Between Tao and Instruments: Railways, China, and the World
From the Perspective of Modern Thought
(1875-1936)

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In the evolution of modern railway thought, it includes not only the discussion of railway planning, sovereignty, debt, and construction, but also the discussion of spiritual guiding ideology such as “Tao, body and utility” and “material and spirit”. From the perspective of the relationship between road and equipment, the development of modern railway thought in China has experienced three stages. During the Westernization Movement, Li Hongzhang and other people expounded the benefits brought by railway construction from the angle of “utility”, and believed that there was still a unity of “Tao and style”. After the Sino-Japanese Naval Battle, with the emergence of the theory of railway sovereignty and the theory of dividing China, Kang Youwei and others questioned the thought of Westernization school. The unified Tao body was divided into two parts: China and the West. After the May Fourth Movement, railway, as a product of western material civilization, was compared with Eastern spiritual civilization by Liang Shuming, Li Dazhao, and others. The conflict between material and spirit made the Western “Tao style” evolve into the Europe-American way of pursuing “scientific spirit” and the Soviet-Russian way of exploring the ideas of revolution and transformation. The railway has thus become an important carrier of the “scientific spirit” and socialism.

Keywords: the history of railways in China, instruments, Westernization group, reformers, revolutionary party, Euro-American road, Soviet-Russian road, Tao

“Between Tao and Instruments”, this quote comes from Zhu Xi’s reply to Huang Daofu: “There is a clear dividing line between Tao and organ, which must not be confused” (Guo, 1996, p. 2948). At the same time Zhu Xi said, “The instrument is the Tao, and the Tao is also the instrument. Tao has never left the instrument, and Tao is also the meaning of the instrument” (Li, 2020, p. 1768). These two seemingly contradictory sentences are derivative interpretations of “Metaphysics is the way; physics is the instrument” in the Book of Zhouyi. Since modern times, Chinese people’s understanding of Tao has also changed. Wang Guowei pointed out, “I think since ancient times, Tao has come from one. After the trade between China and the West, Western books were introduced into China, and there were two principles for managing oneself and governing the country” (Fang, 2014, p. 741).

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The ancients said, “The organ is the carrier of Tao”. As a representative instrument of the Western Industrial Revolution, railway has influenced the development of modern Chinese thought since it was introduced into China at the end of the 19th century. At present, there are abundant researches on modern railway thought in academic circles. It is related to people’s understanding of railway planning, sovereignty, debt, and construction. However, there are few research results on material and spiritual thoughts in modern railway thought. On the basis of sorting out the development of modern railway thought, this paper intends to reveal the internal relationship between material and spiritual part of railway thought by analyzing different classes’ understanding of China and the world.

**The Use of Tao and Body: The Formation of the Theory of “Prosperity and Strength” in the Period of Railway and Westernization Movement**

In the late 1870s, there was a debate within the Qing Court about whether to build a railway. In Li Hongzhang, Xue Fucheng, and Wang Tao’s view, the construction of the railway did promote the development of Western political, economic, and military power, but it also caused pressure and coercion on China’s development. China needs to become rich and powerful by building its own railways within its borders, as Western countries have done. For example, Ding Richang, a famous politician and representative of the Westernization faction in the late Qing Dynasty, pointed out in his memorial to the Emperor in 1876: “Japan used to be a weak country, but since the establishment of railways, the laying of electric lines, the development of mining, the training of the army, and the manufacture of industrial products, it has become a strong country” (Chinese Historical Society, 1961, p. 348).

On the social and economic level, they believe that the railway promoted the development of business travel trade in Western countries. In 1878, Xue Fucheng, a modern diplomat and representative of the Westernization School, pointed out that “the railways in the United States were also recently built, and those who built new cities and opened up wasteland could build railways as a prerequisite; the construction of the railway also contributed to population growth and trade” (Xue, 1987, p. 107).

