NATIONALIZING SCIENCE IN REPUBLICAN CHINA: ACADEMIA SINICA'S POLICY ON INTERNATIONAL BIOLOGICAL EXPEDITIONS

by

Aijie Shi

Bachelor of Arts, Nanjing University, 2012

Master of Science, Chinese Academy of Sciences, 2015

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This thesis was presented

by

Aijie Shi

It was defended on

December 5, 2017

and approved by

Dr. Raja Adal, Assistant Professor, Department of History

Dr. Katherine Carlitz, Adjunct Assistant Professor, Department of East Asian Languages and Literatures

Dr. James Cook, Research Associate Professor, Department of East Asian Languages and Literatures

Thesis Director: Dr. James Cook, Research Associate Professor, Department of East Asian Languages and Literatures

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Aijie Shi, M.A.

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My study addresses the nationalization of science in the nation-building era of China through the establishment of Academia Sinica (*Zhongyang yanjiuyuan*), China's national academy of sciences. In 1929, through its engagement with a Sino-Japanese biological expedition along the Yangzi River, Academia Sinica, as a governmental department, for the first time implemented regulations on foreign biological expeditions in China. The engagement thus paved the way for China's first policy on the matter. By terminating international researchers' unlimited access to Chinese natural resources, this policy established national control over all the scientific activities in China. With such institutional protection, Academia Sinica essentially established biological resources as China's national property, and scientific research as a national enterprise. Through the process, Academia Sinica not only became the place where science and nationalistic politics could mutually empower each other, but also established itself as a monopolist in the Chinese science community. This paper examines the driving forces behind Academia Sinica's nationalizing efforts—namely, China's political instability and its troubled relations with Japan in the late 1920s, the necessity of the Nationalist government to assert its legitimacy and authority in its founding years, and the utility of Academia Sinica in connecting science and nationalistic politics. Based on this examination, the thesis explores the application of science as a nationalistic tool and its effect on China's scientific community, when science became a collectivist interest of Nationalist China.

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1. INTRODUCTION

My study addresses the nationalization of science in Republican China through the establishment of Academia Sinica (*Zhongyang yanjiuyuan*), China's first national academy of sciences. I argue that this nationalizing process was initiated by Academia Sinica's engagement with a Japanese biological expedition along the Yangzi River in 1929. This encounter paved the way for Academia Sinica's future policy on international biological expeditions in China in the 1930s. By terminating international researchers' unlimited accesses to Chinese natural resources, this policy established national control over all the scientific activities in China. It accordingly incorporated biological resources as China's national property, and science as a national enterprise. This paper examines the driving forces behind Academia Sinica's nationalizing efforts—namely, China's political instability and its troubled relations with Japan in the late 1920s, the necessity of the Nationalist government to assert its legitimacy and authority in its founding years, and the utility of Academia Sinica in connecting science and nationalistic politics. Based on this examination, this thesis will look into the changing understanding of Chinese elites towards nation, science, and modernity.

Moreover, through the process of nationalizing science, Academia Sinica not only became the place where science and nationalistic politics could mutually empower each other, but also established itself as a monopolist in the Chinese science community. This thesis intends

to shed light on the Nationalization's effects on China's scientific community, when science became a collectivist interest of Nationalist China.

In October 1929, a Japanese ichthyologist, Dr. Kishinouye Kamakichi (1867-1929), launched a biological expedition along the Yangzi River. The trip was hosted by Shanghai Science Institute (*Shanghai ziran kexue yanjiusuo*, est. 1931), a scientific research institute funded by a Sino-Japanese cultural project. In a team composed of Japanese and Chinese graduate students at the Tokyo Imperial University, the expedition planned to study freshwater fish in the Three Gorges area of the Yangzi River. As they sought to conduct a typical biological expedition, the team expected to study the natural habitat of the freshwater fish and collect fish specimens for further study.

When the team was halfway to their destination, the leader of Academia Sinica, Cai Yuanpei (1868-1940), sent an order to local governors along the Yangzi River to prohibit the team from further proceeding unless the team fulfilled Academia Sinica's requirements. The central point of Academia Sinica's intervention was to establish and stress the point that any foreign researcher shall not conduct scientific expeditions and collect biological specimens in China's territory without the Chinese authority's permission and participation. After rounds of negotiation, the event was settled according to Academia Sinica's will in that the team received two participants from Academia Sinica and sent a set of fish specimens collected to Academia Sinica.

Based on the terms settled with Dr. Kishinouye's team, Academia Sinica in the early 1930s promulgated a set of policies on regulating foreign research expeditions in China. According to the policies, any foreign researchers who planned to conduct scientific expedition

in China must obtain an academic passport, which would be exclusively issued by Academia Sinica. Otherwise, their activities, as well as their host intuitions' activities, in China would be subjected to official intervention. To acquire the passport, a research party had to sign a contract with Academia Sinica, which signifies the conditions under which foreigners may collect biological specimens in China.

With the policies, Academia Sinica established itself not only as the national research center of China, but also as the administrative center of science for the nation. Thus, it was no longer an institution exclusively engaged with the studies of science and arts. It was a political sector capable of solving practical problems that the Nationalist government faced.

The history of Academia Sinica during its mainland period (1927-1949) has been closely examined by Chen Shiwen.[1] Chen's emphasis is on the dual-identity of the institute, both as the national academy of China and a department of the Nationalist government. To start with, Chen traces Academia Sinica's dual-identity from the tradition of China's central academic system, through which the combination of academic research and government service has been gradually institutionalized in China's central academies. Though having similar dual-identity to its predecessors, Academia Sinica was different in that it was the first national academy that did not center on the study of the Chinese classics, but rather regarded scientific research as a priority. The emphasis on scientific research, Chen argues, was influenced by the emergence of modern scientific academies in the West from the 17th century onwards.[2]

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[1] Shiwen Chen. *Government and Academy in Republican China: History of Academia Sinica, 1927-1949*. Dissertation, Cambridge: Harvard University, 1998.
2 *Ibid.*, pp. 11-25.

Further, Chen's work focuses on the institute's attempts to maintain a balance between the two-fold mission led by its dual-identity: serving the nation-building agenda of the Nationalist government and pursuing the impartial truth of nature. This involved three issues that concerned Academia Sinica: [1] To what degree should the institute have autonomy from the government; [2] Whether the institute should give priority to pure science or applied science; and [3] How the faculties of the institute should place themselves between professional scientists and bureaucracies.[3] Regarding the issues, Chen argues that facing Japan's increasing encroachment in North China and the leading members' preference for Soviet industrial development aided by the Soviet Science Academy, Academia Sinica found its place in fulfilling the two-fold mission by serving the nation-building agenda with the professionalism of science through the establishments of the National Resources Commission (*Ziyuan weiyuanhui*, est. 1932) and the National Research Council of Academia Sinica (*Zhongyang yanjiuyuan pingyihui*, est. 1935) in the mid-1930s. The former was a technocratic organization for which Academia Sinica cooperated with other government departments in order to serve China's industrial and military developments with science and technology.

The National Research Council of Academia Sinica, as Chen puts it, was an institutional center within Academia Sinica and an innovation in its history "to coordinate the whole nation's scientists and to discuss China's scientific policy."[4] As it is revealed in my study, however, Academia Sinica already formulated scientific policies for the Nationalist government regarding foreign expeditions in China before the establishment of the National Research Council in 1935.

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3 *Ibid.*, pp. 54-128.
4 *Ibid*., 141.

Hence, it was not until 1935 when Academia Sinica assumed the role of the administrative center of science, but rather at the beginning of its establishment when its leaders incorporated the role of the administrative center into the core of the institute's identity.

Moreover, though Chen briefly mentions the scientific laws Academia Sinica promulgated on behalf of the Nationalist government, their formation and contents are not examined in detail. Neither the policy on foreign expeditions nor the institute's engagement with the Japanese expedition is covered in his monograph. Thus, my study attempts to start with Academia Sinica's capacity building through its intervention in the expedition and the formation of its foreign expedition policies since the late 1920s. The process, which has not been examined in the existing literature, will be closely explored in the context of the commencement of the Nationalist Government. The examination will bring new perspectives on the nature of Academia Sinica and the institutionalization of science in the Republic of China.

As for another major institution involved in Dr. Kishinouye's expedition, Saeki Osamu has pioneered work in recording the history of Shanghai Science Institute.[5] Established in 1931 in Shanghai, Shanghai Science Institute was a research institution co-founded by the Chinese and the Japanese governments. The institute was a part of Oriental Cultural Work (*Tōhō bunka jigyō*), which was funded with the money remitted from the Boxer Indemnity (*Gengzi peikuan*) that China paid to Japan after its military defeat in 1900. The biological expedition along the Yangzi River was one of the institute's preparatory study projects co-operated by Japanese and Chinese

5 Saeki Osamu. *Shanhai Shizen Kagaku Kenkyūjo: Kagakushatachi no Nitchū sensō* (Shanghai Science Institute: Sino-Japanese War among Scientists). Tokyo: Takarajimasha, 1995.

scholars. In Saeki's account, the Japanese expedition vividly unfolds in two chapters based on Japanese archives and memoirs.

Nevertheless, Saeki's work fails to incorporate sufficient primary sources in Chinese to present the whole picture of the expedition. Focusing on the team's suffering during the arduous trip, Saeki tends to reduce the team members to total victims of China's nationalistic sentiment and Academia Sinica's unfair treatment, while their potential roles in Japan's imperial cultural agenda were largely overlooked. Moreover, due to a lack of non-Japanese reference in Saeki's work, it fails to contextualize the establishment of Shanghai Science Institute and the Oriental Cultural Work to which the institute belonged within Chinese society. Therefore, it overlooked the nature of the two entities in that they were both a part of Japanese cultural policy towards China and the outcome of the competition between America and Japan for their influences in China. In this regard, my study will give a comprehensive account of the story which was insufficiently developed in Saeki's work, as the team's suffering was not only the outcome of China's nationalistic sentiment, but also was led by the mounting cultural cooperation between China and America.

The interaction between Academia Sinica and Shanghai Science Institute can be better understood within China's cultural relations with Japan and America in the early 20th century. In 1900, China lost the war caused by the Boxer uprising to foreign powers. It thus had to pay the Boxer Indemnity for at least thirty years to eleven nations, including the United States, the United Kingdom, and Japan. In the following years, due to increasing foreign presence in China and the discrimination the Chinese faced abroad, anti-foreign sentiments were escalating in China, which led to growing boycotts against foreign commodities and regional conflicts

involving foreigners in China's major port cities. This urged foreign forces like the United States and Japan to reconsider their policies in order to carry on their enterprises in China with less resistance. In this regard, America initiated a remission for part of the Boxer Indemnity from China and established a fund with the remissions for Chinese education improvement.[6] With two American Remissions in 1908 and 1924, America was able to fund over 1,300 Chinese students to pursue higher education in America and funded various Chinese cultural and academic enterprises in China.[7] Academia Sinica was among the beneficiaries of the remissions, as the American Remissions did not only provide it with funds, but also trained the Chinese students who later became the institute's faculties.

In the 1920s, the large population of promising Chinese students, who pursued their studies in America, normally found coveted job placements after their return to China and constituted the leading force among the pro-American social elites in China. This, in turn, strengthened the Sino-American relations in various realms, which led to a growing trend in China, especially among the Chinese intelligentsia, to favor European-American scholarship and education over that of Japan.[8] This trend, together with Japan's increasing imperialist moves toward China, gradually terminated the golden era of Sino-Japanese cultural communication in the 1900s.[9]

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[6] Michael H. Hunt. "The American Remission of the Boxer Indemnity: A Reappraisal." *The Journal of Asian Studies*, Vol. 31 (1972): 539-559.
[7] By 1929, it is estimated that 1,289 Chinese students studied in America with the American Remission scholarship. See Wang, 1974, 314.
[8] Teow, See Heng. *Japanese Cultural Policy Toward China, 1918-1931*. Cambridge: Harvard University Asia Center, 1999, pp. 16-24.
[9] Douglas Reynolds. *China, 1898-1912: The Xinzheng Revolution and Japan*. Cambridge: Harvard University, 1993. One of Reynolds's central arguments is that because of China's defeat in the first Sino-Japanese War in 1895 and a similar cultural tradition shared by the two nations, there was a growing trend in China to learn after Japan in the realms of politics, economics, culture and education for China's survival. This trend led to a burst in the exchange of people and knowledge between the nations in the 1900s. The decade is accordingly deemed the golden age of Sino-Japanese cultural relations.

