wave of the Chinese Study Abroad Movement took shape. The impact of this long-lasting and magnificent Study Abroad Movement, indeed, deserves further in-depth discussion on China's development.

The Study Abroad Movement and the Trajectory of Modern Chinese History

For understanding the trajectory of modern Chinese history, there is no denying that brief attention must be paid to the background of the movement first. Before

5. For more on Zhan Tianyou, see, Jin Kaicheng, *Zhan Tianyou yu zhingguo jindai tielu* (Zhan Tianyou and modern Chinrese railway), Jilin: Jilin Literature and history Press, 2012; "Jame Tien Yow, Sheffield Scientific School class of 1881," Yale University library.

1800, China was at the forefront of the world and established a China-centered international order in East Asia. After the Opium War, a series of wars and unequal treaties brought China to a humiliating state. At the end of the 19th century and the beginning of the 20th century, the situation in which China would be carved up by foreign powers was formed, and Chinese nation reached a dangerous moment. The 1911 Revolution is the result of the call of history after an explosive culmination of decades of internal decay and external pressure.

The leader of this great political transformation and revolution was Sun Yat-sen, who had studied in Hawaii and been deeply influenced by American democracy and republicanism there. In 1879, Sun went to Honolulu to join Sun Mei, his brother who had a business in Hawaii. He was enrolled in the Anglican missionary Iolani School and in 1883 graduated from the Oahu College. During this period though Hawaii was still an independent kingdom, it was rapidly influenced by the United States, especially the ideas of democracy and republicanism; some Americans and local progressives were preparing to overthrow the kingdom. We may face the essential fact that the political development in Hawaii had a strong influence on young Sun Yat-sen during the formative stage of his life. There is little question that at this stage of his life the seeds of his future values, plans, and eventual contributions to modern China were planted. After being back in China, he advocated and initiated revolutionary activities to overthrow the Manchu rule. The success of the 1911 Revolution and the establishment of a Western-style republic marked the end of the Chinese dynastic history of about 4,000 years first time, a great political turning point in Chinese history. Sun Yat-sen is therefore recognized by both the People's Republic of China and the Republic of China as the Father of Modern China.[6]

We may also accept the essential fact that two other returnees of the Study Abroad Movement then turned back the forces of restoration for the old system and saved the young Republic in 1916 and 1917. After the 1911 Revolution, Yuan Shikai stole power in an attempt to restore the imperial system, and the Chinese nation faced a crisis of regression. Cai E, who had studied military strategy and been exposed to concepts of constitutionalism, nationalism and modernization in Japan, immediately opposed Yuan Shikai's claim to be emperor. Cai established his "National Protection Army" to fight Yuan and defended the Republic in the National Protection War, also known as the Anti-Monarchy War. Cai E led the triumph over the troops of Yuan Shikai. Because of his outstanding contribution to the nation, Cai E became the first person in the history of the Republic of China to enjoy a state funeral after his death. He is known in China the "first person to

6. Yansheng Ma Lum and Raymond Mun Kong Lum, *Sun Yat-sen in Hawaii: Activities and Supporters* (Honolulu: Hawaii Chinese History Center, 1999), 11; Harold Z. Schiffrin, *Sun Yat-sen and the Origins of the Chinese Revolution* (Berkeley, 1968), 27; Albert Pierce Taylor, "Sen Yat Sen in Honolulu," *Paradise of the Pacific*, 41:8 (Aug, 1928), 8; L. T. Chen in Sun Yat-sen *San Min Chi I: The Three Principle of the People*. Frank W. Price (tr), L.T. Chen (ed.) (Shanghai, 1927), xii; Lorenz Gonschor, "Revisiting the Hawaii Influence on the Political Thought of Sun Yat-sen," *Journal of Pacific History*, 52:1 (2017), 53.

rebuild the republic" and "the god of the protector army".[7] Soon after that in July 1917, Zhang Xun attempted to reinstate the last Qing emperor, Puyi, to the royal seat. Duan Qirui, who had his military training and education in Europe which exposed him to constitutional monarchies and republican institutions, immediately mobilized his "National Protection Army" in Tianjin and marched to Beijing against the restoration. It goes without saying that Duan's European military education made him value modern state structures over imperial rule, which explains why he opposed the monarchist restoration and instead protected the republic. Indeed, his foreign training made him more pragmatic, so he supported the Republic of China as a framework to preserve order and modernize the state, rather than clinging to monarchist loyalty.[8] Both Cai E and Duan Qirui's roles were indeed crucial in keeping the young Chinese Republic alive in its smashable early years.