Of course, Li Hongzhang and others also pay attention to the analysis of the international relations involved in the construction of railways. In 1880, Xue Fucheng discussed the threat posed by Japanese and Russian railway construction on the border to China’s frontier defense:

> Just as a weak country like Japan built a railway in its own country, thinking that it was learning Western technology and looking down on China’s national strength, Russia started to build a railway from the European part straight to Hohanchakhtu, and wanted to build a road from Vladivostok to connect to Hunchun. China has thousands of kilometers of border with Russia. If some railways had been built earlier, it would have been very easy to move the army all over the country. Without railways, it would have been difficult to increase the expenditure of the army to defend against the enemy of the neighboring country. (Xue, 1987, p. 136)

In the face of the measures given by Western countries to build railways on the Chinese border, they mainly have two countermeasures. First, China should firmly grasp the initiative of building railways. In 1875, Wang Tao believed that once China built its own railway, other countries would be afraid of China: “Once the trains and ships are built, and the electric power and railway facilities are laid, the Western countries will be afraid of us and dare not despise our country” (Zheng, 2020, p. 393). Another solution is to “transplant” Western methods of prosperity to China. Xue Fucheng proposed that China should build railways like the West, as a way to achieve China’s prosperity:
Now the competition in Western countries is very fierce, everyone is very rich and strong, full of vitality, they rely on trains and ships. So if only China could learn from Western countries to build railways, the problems of stagnant and expensive transportation would be solved. (Xue, 1987, p. 107)

Of course, they not only pay attention to the aspects of railway planning, sovereignty, debt, and construction, but also think about theoretical issues such as “the use of Dao and body” and “the use of Chinese and Western bodies”. Li Hongzhang believes that ships and railways can promote China’s social and economic development, and also conform to the objective law of natural development of heaven and earth: “Recently, China’s imitation ships have gradually gained benefits, the wisdom of the people has gradually increased, and the manufacturing process has become exquisite” (Li, 1998, p. 1553).

This is essentially a theory of “integrating Eastern thought into Western science and technology” under the framework of “integrating the ideological connotation of Tao into the use of instruments”. As Wang Tao said in “A Thing About Worrying Too Much”, “if Confucius was born today, he would certainly learn how to make ships and trains, weapons and machines in Western countries” (Ren, 2000, p. 1903). Although some people in this period noted the existence of Tao in the West, and pointed out the differences and similarities between the Western way and the Eastern Way, under the ideological framework of “integrating the ideological connotation of Tao into the use of instruments” and “integrating the ideological connotation of East into the technology of the West”, most people still emphasize that “Tao is generated from the number one”. As Wang Tao said in the Principles of Tao,

There is only one way under heaven, but are there two? … The way of the world changes from the same to different at the beginning, and eventually from different to the same… Tao could not play a role in the beginning, so instruments were first used to make it circulate, so trains and ships were the carriers that allowed Tao to play a role. (Tao, 2022, p. 2)

**Since the Equipment Has Changed, How Can the Tao Remain Unchanged?:**

**The Railway and the Sino-Japanese War—The Emergence of Crisis Consciousness in the Period of Xinhai**

With the bankruptcy of the Westernization Movement after the Sino-Japanese War, the reformists, represented by Kang Youwei and Liang Qichao, began to realize that the construction of railways promoted the prosperity of the Western world. But it will only lead to the situation of “the strong over the weapon, the weak weaker”. In his Second Petition to the Qing Emperor, Kang Youwei argued that:

Turkey is a great Islamic country… So, Russia took her Black Sea territory, Persia took her Koto… The Kings of the six nations combined to remove the Ottoman sultan and allow him to open a parliament, weakening the monarch’s power. (Kang, 1987a, p. 173)

Tan Sitong even said that “today’s world is the world of railways. A nation will survive if it has railways, and perish if it does not” (Tan, 1898, p. 74). Thus, they observed not only the prosperity brought by the railway to the Western powers, but also the role of the railway in the decline of the weaker countries of the world.

The change of reformists’ thoughts on railway and the world was closely related to the further erosion of Chinese territory by Western powers. As China was in danger of being divided up by Western countries, Yang Du and Liang Qichao’s thoughts on national crisis and sovereignty were stimulated, and thus the theory of railway sovereignty and the theory of partitioning China emerged. In 1899, Liang Qichao pointed out that “Britain and Russia negotiated terms with China by using railway rights, ostensibly to gain the right to use railways, but in fact to divide China’s territory” (Liang, 1899, p. 1052). In 1905, Yang Du also pointed out that:
Close to the secret information of American students, the United States government because of Russia’s proposal to divide China, the United States government itself believes that the railway has not been completed at this time, and it is not convenient to transport troops, so temporarily advocated the preservation of Chinese territory. (Yang, 1905, p. 35)

At the same time, in the face of the Western countries’ use of railways to erode China’s sovereignty and carve up China, Kang Youwei, Liang Qichao, and others doubted the views of the Westernizers such as Li Hongzhang. Out of concern about the national crisis and sovereignty, they began to rethink the dialectical relationship between China and the world. His understanding of “Chinese traditional thought” and “the ideological core of Tao”, “Western science and technology”, and “apparatus” has undergone important changes. The most representative is Liang Qichao’s Biography of Li Hongzhang. In the book, he starts from a nationalistic approach, pointing out that Li Zhongzheng’s practice of learning from the West to build railways in the hope of making China rich and powerful will not work.