Facing the deteriorating Sino-Japanese relations and America's increasing influence on Chinese elites, Japan followed the example of America in announcing a cultural project toward China with the fund remitted from the Boxer Indemnity.[10] On March 30th, 1923, Japan's 36th Diet passed the "Special Account Bill on the Cultural Work for China" (*Taishi bunka jigyō tokubetsu kaikei hō*) to promote Sino-Japanese cultural communication and cooperation (*Nishi bunka teikei*).[11] The Japan's cultural project, later renamed as the Oriental Cultural Work, was responsible for sponsoring all cultural matters pertaining to China, such as supporting Chinese students abroad, establishing cultural institutions in China, and funding China-related studies in Japan and China, among which was the establishment of Shanghai Science Institute and Dr. Kishinouye's biological expedition.[12]

My examination of China's relationships with Japan and America in terms of cultural affairs will mainly be built upon the studies of Japan's Boxer Remission to China in the early 20th century. There are three scholars, Wang Shuhuai, Huang Fuching, and Teow See Heng, who have done leading work about the Boxer Remission and Japan's cultural policy towards China. With the most comprehensive statistical analysis of the Boxer Indemnity and its remissions from the treaty powers like the United States, Japan, Britain and so forth, Wang lays a sound foundation for later studies pertaining to the topic.[13] As for Huang's monograph, it is not restricted to the Oriental Cultural Work, but extends to the examination of a whole range of

[10] Teow, pp. 63-67.
[11] The Bill's microfilm is available at National Archives of Japan-Digital Archives. Call number: 14083100, microfilm number: 003900. URL: https://www.digital.archives.go.jp/DAS/meta/Detail_F0000000000000028293. The Bill's English translation is available at the Appendix of Teow's monograph, Teow, pp. 217-219.
[12] Saeki, 1995, 17-34.
[13] Shuhuai Wang. *Geng zi pei kuan*. Taipei: Academia Sinica, 1974.

Japanese cultural enterprises in China in the first half of the 20th century, including educational, medical, media, and intelligence, which accompanied Japan's escalated invasion of China from the first Sino-Japanese War to the end of World War I.[14]

Teow raises three innovative points about Japan's cultural policy towards China, with its center on the Oriental Cultural Work. First, in contrast to Huang's discussion in which Japan's cultural policy towards China was reduced to cultural imperialism aiming to exploit China's land, money, and natural resources, Teow, based on Wang's earlier discussion, places Japan's cultural policy in a global context by comparing it with American and British cultural policies towards China at the time. By doing so, Teow highlights the point that against a background of nationwide anti-foreign movements in China, foreign forces should not be collectively categorized and studied as a whole, for there were increasing division and competition among those foreign forces for maximizing their interests in China. Hence, it is necessary to examine China's interactions with the foreign forces respectively and consider the influences the interactions might have on one another. In this regard, Teow adds another layer to Japan's cultural policy towards China in that it was not simply designed to exhaust China's resources but also to restore the deteriorated Sino-Japanese relations against America's growing influence on China, through America's Boxer Remission Projects since 1908.[15]

Second, since cultural imperialism has been a relatively vague concept, Teow associates the term with the cultural enterprises that one party forces upon another without any mutual agreement. In this regard, the Oriental Cultural Work, which was established upon the official

[14] Fuching Huang. *Jindai Riben zai hua wenhua ji shehui shi ye zhi yanjiu*. Taipei: Academia Sinica, 1982.
[15] Teow, See Heng. *Japanese Cultural Policy Toward China, 1918-1931*. Cambridge: Harvard University Asia Center, 1999, Chapter 2 and 4.

cooperation between the legitimate governments of China and Japan, could only be labeled as a cultural imperial project after the Chinese Nationalist Government officially withdrew from the cooperation and announced the project's illegitimacy in December 1929.[16]

Third, and more importantly, different from Wang and Huang's studies which generally depict China at the passive receiving end and even as victims of the cultural imperialism through those foreign cultural projects, Teow argues for China's agency in negotiating with the imperial forces upon the usage of the Boxer Remissions and, in some cases, appropriating the imperial cultural enterprises for China's good.[17]

As the three authors focus their attention on exploring the cultural interactions among China, Japan, and America on a political level, the cultural projects' influences on individual experiences are barely pursued. In this regard, I will look into the divisive impact the cultural competition between America and Japan had on the Chinese scholars, as it was exemplified by the members of Academia Sinica and Shanghai Science Institute. The former received American Remissions as a part of its fund resources and most of them received their professional training in the United States and Europe. Whereas, the latter was exclusively funded by the Japanese government and composed of Japanese and Chinese faculties who graduated from Japanese universities. When Academia Sinica interfered with Dr. Kishinouye's expedition, which was composed of both Chinese and Japanese team members, it did not only set restrictions on foreigners' expeditions, but also restricted the access for the Japanese-trained Chinese scientists to their own nation's natural resources. The disenfranchised Chinese scholars in Dr.

[16] *Ibid.*, Chapter 5.
[17] *Ibid.*, pp. 63-79.

Kishinouye's team were not only the exemplification of the divided academic community of the Nationalist China where pro-American Chinese elites, or in general the pro-Western, assumed dominance, they also represented the individuals who were marginalized in the science community of China due to the marriage between science and nationalism through the establishment of Academia Sinica.

Before the establishment of Academia Sinica and its intervention in Dr. Kishinouye's expedition, China had witnessed constant reshuffling of powers, civil wars, and foreign invasions. In the midst of the political chaos, nationalism reached its new height during and after the Northern Expedition in 1927, a military campaign led by the Nationalist Party (*Guomindang*, hereafter GMD) against the Beiyang Warlord regime (*Beiyang junfa*) and the various foreign forces as its patrons. Under the banner "To defeat the imperialists and to eradicate the warlords (*dadao lieqiang chu junfa*)," the military expedition's central objective was to unify China under a Republican regime of the GMD and to liberate China from foreign political forces. In the process, the banner of nationalism and anti-imperialism proved useful for the GMD to consolidate its position as the leading force in defending and unifying China against its domestic competitors, as any domestic forces fighting against the GMD could be interpreted as the enemy of the nation. This was especially true after the Jinan incident in 1927. When the Northern Expedition was on its way to overthrow the Beiyang government in Beijing, it was involuntarily involved in military confrontations with Japanese troops in Jinan, which ended up with thousands of Chinese casualties. Though this provided the Beiyang government with a good opportunity to attack the GMD army, the Beiyang government chose not to take the advantage. Since a nationalistic discourse promoted by the GMD stressing that "Chinese should not attack

Chinese (when there is Japanese presence)" (*Zhongguoren bu da zhongguoren*) was prevailing in China, an attack on the GMD army at the moment would establish the Beiyang government as an accomplice of Japan and thus a traitor to China. Though the GMD army suffered severe loss in the Jinan incident, the nationalistic sentiment triggered by Japan's military action enhanced the GMD's reputation in China and facilitated its victory over the Beiyang government. From then on, nationalism became a dominant public sentiment through the Republic era and thus an effective instrument for the GMD.[18]

Nationalism in 1920s China was a multilayered concept, which included the unity and sovereignty of China, and the nation's industrial construction.[19] In this regard, the Nanjing regime had to maintain a delicate balance when dealing with foreign forces. On the one hand, the government had to stand assertively against foreign encroachment in order to justify itself as the legitimate and powerful protector of China. On the other hand, to build up a modern China, it had to win the foreign forces' acknowledgements of its position in international politics and to gain their support for China's modernization in terms of industrialization, international trade and modern education. Hence, it was imperative for the Nanjing regime to reduce foreign influence in the political realm of China while seeking cooperation with the foreign forces in the realms of commerce, industry, and culture. A failure in dealing with either facet of nationalism—China's sovereignty and China's modernization—would put the government's legitimacy on ruling China under question.

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[18] Luo, Zhitian. "Minzu zhuyi yu minguo zhengzhi." *Kai fang shi dai*, 2000.5, pp. 108-113.
[19] *Ibid*., 109.

The series of political chaos and the two-layered nationalism rising through the process had significant ramifications on the cultural community of China. Among the ramifications, the interaction between nationalism and science, which set the conditions for Academia Sinica's confrontation with Dr. Kishinouye's expedition and the institute's capacity building, will be a key aspect of my examination. The topic has occupied several scholars' attention in their discussion about foreign explorations in China, the circulation of Chinese material objects, the professionalization of the Chinese scientific community, and the rising authority of science among the Chinese intelligentsia.

Due to a series of unequal treaties dating back to 1840, China was forced to open its territory to foreign imperial forces. Among the increasing foreign presence in China in the following years, there were more and more foreign explorers launching expeditions in China in order to imbue the West with a sense of oriental exotica. In Fan Fati's account, British naturalists led the first wave of the foreign explorations in China around the Opium War in the 1840s.[20] The British naturalists, both professional and amateur, collected and classified the unique floral and fauna of China for Western cultural institutions and global cultural markets. After the Opium War, their explorations extended from their bases in port cities like Canton and Macau to the hinterland of China. Following the British, as it is presented in *Explorers and Scientists in China's Borderlands, 1880-1950*, other major and minor players in the colonial game of China,

[20] Fati Fan. *British Naturalists in Qing China: Science, Empire, and Cultural Encounter.* Harvard University Press, 2004.

which included the French, the Americans, and the Swedish, organized their expeditions to the Southeast and Northeast parts of China around the turn of the 20th century.[21]

Regardless of their nationalities, the foreign explorers who have been studied so far shared certain features. They were either from Europe or America, or in general, the West. They were composed of both professional scientists and amateurs, whereas the latter, which included merchants, missionaries, and diplomats, accounted for a large proportion. During their expeditions, most of the foreign explorers had to rely on their Chinese collaborators, like the indigenous or Chinese dealers, to acquire their intended collections. Since most of the foreign explorers were working for cultural and academic institutions like Kew Gardens, the Royal Society of London, the American Museum of Natural History, and Harvard University, each of their adventures normally carried on multiple missions to collect object materials for more than one discipline, like collecting plants, fossils, folklores, and antiquities in one trip to serve the studies of biology, geology, ethnography, and even philology together.

Concerning the features shared by the western explorers, the books on the foreign expeditions in China are reconciled in presenting that though the foreign expeditions in China were the outcomes generated by the white privilege and the semi-colonial system through the unequal treaties, those were less involved with direct conflicts between particular nations. Rather, the expeditions were more about the projection of the imperialist power that condescended to discover the varieties of oriental humanity lying outside the unmarked category of Western

[21] Glover, Denise M., and McKhann, Charles F., eds. *Explorers and Scientists in China's Borderlands, 1880-1950.* Seattle: University of Washington Press, 1997.

civilization, and to list the regional facts found in China into the universal knowledge of science through the imperial scholarship.

Though both books on foreign explorations in China briefly mentioned that Japan followed Britain as the leading force in the foreign explorations in China in the early 20th century and that China's rising nationalism reduced the privilege of foreign explorers since the 1930s, the points remain insufficiently studied so far. In this regard, my examination of Dr. Kishinouye's journey and Academia Sinica's policy on foreign expeditions will start from the points where the previous studies stopped. Unlike the binary between the enlightened West and the unenlightened East which renders science in the hierarchy of civilizations, my study will address a more intense interaction between science and nationalism on the eve of Japan's full-fledged invasion of China. In the confrontation regarding Dr. Kishinouye's biological expedition, science was deemed as an essential component of national pride by both Japan and China. Through the Japanese-led biological expedition and the Japanese-founded Shanghai Science Institute, Japan did not only attempt to help China upgrade to the standard of the international scientific community, but also attempted to prove its own ability to foster a cultural co-prosperity sphere led by Japan. On the other hand, by suspending the Japanese-led expedition and by promulgating regulations on foreign explorations, Academia Sinica essentially exerted its authority to protect both natural and scientific resources of China and thus defended China's sovereignty in the realms of politics and culture.