The returnees not only decisively shaped China politically but also culturally. At the beginning of the 20th century, a group of them, who studied in the United States and Japan and were deeply influenced by Western studies and eager to rescue the country culturally, were mainly Hu Shi, Chen Duxiu, and Li Dazhao. They felt that China's weakness was rooted not only in politics and military power, but in its traditional culture. Believing Confucianism was the ideological root of China's political failures and scientific backwardness, they proposed to deny it that had been the mainstream of Chinese culture for more than 2,000 years; and they have effectively shaken the dominance of feudal orthodox and have given China a baptism of Western democratic and scientific thought. By aiming to overthrow traditional Confucianism and replacing it with new values of democracy and science, this New Cultural Movement is undoubtedly one of the greatest cultural revolutions in Chinese history.[9]

In particular, Hu Shi, who returned to China after studying in the United States, was the first to take the initiative for establishing the vernacular as the official written language, a literature revolution in Chinese history. After graduating from the Chinese Public Institute, he won a Box Indemnity Scholarship to study in the United States. He earned his B.A. in 1914 from Cornell University and completed his doctoral dissertation under John Dewey at Columbia University in 1917. During his years in the United States, Hu Shi was influenced by Harriet Mouroe's *Poetry: A Magazine of Verse*, which advocated verse writing in plain language. While at Cornell in 1915, he began to promote vernacular writing in the written form of modern Chinese. After returning to China, he published in 1917 an article entitled "On

7. Xie Benshu, *Cai E dazhuan* (complete biography of Cai E) (Guilin: Guangxi Normal University Press, 2013).

8. See Andrew Nathan, *Peking Politics 1918-1923: Factionalism and the Failure of Constitutionalism* (Center for Chinese Studies, 1998): 131-4; Jonathan D. Spence, *The Search for Modern China* (N.Y.: W.W. Norton & Co.), 285.

9. Tan Chung, "China's Unending Quest for 'Mr. D and Mr. S'," *Economic and Political Weekly* 34:23 (1999): 1411-1412; also see Tse-tsung Chow, *The May Fourth Movement: Intellectual Revolution in Modern China* (Cambridge, Mass., 1960).

Literature Reform," which launched the Vernacular Movement. The movement without doubt is a literature revolution, one of the most important turning points in Chinese cultural history. It has erected a distinctive boundary monument in the history of Chinese literature, marking the end of classical literature and the rise of modern literature. This was a great and thorough literary revolution unprecedented in Chinese history. It fundamentally reshaped how Chinese communicate, learn, and think, and its legacy is obvious in every aspect of Chinese cultural life today. His push for vernacular Chinese instead of classical Chinese changed Chinese culture forever.[10]

The initial republican system and the New Cultural Movement, however, did not do enough to alleviate the national crisis. After Yuan Shikai's death, warlords fought against each other and caused a great disaster for China; the Western powers brazenly trampled on China's sovereignty at the Paris Peace Conference in 1919. Foreign powers still controlled treaty ports and spheres of influence. China has reached a moment of crisis again, and history was calling for a new political force that was able to save the country and the nation from dire straits. A historical milestone event occurred in 1921. Chen Duxiu and Li Dazhao became the founders of the Chinese Communist Party with the mission of rescuing China from internal weakness and foreign domination.

Chen Duxiu and Li Dazhao were all returnees of the Study Abroad Movement. Chen Duxiu in 1902 enrolled in the Tokyo Higher Normal School and studied at Waseda University in Tokyo, a known center for political activism in Japan, in 1906. Li Dazhao also studied political economy from 1913 to 1917 at Waseda University before returning China. Their experience in Japan was part of a larger pattern where Japan acted as the primary conduit for the flow of Western radical thought, including Marxism, into China in the early 20th century. Li and Chen lived through the collapse of the Qing, the failure of the early Republic, the rise of warlordism, and foreign domination, and wanted a radical path to save the nation. After the Russian Revolution, Li spread Marxism to Chinese by publishing articles, establishing Marxist Research Society, and urging students to go to the countryside to disseminate "humanism and socialism." Assisted by Comintern agents, Chen Duxiu founded the first Communist group in Shanghai in May 1920, arranged for the publication of the *Communist Manifesto* late in the same year, and was elected the first General Secretary of the provisional central committee of the Chinese Communist Party in July 1921. We may face the essential fact that as the vanguards and the founders of the party, Li Dazhao and Chen Duxiu initiated the magnificent Chinese Communist Movement.[11] Today, Chen Duxiu and Li Dazhao were called the founding Fathers of Chinese Communism.