In Liang Qichao’s view, after the Sino-Japanese Naval Battle, the Chinese people gradually changed from learning Western artifacts and skills to learning Western political systems, and the importance of railways gradually gave way to political measures such as the restoration of civil rights and the establishment of parliament. In his Fourth Petition to the Qing Dynasty Emperor, Kang Youwei also believed that the reason why Western countries were “strong in the army” was closely related to the reform measures of “setting up a special institution to reward scientific research talents” that he advocated:

Recently, Britain acquired India and Burma, Russia ran the railway from Siberia to Hunching, France acquired Vietnam, and they all built railways close to our borders… People say that Western science and technology are strong and very imaginative. I think this is the reason why Western countries pay attention to rewarding scientific research talents. (Kang, 1987a, p. 170)

At the same time that “the use of instruments” changed, the Reformists’ understanding of “the connotation of Tao” also changed. On the one hand, Kang Youwei, Tan Sitong, and others noted that beyond the “powerful technology and weapons” of the West, there are more fundamental things. On the other hand, they blended some concepts of middle school and Western learning and formed a unique ideological system. Tan Sitong was the first to change; he pointed out that:

I don’t think the Westernization Movement has done enough. It only learned advanced Western technology, but shouldn’t the traditional Chinese ideology and moral code be changed? … The equipment and the change, why cannot change the traditional ideas? If people cannot give up the instruments, they will not give up the ideological content of the Tao… How can there be a genuine Westernization movement in China over the past decades? This is not a matter that a minister can figure out? All I have seen of the Westernization Movement are ships, cables laid, trains made, weapons and mines, and some machinery for weaving cloth and ironmaking. I have not seen the political system of Western countries being studied, so I think the Westernization Movement has not touched the root. (Tan, 2012, p. 215)

In 1903, Yan Fu denied Lu Jiuyuan and Wang Yangming’s idea that “pursuing the truth of things is useless”. In his “Decision to Save the Country”, and after clarifying the Western academic method of pursuing truth and its differences from Lu Wang’s mind theory, he believed that although building railways was indeed a necessary move to enrich the country and strengthen the army, we must first understand the Western method of pursuing truth behind the artifacts:

According to Lu Jiuyuan and Wang Yangming, it is quite wrong to think that the pursuit of truth is not useful for the success or failure of things. The teachings of Lu Jiuyuan and Wang Yangming can only educate one’s own heart. They think they can understand everything in the world without going out, but is the world really what they think it is? … However, the
Western approach to truth is completely different from theirs. The creation of every doctrine, the creation of every law, must be carefully studied, and this process is very complicated, so these truths are very valuable. These truths are also very old; if we want to save China, we must build railways and machines to be useful, and if we want to build railways and machines, we must first learn the rigorous scientific research and academic spirit of the West. Therefore, if you want to make the country strong, you must learn the advanced ideas and scientific research spirit of the West, and how can this thing be delayed. (Guang, 2009, p. 145)

When Tao was divided into “China” and “West”, people are beginning to mix Chinese and Western concepts. For example, Kang Youwei combined the ancient Chinese thought of Great Harmony with the Western thought of freedom and equality and the Buddhist paradise, and put forward the theory of Great Harmony world. It also holds that the railway has the characteristics of breaking the barrier of time and space, making the communication between different regions closer, and can be used as a concrete means to realize the world (Kang, 1987b, p. 203). In the Theory of Benevolence and Righteousness, Tan Sitong mixed the ancient Chinese thought of benevolence with the Western scientific concepts such as ether and electricity, and put forward the concept of benevolence. And when discussing the realistic problem of Russia’s construction of the Siberian Railway threatening China’s sovereignty, he believes that the effect of subdue the army without a war can be achieved through the construction of the Eurasian railway, thus reflecting the thought of benevolence and benevolent government:

If we are worried about Russia’s intrusion on our country, we must first build a set of great railways across Europe and Asia… When the construction is completed, war in all directions will be eliminated, and the government will be benevolent. (Tan, 2017, p. 96)

Tao and Instruments Changed Again: Railway and the New Changes in the Thinking Circle of the Republic of China