Academia Sinica's intervention in Dr. Kishinouye's expedition was not China's first assertive objection to foreign explorations. China's collective reaction towards foreign expeditions increased along with the formation of Chinese academic associations, among which

the Science Society of China (*Zhongguo ke xue she*, est. 1914) and the Geological Society of China (*Zhongguo dizhi xuehui*, est.1922) were of prime importance. Two scholars, Jia Sheng and Grace Shen, have comprehensively recorded the history of the associations and their critical roles in the formation of the scientific community of China in the Republic era.

Founded at Cornell University in 1914, the Science Society of China was an association of Chinese scholars who received their professional training in the United States, mostly with natural sciences majors. With *Science* (*Ke xue*) as its major journal, the association devoted itself to the popularization of science in China, the improvement of China's science education, the standardization in Chinese translation of scientific terms, and Chinese participation in the international scientific community.[22] In 1918 it moved its headquarters to Nanjing and established a biological research laboratory there in 1922. The laboratory had launched several short-distance biological expeditions around Nanjing and thus had been a potential competitor to the Japanese expedition over the biological resources along the Yangzi River.[23] Prior to the establishment of the government-sponsored Academia Sinica, the association was the leading scientific organization in China. After the establishment of Academia Sinica, the two organizations cooperated in the scientific enterprise of China by sharing faculties, who usually trained in American, and financial resources, among which the American Boxer Remissions accounted for a large proportion.

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[22] Jia Sheng. *The Origins of the Science Society of China, 1914-1937*. Cornell University Ph.D. dissertation in History, 1995, 23.
[23] Lijing Jiang. "Retouching the past with living things: indigenous species, traditions, and biological research in Republican China, 1918-1937." *Historical Study in the Natural Science*, vol.46 no.2 (2016), 154-206.

Another party related to the issues of Dr. Kishinouye's expedition was a group of interrelated associations, namely, the Geological Society of China (hereafter GSC), the National Scientific Union of China (*Zhongguo xueshu tuanti xiehui*, est.1927, hereafter NSUC), and the Central Commission for the Preservation of Antiquities (*Zhongyang guwu baoguan weiyuanhui*, est. 1928, hereafter CCPA). After the imperial forces like Britain acquired extraterritoriality from Qing Empire in the mid 19th century, the Chinese material objects, especially antiquities and botanical resources, had been continuously subjugated to foreign encroachment. They were transported outside of China, displayed in foreign museums, or sold on international markets through foreign merchants and foreign explorers.[24] When such foreign explorations reached a new height in the first two decades of the twentieth century, GSC first made their assertive reaction towards the crisis by imposing cooperation on a Swedish explorer Sven Hedin (1865-1952) who planned to conduct an excavation trip in central Asia. Joined by several academic associations in Beijing, GSC formed the NSUC. With the Beiyang Warlord government's backing, NSUC signed a contract with Hedin, according to which the two parties would jointly launched an excavation trip to Northwestern China in 1927, mainly with Swedish funding and equipment, whereas a share of the excavated antiquities had to be kept in China. Since then, Chinese scholars, as they were represented by the Chinese geologists here, were enabled to maximize any opportunities that came their way by piggybacking on foreign expeditions and strove to appropriate foreign cultural imperialism.[25]

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[24] Fati Fan. *British Naturalists in Qing China: Science, Empire, and Cultural Encounter.* Harvard University Press, 2004.
[25] Grace Shen. *Unearthing the Nation: Modern Geology and Nationalism in Republican China, 1911-1949*. London: University of Chicago Press, 2014, Chapter 4.

After the transition from the Beiyang Warlord government to the Nationalist government in 1928, most key members of GSC and NSUC were reappointed in academic institutions around Nanjing, the capital of the Nationalist government led by Chiang Kai-shek (1887-1975), and formed an official committee—CCPA—under the new government's direction. The committee helped the new government promulgate the Antiquity Preservation Law (*Guwu baocunfa*) in 1931. Since then, the measures set up to defend national properties, i.e. fossils and antiquities, against foreign encroachment were institutionalized with legal authority.

As it will be presented in my study, Academia Sinica's policy on biological specimens shared some main points with the NSUC's contract with foreign explorers and the antiquities law.[26] However, in contrast to the latter two policies, which emphasized the protection of the cultural artifacts of China, Academia Sinica's biological specimens policy, for the first time, offered official protections for the natural resources of China and thus essentially began to incorporate natural resources as a part of national properties.

Prior to Dr. Kishinouye's expedition and Academia Sinica's biological specimens policies, the discourses of both Chinese nationhood and science were mainly related to Chinese language, literature, and history, or in general cultural materials that embodied China's glamorous past and could accordingly arouse Chinese collective memory. At the turn of the 20th century, due to the unequal treaties, the increasing foreign presence in China in the realms of commerce, politics and culture led Chinese intellectuals to reconsider the issues related to

[26] Fati Fan."Circulating Material Objects: The International Controversy over Antiquities and Fossils in Twentieth-Century China." *The Circulation of Knowledge Between Britain, India and China : The Early-Modern World to the Twentieth Century*, ed. Bernard Lightman, Gordon McQuat, and Larry Stewart, Brill, 2013, pp. 209-236.

Chinese nationhood and westernization. Among their various pursuits, two terms successively constituted influential strands of the discourses of Chinese nationalism: "National Essence" (*Guo cui*) and the more neutral term "National Heritage" (*Guo gu*). Though the two terms addressed Chinese nationhood in relation to nature and science respectively, they essentially tied the concepts of nation and science to cultural studies and materials.

The National Essence group claimed that the essential part of Chinese nationhood was preserved in the pre-Qin learning (*zhu zi xue*), which flourished in the late Zhou (480 BCE-220 BCE), but perished with the bibliocaust in the Qin (221 BCE-200 BCE) and was suppressed by the state-sponsored monopoly of Confucianism during the succeeding dynasties. In this regard, to revive the genuine Chineseness, the scholars attempted to retrieve Chinese language, culture and history through pre-Qin texts. Fan Fati addresses that the National Essence scholars in the early years of the 20th century defined and redefined Chinese history, tradition and nationhood in relation to the transmutations of the concept of nature mainly in two ways.[27] First, the scholars' pursuit of Chinese nationhood was based on an ethno-nationalism. However, the ethnic standards they used to distinguish the Han from the others were not based on any physical differences or various biological types, if there were any. Instead, the Chinese nation, in the National Essence scholars' terms, was a kinship-based ethnic community, which was demarcated by surnames and social customs. In other words, it was the common culture rather any natural or physical feature that shaped the Chinese into a historical nation (*lishi minzu*).

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[27] Fan Fati. "Nature and Nation in Chinese Political Thought: the National Essence Circle in Early Twentieth-Century China." *The Moral Authority of Nature*, ed. Lorraine Daston and Fernando Vidal. Chicago: University of Chicago Press, 2004, pp. 409-437.

Moreover, according to Fan, though the National Essence scholars pursued the study of nature, their scholarship was neither about gaining more knowledge about nature nor discovering Nature's laws. For example, the scholars studied plants and natural history of China only to compare the living creatures with the ones recorded in ancient texts, and thus to recover the lost ancient knowledge about the living world. Moreover, the study of plants served as a part of their study of local history as plants were symbols of the land. Thus, the aim of their research on nature was not about gaining knowledge about nature in the present or the future, but to summon the collective memory of the people, and thus foster a sense of belonging among the Chinese to their land and their past.

After the May Fourth Movement in 1919, the discourse of Chinese nationhood turned to a new trend led by the movement to Reorganize National Heritage (*zhengli guogu*). Similar to the National Essence scholars, the supporters of the movement also attempted to recover the lost knowledge of ancient China through rigorous scholarship. However, besides adopting a more neutral term—National Heritage—to refer to the materials and objects related to Chinese nationhood, the National Heritage scholars were different from their purist predecessors in that they regarded the reorganization of National Heritage as an enterprise of science and that they pursued the knowledge about ancient China with the approach of modern academic disciplines, like history, philosophy, philology, and archaeology.

Luo Zhitian has addressed the concept of science understood in China in the early 20th century in relation to the Reorganizing National Heritage movement. One of his main points is that though science was the slogan of the May Fourth Movement in 1919, which gained increasing attention and popularity in China at the time, it remained as an abstract and

fragmentary notion, which was only loosely connected with the natural sciences. Then, in the 1920s, as the National Heritage scholars, who were also prominent public figures in China, began to advocate the application of scientific 'spirit' and 'methods' on the cultural studies that were related to Chinese nationhood. For them, regardless of the object of study, any research adopting scientific methods, like observation, investigation, and reasoning, could be categorized as science. That is to say, to recover the ancient meaning of a Chinese character was no less scientific than discovering a new planet in so far as both the research employed scientific methods. The concept of science was more associated with cultural studies than being associated with the experimentation and numerical calculation in natural sciences.[28]

In this regard, because of the National Essence and the National Heritage studies, the concepts of both science and nation in 1920s China were closely tied to cultural studies. As a consequence, when science and nationalism gained increasing authority in public discourse, cultural artifacts rather than natural objects received more attention, and thus effective protection from the academic community and the government. Both the Geological Society of China's efforts at the negotiation over the excavated materials in China and the Nanjing government's Antiquities Law indicated the growing importance of the cultural items like antiques and fossils, as they were considered both as the embodiment of Chinese nationhood and valuable sources for China's scientific studies.

The professionalization of the Chinese academic community, especially the making of modern academic disciplines in China in the early 20th century, was a double-edged sword for

[28] Luo, Zhitian. *Inheritance Within Rupture : Culture and Scholarship in Early Twentieth-Century China*. Leiden: BRILL, 2015, Chapter 8 and 9.

the National Heritage scholars. By adopting the research methods of social sciences and humanities from the West, the National Heritage scholars distinguished their approach to the Chinese classics from their National Essence predecessors. Though both the National Heritage and the National Essence scholars were addressing the ancient knowledge of China, the National Heritage scholars, with modern scholarship, rendered the Chinese ancient knowledge more understandable to modern readers, both the Chinese and the non-Chinese.

On the other hand, some of the National Heritage scholars went a little bit further as they attempted to find their modern approach to Chinese ancient knowledge a place in the modern academic system by categorizing their studies into an independent discipline, the National Learning (*guo xue*). They thus proposed to establish the department of National Learning in China's leading universities like Beijing University and Qinghua University. However, in the late 1920s, there was a continuous debate over whether National Learning should be considered a subject at all, since it failed to match with any existing western academic discipline.[29] In this regard, the system of modern academic disciplines offered the National Heritage scholars the authority of science, which allowed them to distinguish themselves from traditional Chinese studies and rendered the ancient knowledge of China more reachable to modern readers. Whereas, the system, with its standards and control over the mode of the production of knowledge, fundamentally disproved the National Learning's validity as a modern discipline, and thus essentially debilitated the Reorganizing National Heritage movement.

[29] *Ibid.*, pp. 249-255.