We may cite another example of Chiang Kai-shek, the Chinese political and military leader from 1928 to 1945. After studying for a short time at the Baoding

10. Gang Zhou, "The Chinese Renaissance: A Transcultural Reading," *PMLA* 120:3 (2005): 783-795; John DeFrancis, Gang Zhou, "The Chinese Renaissance and the Vernacular," *PMLA* 121;1 (2006):298-300).

11. Maurice Meisuer, *Li Ta-chao and the Origins of Chinese Marxism* (Cambridge, Mass., 1967).

Military Academy, Chiang Kai-shek went to Tokyo Shinbu Gakko (Tokyo Shinbu Military Academy) in 1907 where he spent three years for his military studies. He also served in the Japanese Army from 1909 to 1911. In Japan he joined *Tongmenghui* (Chinese United League), a precursor of the *Kuomingtang* (KMT or Nationalist Party); he returned to China in 1911 and served in the revolutionary forces. Under his leadership, KMT launched the Northern Expedition (1926-1928), which led to the end of the warlord disorder and realized military unification of China. Chiang Kai-shek established the Nationalist Government in Nanjing in 1928.[12] The military knowledge he acquired in Japan provided him with the strategic, tactical, and organization expertise necessary to build a modern army and lead it to victory.

During the period of the Nationalist Government, returnees from the Study Abroad Movement continued their contributions. Song Ziwen (T.V. Soong), who graduated from Harvard University with a Bachelor's degree in Economics, made great contributions to the fiscal reform of ending the monetary chaos and unifying the currency since the end of the Qing dynasty as the Governor of the Central Bank. This reform is known as the most thorough monetary reform in China's modern history. Due to the economic achievements of the national government, this period (1927-1937) in China is called the Golden Decade. Song's education directly equipped him to become one of the most important financial architects in modern Chinese history. In fact, the four major families of Chiang, Song, Kong, and Chen, who controlled the political and economic lifelines of China during this period, all had the background of studying abroad, and all were returnees of the Study Abroad Movement. Kong Xiangxi had his educational background at Oberlin College and Columbia University. Chen Lifu had attended Carnegie Institute of Technology (now Carnegie Mellon University) and then graduated from the University of Pittsburgh with his Master's degree in 1925.[13] While the "Four Big Families" were often criticized for corruption and authoritarianism, they also made great contributions to the Gold Decade: Chiang Kai-shek and the Northern Expedition ended the warlord era and created a central government in Nanjing. The government, especially Kong Xiangxi, promoted modern economy, especially industry, railroads, highways, postal service, and banking reforms. The Chen brothers, Chen Lifu and Chen Guofu, emphasized party machinery, but also promoted literacy and modern curricula. With German advisers, Chiang modernized parts of the Chinese army. Though still weak compared to Japan, China's military modernization began during this period. The Song family, especially Song Meiling, helped win international support for China, especially from the United States. It was a period of nation-building and modernization, but also indeed a period of preparation, consciously or not, against Japanese aggression.

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12. Tatsuo Yamada, "Chiang Kai-shek's Study in Japan in His Memories," in *Chiang Kai-shek and His Time: New Historical and Historiographical Perspectives*, ed. Laura De Giorgi and Guido Samarani, 13-36. Venice University Press, 2017.

13. Kuo Tai-chun, Lin Hsiao-ting, *T.V. Soong in Modern Chinese History* (Stanford University, Hoover Institution Press, 2003).

The 2nd Sino-Japanese War, or the War of Resistance against Japan (1937-1945) was an unprecedented anti-aggression war in Chinese history, and the Chinese nation reached one of the most critical moments. During the war, Chiang Kai-shek led China to fight one of the bloodiest wars ever fought in Chinese history. Obviously like other Chinese returnees, Chiang regarded China with great affection and wanted to serve the country of his birth. Almost all the most important generals of the KMT (the Nationalist Party) and the CCP (the Chinese Communist Party) during the war were from the *Whampoa* Military Academy where Chiang was the Principal. It can be said that the academy has created many political and military talents and occupied an important position in modern Chinese history that cannot be ignored. China held out for eight years in the war with an enemy army with absolute superiority. Compared with France, which surrendered after resisting for only six weeks, the resistance of the Chinese army was a miracle. Chiang Kai-shek during the war was not lackluster; he was the supreme commander of China. And he refused to surrender and preserved the last dignity of the Chinese nation. History chose Chiang Kai-shek, who had studied military in Japan and served in the Japanese army for three years, to lead this war of anti-aggression unprecedented in Chinese history.