After the establishment of the Republic of China, there was a new change in the cognition of the role of railways in Western countries. Liang Qichao, a representative of the reformist group who originally advocated learning from Western countries, changed his previous view after witnessing the impact of the First World War on Europe, and declared the bankruptcy of “scientific pandemonitism”. In his book A Journey to Europe, he proposed that:

The more vigorous the development of science, the more factories are built, the wider the gap between the rich and the poor in society. … We traveled in Europe for a year and saw a wave of strikes several times a month. The biggest of these was the British Rail strike in September, where two groups competed, literally two enemy countries at war… The Europeans dreamed of the omnipotence of science, but now they think science is bankrupt. This is a big key to the recent shift in thinking. (Liang, 2017, p. 12)

Almost at the same time as Liang Qichao’s ideological transformation, scholars represented by Hu Shi and Li Dazhao, who were deeply influenced by the New Culture Movement, also began to classify and compare Chinese and Western cultures, and actively explore the spiritual problems behind Western civilization. In 1928, Zhong Luzhai, a famous modern educator, pointed out in his book Chinese Culture and Western Culture that Western culture represented by railway advocated material and technology, and railway was the external expression of Western material civilization, and held that there were great differences between Western material culture and Eastern spiritual culture:

In nature, Chinese culture is a spiritual culture. Western culture, material culture… The so-called Oriental culture is all spiritual, which is more obvious. Westerners focus on material things… After Watt invented the steam engine, it was used
in factories and mines to realize the industrial revolution in the 19th century. For example, Stephen invented the train, Beau invented the cable, Marconi invented the radio communication and so on. (Zhong, 1928, p. 9)

Liang Shuming believes that the Western material civilization represented by the railway is too different from the traditional Chinese life, and advocates that in the process of learning the West, we should see the scientific spirit behind it:

So we Oriental people look at the things of Western civilization, and find the differences are very obvious…For example, the first eye-catching guns, iron ships, telescopes, microscopes, ships, trains, telegrams, telephones, electric lights… Everything is with the spirit of conquering nature, which we cannot achieve. This is true of all material things… Since the West holds the spirit of science, it certainly produces countless studies. China, though it holds the spirit of art, certainly cannot produce a decent learning. (Liang, 1926, p. 24)

Although Hu Shi is very opposed to the simple classification and comparison of Eastern and Western civilizations, he also believes that in the past, Chinese people only touched the superficial level represented by the railway in the process of learning from the West, and had not yet studied the spiritual issues behind the artifacts:

The most vicious remarks today are that the Western civilization is material and materialistic, while the Eastern civilization is spiritual… Western modern civilization can be said in a word, is to use human wisdom to conquer the difficulties of nature. The difficulties of space, steamboats, trains, trams and other tools to conquer them… We see only the material instrument which expresses man’s intelligence; we do not see the spirit which the material instrument expresses. (Hu, 1926, p. 12)

With the spread of Marxism in China after the May Fourth Movement, the early Marxist disseminators represented by Li Da dao began to pay attention to the development of railways in socialist countries such as the Soviet Union. Li Da dao argues that in a country under the dictatorship of the proletariat,

except for a large part of the peasants who own land, all enterprises with large capital, railway mines, steamship companies, transport undertakings, large-scale manufacturing industries, and large shops, are nationalized and carried out as usual under the control of the representatives of the people’s Assembly. (Li, 1950, p. 198)

In addition, some newspapers and magazines have also paid attention to the problem of railway construction in socialist countries. In 1933, “The Status of Industrial Construction in the Soviet Union”, published in Oriental Magazine, observed the path of industrialization of the Soviet Union through the status of railway construction: “At that time the economy of the Soviet Union was built on two cornerstones in different directions: socialist big industry, railways, mines, etc., and the rural economy of commodity capitalism” (Zhi, 1933, p. 40).

Mao Zedong pointed out that

because of China’s economic backwardness, the number of modern industrial proletariat is small. The two million or so industrial workers are mainly workers in five industries: railways, mines, shipping, textiles and shipbuilding, and a large number of them are enslaved by foreign industries. When we look at the strength of the strike movements, such as the seamen’s strike, the railway strike, the Kailuan and Jiaozuo coal mine strikes, the Shamian strike, and the general strikes in Shanghai and Hong Kong after the May 30th, we can see the importance of the position of the industrial proletariat in the Chinese revolution. (Xu, 2017, p. 175)

It can be seen that people’s understanding of learning Western aspects can be roughly divided into the following categories: The scholars represented by Hu Shi and others, who were deeply influenced by the new culture movement, thought that they should learn the “scientific spirit” of European and American countries in
the discussion of material and spiritual civilization; the Communists, represented by Mao Zedong and Li Dazhao, turned to Marxism-Leninism and the Soviet Russian model. After experiencing the fission of the previous period, the understanding of “Tao” has generally formed two parts: China and the West. With the new changes in the ideological circle of the Republic of China, the Chinese people had a new discovery of the western Tao, that is, it was divided into two parts: Europe, America and Soviet Russia.