Since the National Heritage scholars failed to fully incorporate their studies into the system of the western academic disciplines and failed to serve the nation-building agenda of the newly established Nanjing Regime with great utility, the National Heritage movement faced a downturn by the late 1920s. At the time, even Hu Shi (1891-1962), the leader of the movement, refuted his own earlier argument of the equality of the discovery of new stars and the meaning of ancient words and encouraged young students to pursue the studies of natural science and technology, which were more urgent and could better serve the nation. In terms of research material, Hu Shi recommended the youth to achieve something in a science lab or on expeditions to promote sciences that use material objects as their sources and to overthrow sciences that use literature as their sources.[30]

In my study, I will contextualize Dr. Kishinouye's expedition and Academia Sinica's biological specimens policies within the downturn of the National Heritage movement. By doing so, I will present that it was a new ideology of science emerging in the late 1920s, in which science was less associated with cultural studies of literature and more emphasized on its instrumental value, which set the conditions for the Chinese academic community's special attention to natural resources, and thus led to Academia Sinica's policies on protecting the resources. The policies marked a new strand of discourse of Chinese nationhood from which was mainly tied to the cultural studies done by the National Essence and the National Heritage scholars into what also incorporates natural sciences and natural resources. The new strand of discourse, in turn, extended the connotations of both science and nation from what tied with

[30] *Ibid.*, pp. 273-274.

China's culture and past to what embraced the nation's natural environment, its present and a promising future.

Besides the rising nationalistic sentiment in Chinese society and the professionalization of the Chinese academic community through its formative years, there was another factor that accelerated Academia Sinica's intervention in Dr. Kishinouye's freshwater fish expedition: there were a series of violent competitions over fishing resources between Japan and China in Chinese coastal waters in the late 1920s. In Micah S. Muscolino's account, from the East China Sea to the Zhoushan Archipelagos (*Zhoushan qundao,* the delta of the Yangzi River), Japan's mechanized trawlers severely depleted the Yellow Croakers in the region. The Japanese incursion into China's waters thus acutely reduced the catches of the local Chinese fishermen, who were less equipped with mechanized fishing technology. As the local fishermen at the time were already organized into a quasi-guild network—fishing lodges—which was counted as an influential social force in the coastal areas of China and a major source of local governments' revenue, their loss and suffering through the Sino-Japanese confrontation soon caught the government's and the public's attention.[31] In this regard, I will present that when Dr. Kishinouye was about to launch his expedition to study the freshwater fish in the Yangzi River, the trip immediately raised suspicion among Chinese society in that the expedition was related to the fishing-war Japan began in China's waters. The expedition was accordingly interpreted as another Japanese invasion of China's fishing resources with the aid of modern science and technology.

[31] Micah S. Muscolino. *Fishing Wars and Environmental Change in Late Imperial and Modern China*. Cambridge: Harvard University, 2010, Chapter 4.

In all, focusing on Academia Sinica's intervention in Dr. Kishinouye's expedition and its policies on foreign explorations in China, my study attempts to look into Academia Sinica's capacity building through the process at the commencement of the Nationalist Government in the late 1920s. Based on Academia Sinica's capacity building, my study attempts to shed light on one key feature of the institutionalization of science at the commencement of the Nationalist regime: the interaction between science and nation. It will be explored in four aspects as follows.

First, in terms of scientific institutions, the dual-identity of Academia Sinica, both as the national academy and the administrative center of science run by the state, allowed the institute to be the place where science and nationalistic politics could mutually authorize each other. In the late 1920s, the newly established Nationalist government sought support from the authority of science to strengthen its legitimacy by proving its intention and ability to defend and modernize China. Meanwhile, the Chinese scientific community at its formative stage also sought protection from the government to secure its access to scientific resources. Academia Sinica was the intersection to fulfill the two intentions. Hence, the dual-identity of Academia Sinica allowed the institute to interfere with Dr. Kishinouye's expedition and thus accelerated its capacity building through the process.

Second, in terms of the membership of the Chinese scientific community, as it was exemplified in Academia Sinica, two points are worth exploring. In the case of Academia Sinica, the institutionalization of science was not led by scientists per se, but rather by a group of academic-bureaucratic elites. They generally had the experience of studying abroad in leading Western universities, which was rare in China at the time. They were key figures in China's cultural debates and movements, and they shared close ties with China's major political forces.

Because of their outstanding educational background and their reputations accumulated in the movements, they were respected by Chinese intellectuals, including Chinese scientists. Their reputations and influences among Chinese elites thus could be translated into political capital when serving the Nationalist government. Therefore, the academic-bureaucratic elites, with their dual identity, reinforced Academia Sinica's position on connecting the scientific and political communities of China. Thus, with their efforts, Academia Sinica was able to institutionalize the mutual authorization between science and nation.

On the other hand, as we will see in the case of Dr. Kishinouye's expedition, a group of Chinese scientists did not benefit from the marriage between science and nation. Though this unity allowed science to gain support from the government, it escalated the factionalism among the Chinese academic community. At that time, Chinese students overseas generally formed associations with regional bases, like the group of Chinese students in America who founded the Science Society of China at Cornell University in 1914 and the group of Chinese students in Japan who founded Bingchen Association (*Bingchen xueshe*) in Tokyo in 1916.[32] In this regard, based on their educational background and social network, there was a division among the students who were trained in Japan, Europe, and America. As China in the late 1920s saw growing hostility toward Japan and more cooperation with America in the realms of politics and culture, the Chinese students who studied in the West gained more dominance over social discourse and academic resources in China. In contrast, as it was reflected in the membership of

[32] Fan, Tiequan. *Jin dai Zhongguo ke xue she tuan yan jiu*. Beijing: Renming chubanshe. 2011, pp. 41-47.

Academia Sinica and the confrontation concerning Dr. Kishinouye's trip, Chinese scholars who were trained in Japan were largely marginalized in the academic community of China.

Third, in terms of material objects, when Academia Sinica, with its dual-identity, interfered with the expedition and formulated the policies to protect natural resources (biological specimens) from unregulated foreign expeditions, it essentially established natural resources as China's national property. Prior to Academia Sinica's biological specimens policies and the antiquity law, there had been several waves of debate on what should be deemed national properties of China and how should they be treated. Two groups of scholars—the National Essence scholars and the National Heritage scholars—successively dominated the center of the debates. In spite of the differences between their research methods, both of the groups, in general, regarded Chinese language, literature, and history as the basis of Chinese nationhood and thus used them as the sources of their studies. Moreover, the National Heritage scholars, categorized their modern way to approach Chinese literature as a scientific enterprise, before Academia Sinica's policies on biological specimens, the concepts of both science and nation were associated with the cultural studies on ancient texts, artifacts, antiquities, and even fossils. In this regard, Academia Sinica's protection and policies on biological specimens extended the connotations of both science and nation understood in the 1920s from concepts bound to China's culture and glamorous past to more tangible terms compressed with China's natural environment, its present and a promising future.

Fourth, besides being strengthened by the dual-identities of Academia Sinica and the academic-bureaucratic elites, the connection between science and nation was rooted in their authority and utility to serve the nation-building agenda of China in the late 1920s, which

included the claim to China's sovereignty and the promise of the nation's progress, or in general, China's modernization. In 1928, for both the Nationalist government in Nanjing and the Chinese scientific community, which were in their formative years, their legitimacy initially rested upon the authority of the concepts of nation and science—two foreign terms that were only adopted from the West within decades—and the utility of the pioneers who promoted the enterprises of science and nation in China. In this regard, to strengthen themselves, it was imperative for the two newborn organizations to find collaboration with one another, to resort their enterprises to a superior cause, like modernization, or to serve in solving China's urgent crises, which were led by foreign imperial encroachment and discrimination overseas.

The nationalist discourse and enterprises promoted by the Nationalist government could effectively serve the agenda, and so did the discourse of science and the Chinese science community. Through the empowerment of Academia Sinica, the science community reaffirmed China's national identity by connecting their biological approach to the nation's natural environment with the nation's past recorded in ancient texts. It protected the nation's sovereignty by protecting its natural resources. And it reconstructed China's national pride in a modern way by proving the nation's capability of observing, experimenting, and reasoning, or in general, the nation's scientific competence in the international science community. Hence, the empowerment of Academia Sinica, as an essential part of the institutionalization of science in China, was fundamentally facilitated by the discourse of science in the late 1920s in which science had the authority and potential to serve the nation by protecting its sovereignty, reaffirming its identity, and supporting its modernization.

I base my account of Dr. Kishinouye's expedition and its engagement with Academia Sinica on Japanese and Chinese archive materials, newspapers, and one team member's travelogue about the trip. Besides the travelogue's detailed description of the individuals' experience through the expedition, Japan's Diplomatic Archives of the Ministry of Foreign Affairs keeps comprehensive records of what the Japanese government knew about the event when it took place, including official documents between the Japanese and the Chinese governments, telegrams between Japanese diplomats in China and their government concerning the negotiation over the expedition, and the information collected from China regarding Chinese opinions about the expedition. On the other hand, the collection of Academia Sinica's archives, *Guo jia tu shu guang cang guo li zhongyang yan jiu yuan shi liao cong bian*, documents the telegrams among the Chinese officials upon the matter. The academic passport and Academia Sinica's policy on foreign expeditions, which were central to Academia Sinica's capacity building, are available in the Second Historical Archives of China in the Volume 393 (*quan zong hao*). Moreover, for the two major institutions in my discussion, Academia Sinica and Shanghai Science Institute, their archival materials are respectively compiled into published collections, which include the institutions' regulations, journals, publications, and reports.

My thesis consists of five chapters. The second chapter discusses how the transition from the Beiyang Warlords government to the Nationalist government in Nanjing set the stage for the occurrence between Dr. Kishinouye and Academia Sinica. First, I will present that the nationalistic sentiment, which set the tone for the story and Academia Sinica's empowerment, escalated along with the Nationalist Party's Northern Expedition against the Beiyang government, the troops' military confrontation with the Japanese army in Jinan, and the political

discourse promoted by the Nationalist government after its establishment in Nanjing. Second, since Dr. Kishinouye's cooperative project with China was based on an official cooperation between the Japanese government and the Beiyang government, the Nationalist government's attitude toward the cultural cooperation, as well as the expedition, depended on how the government approached its predecessor's political heritage and established its own legitimacy. As foreign forces already constituted as essential parts in China's politics in the early 20th century, the newly established Nanjing regime had to cautiously consider its diplomatic policies if it should abolish all the unequal treaties to confirm its position as a nationalistic protector, continue the cooperation with the foreign forces to build a modern China recognized by the West, or adopted a mixed policy of the two. In my discussion, when Academia Sinica interfered with the expedition and the Nanjing regime officially terminated the cultural cooperation with Japan, the government delicately dealt with the options. It confirmed its nationalist image by abolishing a plausible cultural "unequal treaty" signed between the Beiyang government and Japan. In this regard, by jeopardizing the Sino-Japanese relations, which had already hit the bottom, the Nanjing regime projected a contrast between the Beiyang government, which collaborated with Japan, and itself, which stood assertively against the foreign force. Third, after the political transition, besides reconsidering its foreign policies, it was also imperative for the Nanjing regime to strengthen its political legitimacy as the modern ruler of China. In this regard, the establishment of Academia Sinica effectively fulfilled the government's agenda. For one thing, it projected an image of the government as the legitimate heir of China's political convention in that a legitimate regime of China should be the protector of China's social order and culture, and thus the supporter of China's central academy. On the other hand, by emphasizing the scientific

studies in Academia Sinica, the Nanjing regime were modeling itself after the modern governments in the West, which sponsored the enlightening knowledge and science academy.

Chapter Three will present the entire process of Dr. Kishinouye's expedition in 1929, including its preparation, Academia Sinica's intervention and settlement, and the public opinions in both Chinese and Japanese societies towards the event. The whole story will be recounted based on the primary resources mentioned earlier. After Academia Sinica successively settled the issues regarding Dr. Kishinouye's expedition, it promulgated the policies on regulating foreign expeditions and the circulation of biological specimens in the early 1930s, which included issuing academic passports for foreign researchers and a contract between the institute and the foreign researcher who attempted to obtain the academic passport. The chapter will present the contents of the passport and the contract. The two documents will then be closely examined within the frames of China's passport policy and the Antiquities Law of the early 1930s. I argue that, Academia Sinica's authority to issue the academic passport did not only establish itself as the administrative center of science in China, but also overrode the Chinese foreign ministry's authority to regulate foreigners in the academic realm. In this regard, more than being the national research center of China, which served in improving the Nanjing regime's legitimate image, the institute empowered itself as a functional department of the government with practical value and authority. Moreover, by contextualizing the contract between Academia Sinica and foreign researchers, I argue that the policy essentially extended the connotations of science and nation, which were mainly associated with cultural studies and materials in the 1920s, to the natural sciences and the nation's natural resources, except that there was still a hierarchy

between the nation's emphasis upon which the objects related to Chinese culture were more valued than the nation's natural resources.