In 1941, the War of Resistance against Japan had lasted for four years, and China was exhausted; and without external intervention, the consequences would be unimaginable. The United States and Japan began secret negotiations to resolve their contradictions. For their own interests, the two countries reached a draft compromise. In the midst of this crisis for China, Hu Shi, then the Chinese ambassador to the United States, united with the Great Britain resolutely opposed. President Roosevelt therefore withdrew the compromise draft on November 26. The failure of the negotiations between the United States and Japan led to the Japanese attack on Pearl Harbor and the outbreak of the Pacific War. Japan's defeat was just around the corner. Indeed, this famous returnee from the Study Abroad Movement saved the Chinese nation in a sense.[14] Hi Shi's lobbying did influence American attitude toward helping China and his efforts contributed to U.S. policies against Japan. Without U.S. support, China would have struggled far more to sustain its resistance against Japan from 1937 to 1945.

After WWII, the CCP and KMT were incompatible and the civil war broke out. Chiang Kai-shek was defeated and fled to Taiwan. In 1949 the People's Republic of China was established. The founders and most important leaders of this Communist army almost all had the background of studying abroad. Zhou Enlai, who once went to study in France, was the Secretary of the Front Committee for the Nanchang Uprising on August 1, 1927, which is celebrated annually as the People's Liberation Army Day. Zhu De, who once went to Germany to study military, was the Commander-in-Chief of the Red Army, the Commander-in Chief of the Eighth Route Army, and the Commander-in-Chief of the People's Liberation Army.

14. Chih-ping Chou, Carlos Yu-kai Lin, *Power of Freedom: Hu Shih's Political Writings* (University of Michigan Press, 2022).

Mao Zedong, the Chairman of the CCP and the People's Republic of China, also embarked on the path of Communist revolution because of the Study Abroad Movement. He was indeed a staunch Marxist. In order to realize Communism, he advocated permanent revolution and launched one after another magnificent mass movement after 1949, such as the Land Reform Movement, the Three-Anti and Five-Anti movements, the Resist America and Aid Korea Movement, the Hundred Flowers Movement, the Anti-Rightist Movement, the Great Leap Forward Movement, and the Cultural Revolution. Mao Zedong, however, entered on Communism due to the influence of Cai Hesen who was Mao's best friend during his period as a student at Hunan First Normal University. During his study in France, Cai Hesen read a large number of Marxist works and had close correspondence with Mao Zedong to discuss Marxism. "Indeed, it is said by most scholars that Cai's letters to Mao from France advocating the founding of a Chinese Communist Party were every influential in Mao's turn to Marxism."[15]

Moreover, almost all the most important first-generation leaders of the People's Republic of China were returnees from studying abroad: Liu Shaoqi, who had studied in the Soviet Union, was the Chairman of the Standing Committee of the National People's Congress from 1954 to 1959, Vice Chairman of the Chinese Communist Party (CCP) (1956-1966), Chairman of the People's Republic of China (1959-1968). Zhu De, who had studied in Germany, was the Commander-in-Chief of the People's Liberation Army (PLA), Vice Chairman of the Chinese Communist Party (CCP) (1956-1966), Vice Chairman of the People's Republic of China (1954-1959). Zhu also oversaw the PLA during the Korean War within his authority as Commander-in-Chief. Zhou Enlai, who had studied in France, was the first Premier (1954 to 1976) and first Foreign Minister (1949-1958) of the People's Republic of China. Deng Xiaoping, who had studied in France and Soviet Union, was the party's Secretary-General under Chairman Mao Zedong and Vice Premier under Premier Zhou Enlai in 1950s. All of them saw Marxism as more than just a class struggle theory; for China, it was a tool for national salvation. Under their leadership, China's international status has been greatly enhanced. In the Cold War era, China was the only one in the world that dared to challenge both the United States and the Soviet Union.

After the end of the Cultural Revolution, the stagnation of the Chinese national economy and the backwardness of science and technology called for new policies. This time, Deng Xiaoping saw that China had fallen behind again, just as it was in his youth experiencing industrial capitalism firsthand in France. He was a real communist, but also learned that ideology alone was not enough; real progress required industrial strength and science. When leading reforms, Deng stressed "science and technology are primary productive forces," a view rooted partly in what he saw in Europe. His early experiences in France had a real connection to

15. Rebecca E. Karl, *Mao Zedong and China in the Twentieth-Century World* (Duke University Press, 2010), 13.

the way he thought about a reform to make China strong. He was successful. After 1978, due to the reform and opening up, China entered a stage of economic take-off, and its GDP growth rate surpassed the historical records of economic growth in the United Kingdom, the United States, and Japan. This is one of the greatest economic miracles in the history of the world, and Deng Xiaoping, who had the background in studying in Europe, was the chief designer and initiator of the miracle. Therefore, all the facts suggest that returnees from the Study Abroad Movement were at the helm for China in the 20th century.