On the one hand, some people think that the “scientific spirit” derived from the Western material civilization is the “variant” of “Tao” in the Republic of China. In 1932, Jiang Mingqian’s “The Invasion of Western Culture and China’s Response” reviewed the past exploration of the road to national salvation, and proposed that the essence of the dispute between material and spirit and the dispute between Tao and organs coincided:

In the third period from 1895 to 1918, foreign aggression was the loss of railway and mine rights and the division of spheres of influence. China has given up the army and replaced the armed forces with the industrial development and the reform of the political system. Even now, many people still despise Western civilization as “material civilization” and respect Eastern civilization as “spiritual civilization”, which is exactly the same as the idea of “the East is still the way, the West is still the art” 30 or 40 years ago. (Jiang, 1932, p. 18)

With the gradual deepening of the understanding of Western civilization, Chinese people are increasingly aware that spiritual civilization is not unique to the East. As Lin Yutang said in Machine and Spirit,

Material civilization is not unique to the West, and spiritual civilization is not unique to the East... Because people who have machine civilization may not have spiritual civilization, we know that this so-called machine civilization is still a thing in the psychology of Chinese people 50 years ago. At that time, the Chinese people only saw the obvious civilization of the Westerners, such as trains, ships, telegrams, guns, etc., so they called it machine civilization. (Tianshui, 2008, p. 80)

Feng Youlan argued in “The General Trend of Modern National Movement in China” that the “industrialization” issue discussed at that time involved not only the material civilization such as railways, machinery and factories, but also the spiritual civilization emphasized by people during the May Fourth Movement (Feng, 1936, p. 260).

On the other hand, along with the reflection of scholars on the Western material civilization, the politicians represented by Chen Dachai and Yan Yishi, who were deeply influenced by the 1911 Revolution and the Northern Expedition, began to criticize capitalism from the perspective of ideology and culture. Chen Dacai’s “Material Civilization” questioned Western capitalism and material civilization on the basis of analyzing Western countries’ oppression of the working class: “Factories work all night, trains and ships work all night... The value of material progress and the private property system are almost inseparable” (Chen, 1919, p. 36). In “The Relationship Between Socialism and China’s Material Civilization”, Yan Yishi argued that railway, as a product of Western material civilization, had become a tool for European countries to erode China’s sovereignty, and thus launched a critique of capitalism (Yan, 1922, p. 9).

The realization of socialism depends not only on uniting the proletariat in the strike movement, but also on reforming their ideology and spirit. As Chen Duxiu put it in his letter to Zhang Dongsun,

Only developing material civilization without developing it in a way that is beneficial to the majority of the people, even if all provinces are to open mines and build roads, the majority of the people will not be able to enjoy a human life. (Zhou, 2016, p. 625)

In addition, the “Policy of Transformation of Material Life” and the “Transformation of Spiritual Life”, published in Liberation and Transformation in 1920, pointed out that the material life of the proletariat, including railway workers, should be reformed (Zhou, 1920a; 1920b, p. 7). But it is far from enough to transform the workers
materially; socialism must also be used to transform their spiritual life, because “if the spiritual is transformed, the material life cannot maintain the status quo, and naturally tends to be transformed”. The transformation of spiritual life can be regarded as the flower of the transformation of material life. The transformation of material life can be regarded as the result of the transformation of spiritual life.

Conclusion

Just as Hu Shi said in his “Introduction to the Founding of a Nation”, the various national salvation movements since the period of the Westernization Movement were all aimed at solving China’s modernization problem, that is, “How to solve China’s various difficulties so that she can stand on her own ground and live a stable life in this modern world” (Hu, 2013, p. 30). From Li Hongzhang and others’ ideas of “the use of Taoism and the use of Chinese and Western” during the Westernization Movement, to Feng Youlan and others’ understanding of European and American civilization and socialism in the 1920s and 1930s, it can be found that railway has always been one of the tools for Chinese people to solve the problems they faced at that time. In the course of the development of modern Chinese railway thought, it includes not only the specific content of railway planning, sovereignty, debt, and construction, but also the discussion on the ideological aspects of “Tao, body and utility”, “material and spirit”.

References

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