Chapter Four examines four main factors that accelerated Academia Sinica's empowerment. The first two interrelated factors that set the conditions for Academia Sinica's moves were the rising nationalistic sentiment in Chinese society and Japan's increasing presence in China's territory in the late 1920s, which jointly rendered Japan as the primary target of China's anti-foreign movements and thus mobilized public support for Academia Sinica's intervention in the expedition. Moreover, a more necessary cause for Academia Sinica's capacity building was the newly established Nationalist regime's intention to consolidate and prove its position as the legitimate government of China, and the utility of Academia Sinica's dual-identity on serving the agenda. One the one hand, unlike earlier academic associations, whose attempts to interfere with foreign expeditions mostly proved futile due to a lack of government support, Academia Sinica, as an academic institute run by the Nanjing regime, was authorized to implement coercive measures over the foreign expeditions in China, like directly ordering provincial governments to detain the expedition team in a port city. On the other hand, Academic Sinica was different from the other departments of the Nanjing regime in that it was not simply composed of bureaucrats, but also included scholars who were able to speak the standard language of science, to effectively communicate with foreign researchers, and to judge whether one expedition was exclusively on academic mission as it proposed. Lastly, though as a department of the Nanjing Regime, Academia Sinica's establishment and active participation in defending China's cultural sovereignty were not solely because of its official duty, but were rather propelled by the calling and initiative of the Chinese academic community in its formative

years. It sought cooperation with and protection from the authorities in order to secure the resources for its research and further development. In this regard, it was because of their efforts that natural sciences, rather than the studies of the Chinese ancient knowledge, became more associated with the concepts of nation, science, and modernity. Hence, the natural resources, which could be the potential scientific resources, were finally categorized as national property and thus received effective protection from the government.

Chapter Five examines several features of the institutionalization of science in the Republican China, as they were exemplified through the process of Academia Sinica's capacity building. I will respectively discuss how science served in reconfirming Chinese nationhood, building China's national pride, and connecting China to the modern system of academy through the capacity building of Academia Sinica. First, by comparing modern biological taxonomy with the Chinese tradition of classifying flora and fauna recorded in *Compendium of Materia Medica* (*Bencao gangmu*), the biologists in Academia Sinica attempted to connect the nation's tradition with modern biological study. Second, by establishing the Museum of Natural History, Academia Sinica aimed to display the richness of the nation's natural resources and Chinese scientists' ability to collect and study the nature of the nation on their own. Third, according to Academia Sinica's annual reports, the institute placed it as its priority to have its members participate in international academic conferences and encourage them to publish in English in order to justify the nation's capability and competence in the realm of science. Fourth, the faculties of the institute were also dedicated to the translation and standardization of the terminology and the nomenclature of science in Chinese in order to systematically relocate the western system of modern disciplines in the Republican China. In all, I argue that the

institutionalization of science in early 20th century China was fundamentally facilitated by the connotation of science at the time in that science possessed the potential and utility to serve the nation, the party-state government, and China's modernization. Though, positive ideas of science were held by the majority of people in China in that science was meant to serve the collective interest of an institution, a political party, or a nation, it inevitably generated the marginalized and even the disenfranchised minority in the Chinese science community, as it was exemplified by the Japanese-trained Chinese members in Dr. Kishinouye's team, who were deprived of the access to their own nations' natural and research resources.

2. SETTING THE STAGE FOR THE NATIONALIZATION OF SCIENCE: THE TRANSITION FROM THE BEIYANG GOVERNMENT TO THE NATIONALIST GOVERNMENT

This chapter discusses how the transition from the Beiyang Warlords government to the Nationalist government at Nanjing set the stage for Academia Sinica's intervention in the biological expedition led by Dr. Kishinouye along the Yangzi River. First, it examines the inequality, violence, and the constant reshufflings of power that China faced in the 1920s, both domestically and internationally. In this period, nationalistic sentiment was escalating along with the Nationalist Revolution and it reached its peak in the Nationalist Party's military campaign against the Beiyang government. It thus rose to be the dominant social discourse of China and an effective instrument for the Nationalist Party to mobilize massive support. The chapter looks specifically into the anti-foreign facet of the nationalistic sentiment, which was embodied in China's insistent popular demand for the abolition of all "unequal treaties" and the Education Independence movements. The second section will examine the foreign presence that prevailed in the cultural community in early twentieth century China through foreign-funded cultural projects: the American Boxer Remissions and the Japanese Oriental Cultural Work. These

foreign cultural projects allowed external forces to control scientific enterprise in China. To deal with the uncomfortable fact that science, the best instrument for China's independence and modernization, remained under the control of foreigners, the Nationalist government determined to "nationalize science." In that effort, the Nationalist government at Nanjing established the nation's central academy of sciences, Academia Sinica (*Zhongyang yanjiuyuan*), in 1928. The third section will then briefly outline the government's attempts at the nationalization of science, and present an introduction of Academia Sinica and its role in the Nationalist government.

2.1. RISING NATIONALISM IN 1920S CHINA

After the Revolution of 1911, the Qing dynasty descended from power. The termination of China's last imperial dynasty did not immediately establish the republican regime in China, as the revolutionists had expected. The Nationalist revolutionary party, later named Guomindang (GMD), which had led the uprising, was denied the fruits of its labor. Though Dr. Sun Yat-sen (1866-1925), the leader of the party, was inaugurated as the provisional President of the new Republic of China on January 1st, 1912, he had to immediately step down in favor of the northern military autocrat Yuan Shikai (1859-1916). After being elected as the President of the Republic in 1914, Yuan suppressed the GMD, suspended the national assembly of China, and legalized his

dictatorial authority through the promulgation of the so-called Constitutional Compact of 1914.[33] Headed by Yuan and composed of the senior members in his Beiyang Army (*Beiyang jun*), the Beiyang clique dominated the government of the Republic of China at Beijing from 1912 to 1928. The government was also referred as the Beiyang government (*Beiyang zhengfu*), with Beijing as its capital. After Yuan's death in 1916, factionalism split the Beiyang Army. The military leaders of the major factions of the Army, who consolidated their positions in respective regional bases, later became regional warlords. They exercised regional autonomy, engaged in warfare with one another, and formed alliances with foreign forces. Usually, the strongest army among the warlords would control the Republican government at Beijing. In this regard, the decades long intermittent wars among the warlords not only continued to reshuffle the structure of the Beiyang government, but also jeopardized the stability of Chinese society.

At the same time, after the GMD retreated to its base in Canton, Dr. Sun and his followers organized series of political movements to challenge Yuan's dictatorship and to establish a constitutional republican regime. Most of their attempts proved futile until the GMD launched the Nationalist Revolution in the 1920s. The GMD, advised by Soviet experts and aided by the Chinese Communist Party, mobilized the nation in the service of the patriotic movement, such as labor strikes, student movements, and military expeditions. The programs were aimed at unifying the country, defeating the Beiyang warlords, overcoming foreign privilege, and achieving a constitutional republic in China.[34] The Nationalist Revolution reached

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[33] Fishel, Wesley R. *The End of Extraterritoriality in China*. Berkeley: University of California Press, 1952, pp. 71-72.

[34] Fairbank, John K edit.. *The Cambridge History of China. Volume 12: Republican China 1912-1949*. Cambridge: Cambridge

its peak through the Northern Expedition (*beifa*) under the GMD's leadership, a military campaign against the Beiyang government, the warlords, and the various foreign forces backing them. The GMD established a regional government in Nanjing in 1927. After its military expedition conquered the Beiyang government at Beijing, its regional government at Nanjing nominally became the central government of China.

Before the Nationalist Revolution, the Beiyang government was the legitimate central regime of China, and it exercised military forces and received recognition internationally. To overthrow such a central government, it was imperative for the GMD to mobilize massive support. In this regard, nationalism became an effective tool for the GMD as it could easily attribute all the inequality and sufferings experienced by the Chinese people to the foreign presence in China and the Beiyang government's incompetence to end the situation.[35] Hence, besides setting the Beiyang government as its prime target, the revolutionaries demanded the abolishment of all unequal treaties and led anti-foreign protests, sometimes violently, against western corporations and missionary schools in the port cities of China. They referred the institutions as "the agents for foreign imperial forces in their colonizing enterprises in China."[36]

Consequently, nationalism escalated under the Nationalist Revolution and reached its height during the Northern Expedition (1926-1928). Under the banner "To defeat imperialism and to eradicate warlords (*dadao lieqiang, chu junfa*)," the military expedition's central objective was to liberate China from foreign political forces and to unify China under a republican regime

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University Press, 1983, 527.
[35] Wang, Dong. *China's Unequal Treaties: Narrating National History*. Lanham: Lexington, 2005, 10.
[36] Saeki, 1995, 20.

of the GMD. In the process, nationalistic banners proved useful for the GMD to consolidate its position as the major force in defending and unifying China, in contrast to its potential competitors, for any domestic forces fighting against the GMD at the time could thus be interpreted as the enemy of the nation. In the case of the Jinan incident in 1928, when the Northern Expedition was on its way to overthrow the Beiyang government, it was accidently involved in military confrontations with Japanese troops in Jinan with thousands of Chinese civilian casualties. Though this provided the Beiyang government with a good opportunity to attack the GMD army, the government chose not to take the advantage. Since a nationalistic discourse promoted by the GMD, which stressed that "Chinese should not attack Chinese (when there is foreign presence) (*Zhongguo ren bu da zhongguo ren*)," rendered any attack on the GMD army at the moment an accomplice of Japan and thus a traitor to China. Though the GMD army suffered a severe loss at the Jinan incident, the nationalistic sentiment triggered by Japan's military action enhanced the GMD's reputation in China and facilitated its victory over the Beiyang government. From then on, nationalism became a dominant discourse in China through the Republican era and an effective instrument for the party to mobilize popular support.[37]

Nationalism in 1920s China was a multi-layered concept, which included both the unity and sovereignty of China, and the nation's reconstruction.[38] After replacing the Beiyang government as the central government of China in 1928, the Nanjing regime had to maintain a delicate balance when dealing with foreign forces. On one hand, in accordance with the

[37] Luo, Zhitian. "Min zu zhu yi yu min guo zheng zhi 民族主义与民国政治 (Nationalism and Republic China Politics)." *Kai fang shi dai*, 2000.5, pp. 108-113.
[38] *Ibid*., 109.

nationalistic discourse promoted by itself in the Nationalist Revolution, the government had to stand assertively against foreign encroachment in order to justify itself as the legitimate and powerful protector of China. On the other hand, to build up a modern China, it had to win the foreign forces' acknowledgement of its position in international politics and gain their support for China's modernization in terms of industrialization, international trade, and modern education. Hence, it was imperative for the Nanjing regime to reduce foreign influence in the political realm of China while seeking cooperation with the foreign forces in the realms of commerce, industry and culture. A failure in dealing with either facet of nationalism—China's sovereignty and China's modernization—would put the government's legitimacy in question. In this regard, among the primary concerns of the newly established Nanjing regime, was the issue of the unequal treaties.