The Studying Abroad and the "Fathers" of Modern Science/Technology

The people who returned from studying abroad were not only the leaders and escorts of the political, social, and economic developments of modern China, but also savers of the country through education, science, and technology. Before the Opium War, China's education, science, and technology were largely traditional, little industrial or scientific revolution happened. Generally speaking, in the 19th and 20th centuries, China was far behind the West and Japan in science and technology. The Opium Wars, the Sino-French War, the Sino-Japanese War, the Boxer Rebellion, all revealed China's military and industrial weakness. In the early 20th century, Japan and the West raced far ahead in science and technology, while China struggled with warlordism, poverty, and weak modernization. The returnees' overseas experience made them painfully aware of China's weakness and they returned to devote their knowledge and expertise to "save the nation." Many of the returnees brought back cutting-edge knowledge in fields China had barely developed, and therefore they became pioneers or founders in their respective scientific fields and disciplines, and cultivated new generation talents for the country, so that these new fields could develop further. Because of them, these areas of science bloomed from nothing; they were therefore the engines of national take-off. Without them, the gap between China and the West would have been unthinkable. Because of their contributions, many of them were known as the fathers of their respective fields in China. They actually launched into the biggest educational transformation in Chinese history.

Some of them became the best presidents of modern Chinese universities. It is time that we place special emphasis on Cai Yuanpei. After studying in the University of Leipzig of Germany from 1907 to 1911, Cai became the leading liberal educator of China. He was known for being the first Minister of Education of the Republic of China, President of Peking University and the founder of Academia Sinica, the highest national academic institution. John Dewey once compared Cai Yuanpei with presidents of such prestigious universities as Oxford, Cambridge, Harvard, and Columbia and pointed out that these Western university presidents were no match for Cai Yuanpei because Cai had turned Peking University into China's first modern university. Evidence indeed suggests that the complete Chinese modern education system began from Cai Yuanpei. Behind all his work

for improving China's education system lay the values and knowledge which had become part of him during his European days. Cai Yuanpei is recognized in China as the Father of modern Chinese universities.[16] We may mention more examples: After returning to China, Tang Guoan, one of the Qing Chinese Educational Mission students, became the first president of Tsinghua University, one of the best universities in contemporary China. He participated in the initiation of the Boxer Indemnity Scholarship Program for Chinese students to be educated in the United States, laid the foundation of Tsinghua University, made unremitting efforts, and died of illness as the president of the university.[17] Mei Yiqi, another famous president of Tsinghua University, had gone to Worcester Polytechnic Institute as one of the Boxer Indemnity Scholarship Program students and received his bachelor's degree in 1914. In 1931, he became the President of the National Tsinghua University. Today, he is revered by both Tsinghua Universities in Beijing and Taiwan as their eternal President.[18]

Also, we may recognize the essential fact that most of the pioneers or founders of China's academic disciplines graduated from institutions of higher learning in the United States. For example, upon receiving the Boxer Indemnity Scholarship, Chu Coching (Zhu Kezhen) studied at Harvard University and received his Ph.D. degree in meteorology in 1918. Then he returned to China and taught at Nanjing University and Zhejiang University. He is respected as the "Father of meteorology in China".[19] Zhao Yuanren received his B.A. in mathematics from Cornell University in 1914 and his Ph.D. degree in philosophy from Harvard in 1918. Then he was recruited by Tsinghua University in Beijing and helped Chinese linguistics emerge as a modern discipline. He is revered in China today as the Father of Chinese linguistics.[20] Wu Mi arrived in the United States in 1917 and received his Bachelor of Arts and Masters of Arts degrees from Harvard University in 1920 and 1921. Then he taught at Nanjing University and Zhejiang University where he introduced Western classics, such as Greek and Roman thought, into Chinese scholarship. Today he is honored as the Father of the study on China's comparative literature. [21] Mao Yisheng earned his master's degree from Cornell University and then the first Ph.D. ever granted by the Carnegie Institute of Technology (now Carnegie Mellon University) in 1919. He

16. Lin Sumai, "Is Yuanpei College A Legacy of Cai Yuanpei? A Historical Comparative Study on High Education Reform in China," Hong Kong University Dissertation, 2014.

17. Tang Shaoming, *Qinghua xiaozhang Tang Guoan: yiwei zaoqi liumei xuesheng de baoguo zhilu* (Tsinghua President Tang Guoan), Tsinghua University Press, 2016.

18. Chang The-kuang, "Tsinghua University," in Zha Qiang, Ruth Hayhoe, Heidi Ross, et al., *Education in China: Educational History, Models, and Initiatives* (Berkshire, 2013): 158-159.