2.2. THE ISSUE OF UNEQUAL TREATIES

The "Unequal Treaties" refers to the treaties, conventions, and agreements concluded between China and various foreign states during the 19th and early 20th centuries. The Qing rulers of China (1644 CE-1911 CE), under military threat, granted foreign powers unilateral treaty rights and privileges, while China failed to enjoy equivalent rights and privileges in those countries. The most important treaty rights ceded to foreign interests in China included low fixed tariffs, extraterritoriality, concessions and settlements, leased territories, the right of inland navigation,

and the non-reciprocal most-favored nation clause (*pianmian zuihuiguo daiyu*). The major countries enjoying "unequal treaty" relations with China were Great Britain (1842), United States (1844), France (1844), Sweden/Norway (1847), Russia (1851), Prussia (1861), Portugal (1862), Denmark (1863), Netherlands (1863), Spain (1864), Belgium (1865), Italy (1866), Austria (1869), Japan (1871), Brazil (1881), Mexico (1899) and Switzerland (1918).[39]

The phrase "Unequal Treaties (*bupingdeng tiaoyue*)," which refers to the diplomatic documents between Qing China and foreign powers, was not invented until 1924. Dr. Sun Yat-sen first used the term in a public speech calling for collective action against warlordism and imperialism during the Nationalist Revolution.[40] He stated as follows:

> All Unequal Treaties (*yiqie bupingdeng tiaoyue*), including foreign concessions, consular jurisdiction, foreign management of customs services, and all foreign political rights exercised on China's soil, are detrimental to China's sovereignty. They all to be abolished so as to leave the way open for new treaties based on the spirit of bilateral equality and mutual respect for sovereignty.[41]

After the speech, the phrase Unequal Treaties (*bupingdeng tiaoyue*) has been repeatedly adopted by influential public figures like Hu Hanming (1879-1936) and Mao Zedong (1893-1976) in both the GMD and the Chinese Communist Party (CCP), the two leading parties in the Nationalist Revolution. Though the two parties developed different discourses on the "Unequal Treaties" in relation to foreign powers and the governance of China, their discourses shared one major feature: regardless of the differences of the texts, the two parties indiscriminately applied

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[39] Wang, Dong. *China's Unequal Treaties: Narrating National History*. Lanham: Lexington, 2005, 10.
[40] *Ibid.*, pp. 64-66.
[41] *Ibid.*, pp. 64-66.

the term "Unequal Treaties" to all the documents signed between the foreign powers and China without providing any other specific definition of or standard for the phrase. In general, centering on the "Unequal Treaties," they promoted a revolutionary discourse: as the stigma of the nation's past and the origin of the people's sufferings, the Unequal Treaties were jointly shaped by increasing foreign presence and the Beiyang government's incompetence, which ought to be immediately and completely terminated by a competent government.

The discourse of "Unequal Treaties" was obviously more about revolutionary propaganda than about historical reality. Predating the usage of the phrase "Unequal Treaties (*bupingdeng tiaoyue*)" in 1924, there was no similar term referring to the documents collectively. Qing literati described certain agreements in classical Chinese as a "treaty of inequality (*bupingdeng zhi tiaoyue*)."[42] Qing literati and officials certainly saw variations in the "inequality" of the treaties between the Qing dynasty and the treaty powers. For instance, there were treaties in which only certain provisions granting unilateral privileges to treaty powers while the rest of their content were based on reciprocal terms. In fact, the concepts related to the "Unequal Treaties", like *bugong* (unfairness), *zhuquan* (sovereignty), *gaizheng tiaoyue* (treaty revision), *gaiding tongshang tiaoyue* (revision of commercial treaties), and *bupingdeng zhi tiaoyue* (treaty of inequality), had already appeared in both official and unofficial texts of Qing literati. This indicated a determination among the Qing elite to revise or remove the unequal provisions from the treaties. Nonetheless, the absence of the revolutionary-era term "Unequal Treaties (*bupingdeng tiaoyue*)" in pre-republican texts suggests that Qing literati did not indiscriminately

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[42] *Ibid.*, 4.

categorize all international treaties as unequal, and therefore they did not see a need to demolish the entire edifice of the treaty system.[43]

Moreover, prior to the nationalists calling for the abrogation of all "Unequal Treaties," the Beiyang government had been engaged in negotiations with the treaty powers on the revision of the treaties for China's good.[44] Though most of the Beiyang government's attempts to revise the diplomatic documents failed, it achieved a few revisions after World War I, in which China as a member of the victorious side, was allowed to remove the unequal provisions from the treaties it signed with the treaty powers who were defeated.

Meanwhile, as a Communist regime began to govern Russia during World War I, it intended to foster new diplomatic relations with China, which led to further division among the treaty powers' collective stance towards China. According to the Sino-Russian agreement between Russia and the Beiyang government, the Russians surrendered certain rights, including their concessions in China and their extraterritorial jurisdiction, in exchange for *de jure* recognition by the Beiyang government. Based on the new Sino-Russian relations, the Soviet envoy in Beijing, Lev Karakhan, was installed as dean of the diplomatic body in Beijing. That is to say, the other diplomats in Beijing were forced to act under his leadership despite the fact that their governments did not recognize the existence of the Soviet government. This essentially paralyzed the activity of the diplomatic body as an instrument for the expression of the collective interests of the treaty powers. In fact, after Karakhan took office, the diplomatic body was divided into groups, such as the extraterritorial powers, the maritime customs signatories, and the

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[43] *Ibid.,* pp. 4-5.

[44] Li, Yumin. *Zhongguo fei yue shi*. Beijing: Zhong hua shu ju, 2005, pp. 233-416.

1901 Protocol Powers, who each protected its own prime interest in China and took up matters with China's Foreign Office without consulting the rest of their colleagues.[45]

Ultimately, the phrase "Unequal Treaties" was invented by Chinese nationalists as a revolutionary slogan to foster a collective denial of the nation's past, attribute all of China's painful experiences in that past to the foreign powers and the Beiyang government, and thus mobilize popular support for the Nationalist regime which was about to put all the sufferings and inequality to an end.

2.3. THE AMERICAN BOXER INDEMNITY AND THE JAPANESE ORIENTAL CULTURAL WORK

Due to escalating nationalism in China and division among the foreign powers regarding China's treaty revision, the treaty powers had to reconsider their diplomatic relations with China in order to maintain their interests. The United States played a leading role in fostering an amicable relation with China by remitting China's Boxer Indemnity in the 1900s. Other treaty powers, like Britain and Japan, eventually followed America's example in supporting China's educational development with the Boxer Indemnity they received from China.[46] This led to a major

[45] Fishel, Wesley R., 1952, pp. 80-84.
[46] Michael H. Hunt. "The American Remission of the Boxer Indemnity: A Reappraisal." *The Journal of Asian*

competition between America and Japan, as both of the nations intended to extend their influences on the promising students and potential leaders of China through their cultural projects.

In 1901, China lost the war caused by the Boxer uprising to foreign powers. It thus had to pay the Boxer Indemnity (*Geng zi pei kuan*) for at least thirty years to eleven nations, including the United States, the United Kingdom, and Japan. The extension of America's Chinese Exclusion Acts in 1902 led to furious protests and the boycott of U. S. goods in China for the following two years. In this regard, America in 1908 initiated to remit part of the Boxer Indemnity and apply the money solely to the improvement of China's education system in order to ease tensions between America and China.[47] With two remissions in 1908 and 1924, America was able to fund over 1,300 Chinese students to pursue higher education in America and establish Tsing-hua College as a preparatory college for the Chinese students who planned to study in America.[48] The American Remissions also funded Chinese cultural and academic enterprises through the *China Foundation for the Promotion of Education and Culture* (*Zhong hua jiao yu wen hua ji jin hui*, hereafter China Foundation), a board of trustees made up by a Sino-American committee that was independent from both the Chinese and the American governments. Among the major beneficiaries of the remissions, were some of China's leading academic associations, which mainly consisted of western-trained Chinese scholars such as the Science Society of China (*Zhongguo ke xue she*, est. 1914), the Geological Society of China

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Studies 31, no.3 (1972): 539-559.

[47] *Ibid.*

[48] By 1929, it is estimated that 1,289 Chinese students studied in America with the American Remission scholarship. See Wang, 1974, 314.

(*Zhongguo di zhi xue hui*, est.1922), and Academia Sinica (*Zhong yang yan jiu yuan*, est. 1928).[49]

Due to the amicable relations between America and China in the 1920s and the American Remissions, a large population of promising Chinese students pursued their studies in America and found coveted job placements after their return. These pro-American social elites in turn strengthened Sino-American relations in various realms, which led to a growing trend in China, especially among the Chinese intelligentsia, to favor European-American scholarship and education over that of Japan.[50] This trend, together with Japan's increasing imperialist moves inside China, gradually terminated the golden era of Sino-Japanese cultural communication, which had its peak in the first decade of the 20th century.[51]

Considering mounting anti-Japanese sentiment and America's increasing influence, Japan, following the example of the United States, announced a propaganda project in China--the "Oriental Cultural Work (*Tōhō bunka jigyō*)."[52] On March 30th, 1923, Japan's 36th Diet

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49 Wang, 1974, pp. 308-335.

50 Teow, 1999, pp. 16-24.

51 Douglas Reynolds. *China, 1898-1912: The Xinzheng Revolution and Japan*. Cambridge: Harvard University, 1993. One of Reynolds's central arguments is that because of China's defeat in the first Sino-Japanese War in 1895 and a similar cultural tradition shared by the two nations, there was a growing trend in China to learn after Japan in the realms of politics, economics, culture and education for China's survival. This trend led to a burst in the exchange of people and knowledge between the nations in the 1900s. The decade is accordingly deemed the golden age of Sino-Japanese cultural relations.

52 The initial title that Japan proposed for the program was "China Cultural Work (*Taishi bunka jigyō*)," since activities would be overseen by the China Cultural Affairs Bureau (*Taishi bunka jimukyoku*). At the first meeting of the General Committee, Chinese members proposed a new title for the project, "Sino-Japanese Cultural Work (*Zhong-ri wenhua shiye*)" to suggest that the project was based on an equal cooperation between China and Japan. Japanese members, on the other hand, suggested the more encompassing title "Oriental Cultural Work (*Tōhō bunka jigyō*)" to indicate that Japan and China were part of a "family" rooted in the culture of the East and thus having same interests of "mutual survival and mutual prosperity." See Teow, 40-41, 63-67. For official translation of *Tōhō bunka jigyō* as "Oriental Cultural Work" in English, refer to the bilingual handbook published by Shanghai Science Institute in both Japanese and English. As a part of the cultural project, Shanghai Science Institute stated the name, purpose and framework of the project in English in the handbook as "Oriental Cultural Work." See *Shanhai Shizen Kagaku Kenkyūjo Yōran* 上海自然科学研究所要覽. Shanhai:

passed the "Special Account Bill on China Cultural Work" (*Taishi bunka jigyō tokubetsu kaikei hō*).[53] According to the bill, the China Cultural Affairs Bureau (*Taishi bunka jimukyoku*) was established to promote Sino-Japanese cultural exchange and cooperation (*Nishi bunka teikei*). With the fund Japan received from China's Boxer Indemnity, Oriental Cultural Work activities were planned to support Chinese students and residents in Japan, establish cultural institutions in China, and sponsor China-related studies.[54]

According to two official documents signed between the Japanese government and the Beiyang government, "Informal Memorandum on China Cultural Work" (*Taishi bunka jigyō hiseishiki bibōroku,* 1924.2.6) and "Exchange of Notes on Oriental Cultural Work" (*Tōhō bunka jigyō kōkan kōbun*, 1925.5.4), the project's outline is listed as follows:

1) In Beijing, a library and a humanities research institute will be established.
2) In Shanghai, a natural sciences research institute will be established.
3) If any surplus remains after fulfilling the programs mentioned above, the remission should be used for the following purposes:
   a. To establish a museum at a selected city in China.
   b. To establish a medical school attached to a hospital in Jinan.
   c. To establish a medical school attached to a hospital in Canton.
4) To undertake further planning of items mentioned above, a general committee comprising twenty members, ten Japanese and ten Chinese, headed by a Chinese will be formed. Meanwhile, subordinate committees will be built in Beijing and Shanghai respectively to oversee the establishment and administration of the institutions in their sections.[55]

Shanhai Shizen Kagaku Kenkyūjo, 1936. pp. 1-7. The document is available at Japan's National Diet Library Digital Collections. http://dl.ndl.go.jp/info:ndljp/pid/1149119.