19. Wang Zuoyue, "Practicing Mr. Science: Chinese Scientists and the May Forth Movement from Zhu Kezhen to Fang Lizhi," *East Asian Science, Technology and Society: An International Journal* 16:3 (2022): 327-348.

20. Zhang S. *Yaoyao changlu: Zhao Yuanren* (A long road: Zhao Yuanren) (Hong Kong, 1999).

21. Wang Songlin, "I.A. Richards and Wu Mi: Basic English, Vernacular Chinese, and 'Chung Yung'," *The Cambridge Quarterly* 41:1 (2012):66-81.

returned to China as a pioneer in bridge construction and designed some of China's most famous modern bridges. He is known today as the Father of Chinese bridges.[22] Liang Sicheng, known as the Father of modern Chinese architecture, was also a returnee of the Study Abroad Movement. He studied architecture at the University of Pennsylvania funded by the Boxer Indemnity Scholarship Program. After returning to China, he became the founder of the Architecture Departments at Northeastern University in 1928, and at Tsinghua University in 1946.[23] We may cite more examples. After Dong Tiebao graduated from Jiaotong University in 1939, he went to the United States to study and work at Purdue University and the University of Illinois from 1945 and in 1949 received a doctorate. He returned to China in 1956 and taught at Peking University. He is known as the Father of Chinese computers.[24] Ye Qisun, who received his doctorate in physics at Harvard in 1923 and published an article "A Remeasurement of the Radiation Constant by Means of X-Rays" in *Proceedings of the National Academy of Sciences of the United States*, founded the Department of Physics at Tsinghua University and became the first chair.[25] While Ye Qisun laid the ground for Physics research and education in China, the title, "Father of Chinese Physics" most often attributed to Wu Dayou who obtained his doctorate from the University of Michigan in 1933. He returned to China and taught at Peking University. Two more Chinese returnees from the University of Michigan, Zheng Zuoxin and Zeng Chengkui, are also honored respectively as the "Father of Chinese ornithology," and the "Father of marine botany" in China.[26]

Evidence suggests that after the Mukden Incident in 1931, many of them studied military technology. Shu Xingbei, renowned as the "Father of Chinese radar," studied at many universities in the United States and Britain, such as, the University of California--San Francisco, the University of Edinburgh, the University of Cambridge, and the Massachusetts Institute of Technology before returning to China in 1931. He

22. Li Haijing, Sally K. Church, "Science and Politics in China's Official Water System: The Management of the Qiantang River (1927-1949)" *East Asian Science, Technology, and Medicine* 52/52 (2020): 51-89.

23. Harold Kalman, "'Chinese Spirit in Modern Strength': Liang Sicheng, Lin Huiyin, and Early Modernist Architecture in China," *Journal of the Royal Asiatic Society Hong Kong Branch*, 58 (2018), 154-188; Sidney Wong, "The Planning Connection between Clarence Stein and Liang Sicheng in Republican China," *Planning Perspectives* 28:3 (2013), 421-439.

24. Wang Tao, "Dong Tiebao dui zhongguo jisuanshuxue de gongxian" (Dong Tiebao's contributions to China's computational Mathematics) *Journal of Inner Mongolia Normal University* 6 (2019): 499-503.

25. Hao Yu, Yanfu Huang, *Zhongguo kejide jishi: Ye Qisun he kexue sashimen* (China's foundation stone: Qisun Ye and masters of sciences), (Fudan University Press, 2000); Duane W., Palmer, H. H., Yeh Chi-Sun, "A Remeasurement of the Radiation Constant by Means of X-Rays" in *Proceedings of the National Academy of Sciences of the United States* 7 (8), 1921: 237-242.

26. Ting-kuo Lee, "A biographical Sketch of Dr. Ta-You Wu," AAPPS Bulletin 17:5 (2007): 3-4.

taught at the Whampoa Military Academy, Zhejiang University, and Jinan University.[27] Qian Xuesen travelled to the United States in 1935 and studied at the Massachusetts Institute of Technology and California Institute of Technology in 1936, and received a doctorate in 1939. He returned to China in 1955 and helped establish the Chinese space program. For his contributions in the field of aerodynamics, he achieved recognition as the "Father of Chinese Rocketry." He is also recognized as one of the founding fathers of "Two bombs, One Satellite."[28] Wang Chenshu, a female scientist, received her Ph.D. degree from the University of Michigan in 1944. She returned to China in 1956 working as an academician at the Chinese Academy of Sciences and a professor at Peking University. Because of her contributions in China's nuclear program, she was revered as "Marie Curie of China."[29] Chen Nengkuan received his master's and doctor's degrees from Yale University in 1948 and 1950 respectively. After returning to China, he was an academician in the Chinese Academy of Sciences. Because of his contributions, he obtained "Two Bombs and One-Satellite Achievement Medal," the top award for Chinese nuclear weapon program.[30] Guo Yonghuai was also a returnee of the Study Abroad Movement and one of the fathers of two bombs and one satellite. After graduating from Peking University in 1933, Guo studied at the University of Toronto and California Institute of Technology from 1940 to 1945. From 1946 he became an associate professor and later a professor at Cornell University. He returned to China in 1956 and became a founder of mechanics in China. Due to his contributions in explosive mechanics and China's nuclear weapons, he won the "Two Bombs, One-Satellite Achievement Medal."[31] Deng Jiaxian earned his doctorate in physics at Purdue University in 1950 and then returned to China. Due to his pioneering work and contributions in China's nuclear theoretical research, he is recognized as the "Father of China's Atomic Bomb."[32] Liang Sili, Liang Sicheng's youngest brother and the founder of China's missile control system, also had education experience in the United States. He received his bachelor's degree with a major in electrical engineering in Purdue University in 1945 and his doctorate in missile control from the University of Cincinnati in 1949.[33] Xu Guangxian, known as "The Father of Rare Earth" in China, similarly benefitted from his education and

27. Liu Haijun, *Shu Xingbei: yige tiancai wulixuejia de mingyun* (The archives on Shu Xingbei: the fate of a genius physicist) (Beijing: Writers Press, 2005).

28. Ning Wang, "The Making of an Intellectual Hero: Chinese narratives of Qian Xuesen," *The China Quarterly* 206 (June 2011): 352-371.

29. Wang Zuoyue, "Transnational Science during the Cold War: The Case of Chinese American Scientists," *Isis* 101:2 (2010): 367-377.

30. "Cheng Nengkuan: yi'weiguozuoshi' wei shiming" www.cas.cn accessed 2024-04-10.

31. "Guo Yonghuai: yongyuan zhide huainian de ren," Museum of Peking University History, Retrieved 2024-04-10.

32. "Deng Jiaxian, China Scientists Developed Nuclear Weapons," *New York Times* 4 August 1986.

33. "Sili Liang, "Cangqiong daye chizixin" (Liang Sili: the pure heart for the sky and great cause) in *Qiushi*, 18 December, 2015.

training in the United States. He traveled to the United States in 1948 to study at Washington University in St. Louis and Columbia University. After receiving his Ph.D. degree in 1951, he returned to China and began his teaching career at Peking University.[34]

Many of the returnees also received their degrees from elite universities in Europe, Canada and Japan. Li Siguang studied in Osaka Technical College in Japan and the University of Birmingham in the United Kingdom. Upon his return from abroad in 1920, he became a geological professor at Peking University and Wuhan University. Because of his outstanding contributions, he is admired as the Father of China's geomechanics.[35] Tong Dizhou received his Ph.D. in 1934 from the Free University of Brussels of Belgium. He then became a professor at Shandong University and an academician at the Chinese Academy of Sciences. As the founder of experimental embryology, he is honored as "the Father of biological cloning" in China.[36] After studying at Cambridge University, Hua Luogeng returned in 1938 to Tsinghua University where he was appointed full professor. He educated many mathematicians, and his influence lasting several generations. English mathematician Harry Bateman once praised him as "China's Einstein." Due to his contributions, he is regarded as "the Father of China's modern mathematics."[37] Qian Sanqiang, again a returnee of the Study Abroad Movement, is often called the Father of China's nuclear program. After graduating from Tsinghua University in 1936, he moved to France to study at the College de France. Qian returned to China in 1948. In 1955 he advised Mao Zedong to build an atomic bomb. He served as the administrative head of the project and oversaw its first test in 1964, on his 51st birthday.[38] Wang Zhizhuo, the "Father of remote sensing in China," is again a returnee of the Study Abroad Movement. He traveled to Europe to study at the University of London and the Technical University of Berlin from 1935 to 1939. He was the first Chinese to obtain a doctorate in aerial survey. After graduation he returned to China and became a professor at Tongji University and Wuhan University.[39] Again, after

34. Xing Ling Staff, "Xu Guangxian: Father of Chinese Rare Earths Chemistry," *Bulletin of the Chinese Academy of Science* 23:2 (2009), 5; Jilie Michelle Kinger, *Rare Earth Frontiers: From Territorial Subsoil to Luner Landscapes* (Cornell University Press, 2017), 13; Seth C. Rasmussen, ed., *Igniting the Chemical Ring of Fire: Historical Evolution of the Chemical Communities of the Pacific Rim* (New Jersey: World Scientific, 2018), 115-119.