53 The Bill's microfilm is available at National Archives of Japan-Digital Archives 国立公文書館デジタルアーカイブ. Call number: 14083100, microfilm number: 003900. URL: https://www.digital.archives.go.jp/DAS/meta/Detail_F0000000000000028293. The Bill's English translation is available at the Appendix of Teow's monograph, Teow, pp. 217-219.

54 Saeki, 1995, pp. 17-34.

55 *Ibid,* pp. 23-25.

Unlike the American Remission project, which yielded productive results and received a positive response from China, Japan's Oriental Cultural Work activities were under severe suspicion and criticism as a symbol of Japan's cultural imperialism towards China from the start.[56] Three factors rendered Japan's Oriental Cultural Work as an unwelcome project in China for both the Beiyang and the Nationalist governments. The first and primary factor was the growing hostility between Japan and China due to Japan's expansion on China's territory in Shandong peninsular and Manchuria (1928-1932). Due to the Jinan Incident in 1928, Chinese committee members in the Oriental Cultural Work announced their resignation from the project in protest.[57] However, since the committee was established based on official agreements between the Beiyang government and the Japanese government, Japan insisted that those Chinese members could not resign from the project unless the Beiyang government officially terminated their appointments.[58] Though the Chinese members' appeal was dismissed, their attempts vividly portrayed the damaging effect of deteriorating Sino-Japanese relations upon the Cultural Work activities.

Second, as the embodiment of China's rising nationalism, two anti-foreign movements in China—the movement for abolishing Unequal Treaties and the movement for the independence of China's education—viewed Japan's Cultural Work as a target. On one hand, since "abolishing all unequal treaties" was one of the GMD's major revolutionary slogans since 1924, it became the first priority of the newly-established Nationalist government to fulfill that promise. As

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56 Saeki, 4.90

57 *Tōhō Bunka Jigyō*. Call number: B05015167100.

58 *Tōhō Bunka Jigyō*. Call number: B05015181200.

mentioned, the GMD did not provide a specific definition or standard for Unequal Treaties, except that the term was generally associated with the diplomatic documents signed between China and foreign forces. In this regard, as a project based on official notes between the Beiyang government and Japan, the Oriental Cultural Work was deemed as a part of the unequal treaties and therefore should be terminated by the Nationalist government. In fact, as the Oriental Cultural Work treaty allowed Japanese organizations to own the land where they built the institutions of the project. It was denounced as a disguised form of the Twenty-One Demands, a treaty Japan forced upon the Beiyang government in 1915 with blatant colonial ambitions.[59]

On the other hand, a nationalistic trend in the 1920s, which called for the independence of China's educational system, also played a role in fostering an environment hostile towards the Oriental Cultural Work. The trend was a part of a nationwide anti-Christian movement in China, which was started by young students and intellectuals in 1919, and was then precipitated by the GMD and the CCP in the Nationalist Revolution.[60] The critics of Christianity opposed the function of religion and the practices of the church in China. The religion and its church were criticized for being the agents of foreign imperialists and capitalists, who alienated the Chinese from their own culture through western preaching, and who, as non-producers, encouraged Chinese workers to submit to the wishes of the West.[61] Moreover, it was denounced as

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[59] Saeki, pp. 27-29; *Zhonghua Minguoshi dangan ziliao huibian, Di 5 ji, di 1 bian, Wenhua*, Vol.1 中华民国史档案资料汇编, 第五辑，第一编 文化（一）. Nanjing: Jiangsu gu ji chu ban she, 2000, 44-45. According to the Sino-Japanese agreements, the Oriental Cultural Work, which planned to establish schools, hospitals and museums in China, allowed Japan to own the land of these buildings in China. This was the general idea contained in the Group V of the Twenty-One Demands. Due to severe nationalistic protests, the Beiyang government did not accept Japan's Twenty-One Demands. Chinese elite thus regarded the Oriental Cultural Work as Japan's another attempt to enforce its demand on China.

[60] Hodous, Lewis. "The Anti-Christian movement in China." *The Journal of Religion,* 1930, 10 (4): 487.

[61] *Ibid.,* pp. 491-493.

superstition for its belief system and its ritual of worship was deemed inconsistent with science. Hence, the anti-Christians regarded religion as hinderance to the nation's progress and should be replaced by an education of science and arts.[62]

As this nationalistic sentiment permeated the educational arena of China, the intellectual and educator Cai Yuanpei (1868-1940) seized the chance to call for the independence of China's education from religion and foreign control.[63] The claim was supported and legalized by both the Beiyang and the Nationalist governments successively. In 1925, the Beiyang government promulgated stringent regulations on the schools established by foreigners. In 1926, the Nationalist government at Canton issued even more drastic regulations that prescribed that schools founded by foreigners or by churches should be under the supervision and guidance of the Chinese government's educational administration, directors of private schools should not be foreigners, and no religious teaching should be compulsory in any school.[64] The regulations marked a turn in the anti-Christian movement towards a trend calling for the independence of China's educational system. The target of the movement was then extended from Christian church and mission schools to all foreign educational institutions in China. Behind the shift, were Chinese intellectual leaders, especially those in the GMD and in the CCP, who intended to nationalize China's education and believed that only the academic results yielded by the nationalized education through science and arts could truly and effectively serve the nation for independence and progress. In this regard, the Oriental Cultural Work, which obeyed no law but

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62 *Ibid.,* 488.

63 Tatsuro, Yamamoto S. "The Anti-Christian Movement in China, 1922-1927." *Far Eastern Quarterly,* 1953, 12(2), 140.

64 *Ibid.,* 142.

Japan's "Special Account Bill on the Cultural Work for China" and thus could not be fully managed by China, once again became a major target of nationalistic movements.[65]

Ultimately, regardless of the rise of Japanese imperialism and China's mounting nationalist movements in the first two decades of the twentieth century, China's distrust of Japan's Oriental Cultural Work was also rooted in the structure and practices of the project, especially when it was compared with the project funded with America's Boxer Indemnity (Table A.1). Although America was also a major imperialist force in China and its educational policies towards China, to a certain degree, served to defend its own interests in China, its projects received far less objection and attention.

TABLE A.1. Remissions of the United States, Britain, and Japan (silver taels)[66]

Country	Original Indemnity	China's Actual Payments	Scheduled Remissions	Paid Remissions
United States	71,897,770	14,527,915	57,369,855	45,971,008
Japan	75,944,689	24,697,505	51,274,184	35,408,207

First, the administrative body that oversaw the American remission activities, the China Foundation's joint committee, was led by a Chinese leader who was responsible for all funding decisions. It remained independent from both the Chinese and the American governments. In contrast, although there was also a joint committee overseeing the Japanese efforts, its

65 Huang, Fuching. *Jindai Riben zai hua wenhua ji shehui shi ye zhi yanjiu* 近代日本在华文化及社会事业之研究 (Japanese Social and Cultural Enterprises in China 1891-1945). Taipei: Academia Sinica, 1982, pp. 119-120.

66 The table is regenerated based on Teow's work. See Teow, 1999, 204.

administration was fundamentally under the Japanese Foreign Ministry's command and received its funding from Japan's Ministry of Finance as a part of the nation's annual budget.[67] Moreover, unlike the American project, which solely funded educational enterprises in China, the Oriental Cultural Work, which funded all China-related studies and organizations in both Japan and China, only distributed around 20% of its funds to Chinese students and educational organizations (Table A.2). As the totality of Japan's remission was smaller than that of America, it largely diminished the achievements of the funds. As one secretary in the Japanese Foreign Ministry pointed it out in 1926, the accommodations and equipment of the American-funded hospitals and schools in China, like Peking Union Medical College Hospital (*Xiehe yiyuan*) and Tsinghua College, were beyond the compare of institutions funded by Japan's Oriental Cultural Work.[68]

TABLE A.2. Programs in Terms of Percentage of the Total Budget for the Oriental Cultural Work[69]

Program	Percentage of Total Budget
Sino-Japanese Academic Institution in China	
Beijing Humanities Institute	6.65%
Oriental Cultural Academy	5.52%
Shanghai Science Institute	24.42%
SUBTOTAL	36.59%
Chinese Student and Organization	
Chinese students in Japan	18.16%

67 Teow, pp. 166-169.

68 Kimura, Atsush 木村惇. "Nichibei ryōkoku no taishi bunka jigyō 日米両国の対支文化事業 (Japanese and American Cultural Projects towards China). " *Taiyō 太陽*. 1926, 32(7), pp. 23-27.

69 The table is regenerated from Teow's work, see Teow, 1999, 195.

Nikka gakkai[70]	2.96%
SUBTOTAL	21.12%
Japanese Organization with China-related Study	
Dōjinkai[71]	17.30%
Japanese cultural organizations in Qingdao	6.64%
Tō-A dōbunkai[72]	14.02%
SUBTOTAL	37.96
Other Cultural exchanges	4.51%
Total	100%

Furthermore, as the phrase "[funding] the undertakings to be carried out in China for the encouragement of education, arts and science, sanitation, relief, and other cultural purposes" in the Special Account Bill was vague, the projects could either serve an academic purpose or a military one for Japan.[73] In other words, the Oriental Cultural Work was not prohibited from providing financial resources for studies related to intelligence activities in China. For example,

70 Nikka gakkai 日中学会, literally means the Japanese-Chinese Academic Association. Established by a group of Japanese businessmen in 1918, Nikka gakkai aimed at improving the living conditions of Chinese students in Japan. Teow, 1999, pp. 191-192.

71 Established in 1902, Dōjinkai 同仁会 was a private association to promote medicine and public health in Asian countries, primarily in the cities with Japanese settlements. From 1914, it opened four hospitals in four Chinese cities, including Beijing, Hankou, Jinan and Qingdao. In the 1920s, the four Japanese hospitals treated more Chinese patients than Japanese patients. See Teow, 1999, 185; Huang, 1982, pp. 69-91.

72 Established in 1898, Tō-A dōbunkai 東亜同文会 was a Japanese semi-official organization. It did not attached to the Japanese government, but most of its founding members were prominent officers in the government. It received annual subsidy from the Japanese Foreign Ministry and carried out its activities on political missions. Its primary aim was to investigate China in order to better serve Japanese interests through a sound understanding of contemporary China. It launched Tō-A dōbun shoin 東亜同文書院 in Shanghai in 1901, which was an educational institution for training Japanese students in Chinese matters, and the Tokyo dōbun shoin 東京同文書院 in Japan to prepare Chinese students for admission into Japanese schools, except that the latter was closed in 1922. Teow, 1999,189.

73 Tazaki, Masayoshi 田崎仁義. "Taishi bunka jigyō to gojin no kore ni taisuru jakkan no kibō 対支文化事業と吾人の之に對する若干の希望." *Syōgyō to keizai 商業と經濟*, 1925, 5(2), 174.

efforts by *East Asian Common Culture Association* (*Tō*-A dōbunkai), established in 1898, began to receive funding from the Oriental Cultural Work project in 1924.[74] This Association was a Japanese semi-official organization whose main objectives included: (1) The Preservation of China (*Shina hozen*); (2) Promoting social improvements in China and Korea; (3) Promoting research on contemporary issues of China and Korea in order to have its results implemented.[75] The organization's objectives suggest a condescending tone by the Japanese government: since Western culture had reached a stage of bankruptcy after World War I, as the most modern nation in the East, it was Japan's duty to preserve China and Korea from Western colonization and influences. It would foster a pan-Asia by assimilating China and Korea into a prosperous community of "same writings and same race (*dōbun dōshu*)."[76] Hence, though the Oriental Cultural Work provided support for Chinese students and organizations in Japan, due to its engagement in the intelligence activities and condescending gestures, the project was denounced as an agent of Japanese imperialism in China.[77]

Within the overall budget for the Oriental Cultural Work project, the largest proportion of funds was allocated to the Shanghai Science Institute (*Shanghai ziran kexue yanjiusuo* in Chinese *or Shanhai shizen kagaku kenkyūjyo* in Japanese). With an annual budget of more than 400,000 yen, the Institute's funding was even greater than any laboratory or classroom in Japan

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74 For instance, Tō-A dōbunkai had launched expeditions into Manchuria (the Northeastern part of China colonized by Japan in the 1930s), the inner land of China, and along the Yangzi River in order to collect information about China's economic geography, transportation system, and currency markets. See Huang, 1982, pp. 16-27.