35. Hou Li, *Building for the Oil: Daqing and the Formation of the Chinese Socialist State* (Harvard University Asia Center, 2021).

36. Yang Shaoyi, "Contribution of Late Professor T.C. Tung to Experimental Embryology of Amphioxus: In Memory of the 20th Anniversary of Professor T.C. Tung's Death," *Development, Growth, and Differentiation* 41 (1999):503-22.

37. Wang Yuan, *Hua Loo Keng: A Biography* (Springer, 1999).

38. Mark Matthews, "Sense and Sensibilities" *ASEE Prism* 31:1 (2021) 34-37; Nocholas Kristof, "Qian Sanqiang, Chinese Physicist on Atom Bomb Team, Dies at 79," *New York Times* 8 November 2018.

39. Yang Kai, "Remote Sensing—the Modernized Development of Photogrammetry," *Geomatics and Information Science of Wuhan University* 10:3 (1985) 19-24.

graduating from Tsinghua University in 1936, Wang Daheng went to England to study at Imperial College London and the University of Sheffield in optical physics and technology. In 1948, he returned to China and became a founding member of the Chinese Academy of Sciences and the Chinese Academy of Engineering. He is considered as the "Father of Optical Engineering in China."[40] Qian Weichang received his Ph.D. degree from the University of Toronto in 1942. In 1946, Qian returned to China and served as mechanics professor of Tsinghua University, Peking University, and Yanjing University. He is acknowledged as the "Father of modern mechanics in China."[41] Yang Chengzong studied in the University of Paris and received his doctorate in 1951. After returning to China, he became a radiochemist professor at the University of Sciences and Technology of China. He established the first radiochemical laboratory in China and many young successful radiochemists emerged from there. For these achievements, he is honored as the "Father of radiochemistry in China."[42] Sun Jiadong in 1951 studied aircraft engines at Zhukovsky Air Force Academy in the Soviet Union and graduated in 1958 with "the highest honor." After returning to China, Sun is a member of the Chinese Academy of Sciences and known as the "Father of Chinese Satellites." As the former chief designer of the Beidou navigation system, he is also considered the "Father of Beidou."[43]

Obviously, these returnees had profound sense of patriotism to use their knowledge to help rebuild China, which had been devastated by long lasting wars, especially the War of Resistance against Japan, and the Chinese Civil War. They believed it was their duty to contribute to the strength and modernization of their native country. They used their overseas learning to create the foundations of modern Chinese science, technology, and education. Returnees from the Study Abroad Movement were surely the key drivers for a scientific and educational modernization in China.

Conclusion

The Chinese Studying Abroad Movement is in itself a long-lasting and influential event deserving attention which is sure to attract. Due to its massive and comprehensive influences, it is simply the mightiest movement in modern Chinese history. The reason is inextricably linked to its historical background. China's

40. Gan Fuxi, *History of Modern Optics and Optoelectornics Development in China* (World Scientific, 2014):27-29.

41. Xiaoguang Wang, "The 'Techno-Turn' of China's Official Discourse on Nationalism," *Communist and Post-Communist Studies* 53:4 (2020): 220-239.

42. W. -Q. Shi, Y. -L. Zhao, Z. -F. Chai, "Nuclear and Radiochemistry in China: Present Status and Future Perspectives," *Radiochimica Acta* 100 (2012): 529-539; Liu Pei, Zhang Zhihui, "Yang Chengzong and the University of Science and Technology of China," *Cultures of Science* 1:2 (2018): 93-106.

43. Eric Hagt, "China's Beidou: Implications for Individual and the State," *The SAIS Review of International Affairs* 34:1 (2014): 129-140.

proud international status and order were broken by the West in the 19th century, and China became a semi-colonial "sick man of East Asia." Therefore, many Chinese with lofty ideals realized that China was lagging behind and needed to learn from the West and Japan in order to return to the top of the world. When they went abroad, they carried strong desire to find an example that could save and modernize China. Under this background, the Study Abroad Movement has become a main theme of modern Chinese history.

When Deng Xiaoping made his speech in 1978 stressing China would send more students to study abroad, he fully realized how important it was to China's future progress. The speech was evident at the outset of the wisdom of this sagacious statesman though the policy was not new. It is, therefore, apparent that the power of young Chinese mind has been, and will continue to be, kindled by overseas education and burn on the land beneath which rest the bones of the inventors of gunpowder, of paper, of compass, and of printing. The influence of the Study Abroad Movement is so particularly noteworthy and all-round in modern Chinese history that we cannot fail to regard it as one with peculiar significance and importance.

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