75 Huang, 1982, 13.

76 Teow, 1999, pp. 168-171.

77 Saeki, 28.

proper.[78] As the most significant measure by Japan to promote its achievements in modernization, the Shanghai Science Institute claimed to contribute to advanced research in the study of the natural sciences within China. The idea to utilize Japanese Boxer remission funds to establish a museum and a research institute for natural sciences in China was first proposed by the Chinese in 1923, when two Japanese Foreign officers Irisawa Tatsukichi (1865-1938) and Okabe Nagakage (1884-1970) were dispatched to consult the Chinese about the application of the Japanese funds.[79] After the Japanese government formally endorsed the idea in the Special Account Bill, the Oriental Cultural Work's Shanghai Committee announced the blueprint for the Shanghai Science Institute in December 1926.[80] Its main points are summarized as follows:

1) The Institute is created to promote the progress of natural sciences in China by carrying on, first of all, purely scientific research on urgent questions especially vital to the interests in China.
2) The Shanghai Committee stressed the necessity of endeavoring to raise the scientific ability of Chinese scholars.
3) The Institute will be including seven Departments: Physics, Chemistry, Biology, Geology, Pathology, Bacteriology, and Pharmaceutical Research.
4) The chairman should be selected among Chinese members. Each Department consists of Researchers, Assistant-Researchers, Assistants, and Research Probationers. The Research Probationers will be chosen among Chinese candidates by exams.
5) Preliminary Studies will be carried out by Japanese and Chinese researchers together as preparation without waiting for the completion of the construction of the Institute. The seven preliminary studies and their researchers were:
    a. Keimatu Katuzaemon and Yu Yan: A Study on Chinese Herbal Medicine.
    b. Shinjo Shinzo and Wen Yuanmo: A Study on Terrestrial Gravitation and Magnetism in China.
    c. Kishinoue Kamakichi and Yan Zhizhong: A Biological Study of Fish in the Yangzi River.
    d. Yamazaki Momoji and Zhang Hongzhao: Geological Studies in the South of the Yangtze River.

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78 Hiromi Mizuno. *Science for the Empire: Scientific Nationalism in Modern Japan*. Stanford University Press, 2008, 47.
79 Saeki, 23.
80 *Shanhai Shizen Kagaku Kenkyūjo Yōran* 上海自然科学研究所要覽. Shanhai: Shanhai Shizen Kagaku Kenkyūjo, pp. 1-7.

e. Katayama Masao and Zheng Zhenwen: Synthetic Study of Natural Inorganic Compounds.
f. Katayama Masao and Zheng Zhenwen: A Study on Fermentation Fungi and its Products in China.
g. Hayashi Horuo and Xie Yingrui: An Investigation of Epidemics and Endemics in China.

6) The Institute will be located at No. 320 Route Ghisi, in the southwestern section of the French Concession of Shanghai.

Even before the Institute officially opened in April 1931, the blueprint encountered problems. Due to the Jinan Incident in 1928, most Chinese members in General Committee and Shanghai Committee attempted to resign from the Oriental Cultural Work project.[81] Though their appeal did not officially terminate the Sino-Japanese cooperation, their actions did lead to a reshuffle of the faculty members in the Institute. After the Jinan Incident, most of Chinese Committee members who also bore administrative titles in other Chinese institutes, such as the President's secretary, university presidents, and the former Financial Minister of China, resigned from the project without official permission from either the Chinese or the Japanese governments. As for the Chinese researchers in the Institute, most of whom received their higher education in Japan and had been maintaining cooperative relationships with Japanese researchers during the cultural project, remained in their positions and participated in some of the preliminary studies of the Institute as assistants.[82] After the events in 1928, no Chinese academic ever assumed the post of director of the Institute as was originally planned. As a consequence, Yokote Chiyonosuke (1871-1941), a Japanese professor of medicine at Tokyo Imperial University, was appointed Acting Director of the Institute. Moreover, regardless of the number

[81] Call number: B05015167100
[82] Saeki, 44.

of remaining Chinese members, the lack of Chinese participation required the Institute to appoint larger numbers of Japanese researchers to fill positions in the departments and to undertake the preliminary studies.

Though it was not Japan's original plan to establish Shanghai Science Institute as an academic center dominated by the Japanese, research conducted during many preliminary studies provides insight into the motive behind the Institute's establishment. Billed as an organization that was "[promoting] the progress of natural sciences in China…[and] carrying on purely scientific research on urgent questions especially vital to the interests in China," In reality, with the exception of the work on epidemics in China, it was rather difficult to associate the other six preliminary studies with the most urgent questions of China.[83] On the contrary, the studies on freshwater fish and fermentation fungi had greater potential to serve Japan with its greater demand for aquatic resources and bean products like miso, soy sauce and Nattō. However, regardless of the potential of the preliminary studies to serve Japan's imperial agenda, Shanghai Science Institute, as a part of the official cooperation between Japan and China, was also launched to counteract the rise of anti-Japanese sentiment, compete against America's increasing influence over Chinese intellectuals, and justify Japan's scientific competitiveness in shaping a modern Asia.

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[83] Mark Elvin, "The Environmental Impasse in Late Imperial China." In Brantly Womack, ed., *China's Rise in Historical Perspective*. Rowman and Littlefield: Lanham MD, 2010, pp. 151-169.

2.4. FOREIGNERS, FOREIGN INSTITUTIONS, AND FOREIGN LANGUAGES

Japan was not the only state to blame for exercising treaty powers' privilege to facilitate its scientists' research in China. By the 1920s, most treaty powers had also engaged in scientific activities like the studies funded by Shanghai Science Institute that utilized Chinese resources for foreign commercial and academic interests. Due to a series of treaties between China and foreign forces dating back to 1842, China was forced to open its territory to the latter. There were foreign explorers launching expeditions across China in order to imbue the West with a sense of oriental exotica. British naturalists led the first wave of the foreign explorations in China around the Opium War in the 1840s.[84] The British naturalists collected and classified the unique flora and fauna of China for Western cultural institutions and global cultural markets through its base in Canton. After the Opium War, their explorations extended from their bases in port cities like Canton and Macau to the hinterland of China. Following the British, other major and minor players in the colonial game of China, including the French, the Americans, and the Swedish, organized their expeditions to the Southeast and Northeast parts of China around the turn of the 20th century.[85] They transported both natural resources and cultural objects outside of China, displayed the items in foreign museums, or sold them on international markets.[86]

The first wave of foreign exploration in China was mainly led by the West. The explorers were composed of both professional scientists and amateurs. The amateurs included merchants,

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84 Fati Fan. *British Naturalists in Qing China: Science, Empire, and Cultural Encounter.* Harvard University Press, 2004.

85 Glover, Denise M., and McKhann, Charles F., eds. *Explorers and Scientists in China's Borderlands, 1880-1950.* Seattle: University of Washington Press, 1997.

86 Fati Fan. *British Naturalists in Qing China: Science, Empire, and Cultural Encounter.* Harvard University Press, 2004.

missionaries, and diplomats, and they accounted for a larger proportion. During their expeditions, most of the foreign explorers had to rely on their Chinese collaborators to acquire their intended collections. Since most of the foreign explorers were working for cultural and academic institutions like Kew Gardens, the Royal Society of London, the American Museum of Natural History, and Harvard University. Each of their excursions carried on multiple missions to collect objects for more than one discipline, like collecting plants, fossils, folklores, and antiquities in one trip to serve the studies of biology, geology, ethnography, and even philology at the same time.

After the turn of the twentieth century, foreign explorations in China reached another new height, which was marked by features different from earlier events. On the one hand, after exercising foreign privileges granted by the unequal treaties for nearly half-century, major treaty powers like America, Great Britain, and Japan, gradually established their cultural institutions in China's port cities. Some of them, like America, fostered direct cooperation with the Chinese cultural community through the Boxer Indemnity Remissions and the Rockefeller Foundation. Hence, activities serving academic purposes accounted for a larger proportion of foreign exploration in the early 20th century than in the late 19th century. This led to changing relations between the foreign explorers and their Chinese collaborators from one based on employment and commission to a fellowship of researchers with similar academic interests.

On the other hand, due to Japan's incursion into China after its victory in the first Sino-Japanese war in 1895 and Europe's' decreasing presence in China during World War I, Japan replaced Britain as the leading force in foreign exploration in China in the early 20th century. Before the start of the Oriental Cultural Work project, the Japanese government already

supported three major institutions in China to conduct exploratory expeditions. The first of the institutions established by the semi-government organization, *the East Asia Common Culture Association* (*Tō-A dōbunkai*), through its five locations in Chinese major cities and *the East Asian Common Culture Academy* (*Tō-A dōbun shoin*, est. 1901) in Shanghai. Prior to the establishment in China, the East Asia Common Culture Association, with its headquarters in Tokyo, had already launched expeditions to both North and Northeast China to collect information for Japan's military interests during the first Sino-Japanese War (1894-1895) and the Russo-Japanese War (1904-1905).[87] Around the turn of the twentieth century, the Association set up five sections in Chinese major cities, (Shanghai, Hankou, Beijing, Fuzhou, and Guangdong). Outside of supporting regional expeditions, the five sections also published regional newspapers, maintained social networks for local Japanese communities, and connected Japanese businessmen with Chinese commercial resources.[88] As for the East Asian Common Culture Academy in Shanghai, it was an educational institution for training Japanese students in Chinese Studies. Based on their regular field trips in China, the Japanese students' research papers provided first hand information on geography, transportation system, and currency markets.[89]

The other two major institutions funding expeditions in China were the research sections affiliated with Taiwan colonial government (*Taiwan Shōtokufu*, est. 1895) and the Southern Manchuria Railway Company (*Minamimanshū tetsudō kaisha*, est. 1906, hereafter Mantetsu). Both research sections were housing numerous social and natural scientists to study natural

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87 Huang, 1982, pp. 12-17.
88 Huang, 1982, pp. 16-23.
89 Huang, 1982, pp. 16-27.

resources, land-distribution systems, and local customs around their locations to aid Japanese colonial rule.[90] The two research sections played a critical role in demarcating the colonial landscape for Japanese technocracy. Ambitious scientists in Japan's civil service dedicated themselves to creating a "heaven of truly mutual prosperity in Manchuria and Taiwan" by having Japan provide China with 'organization' and 'technology'.[91]

Unlike the Japanese government-funded research projects in China, western researchers in China in the twentieth century were mainly supported by foreign academic institutions and private foundations. One the one hand, there were individuals from the West came to China to collect information and objects related to their fields of study. For instance, the Swedish geographer, Sven Anders Hedin (1865-1952), launched four expeditions inside western China from 1893 to 1935 in order to complete his map of Central Asia. Inspired by Hedin's work, a Hungarian-British archaeologist, Marc Aurel Stein (1862-1943), organized his archaeological trips to western China in the first three decades of the twentieth century during which he discovered a printed copy of the *Diamond Sutra*, the world's oldest printed text dating to 868 CE, and transported part of the manuscripts abroad.

Besides individual researchers, western forces also gained access to China's natural resources through academic and research institutions they founded in China, like mission schools, private schools, research laboratories, and hospitals. Among them, two well-endowed institutions, with financial supports from America, made major contributions. One was the China Foundation mentioned earlier that administered the application of American Boxer Remissions

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[90] Hiromi Mizuno. *Science for the Empire: Scientific Nationalism in Modern Japan*. Stanford University Press, 2008, 47.
[91] *Ibid.,* 44-46.

in China. The other one was the Rockefeller Foundation's China Medical Board (est. 1914), which had overlapping boards of directors with the China Foundation. Started in 1914 as the second major program of the Rockefeller Foundation, China Medical Board's initial commitment was to establish and operate the Peking Union Medical College (est.1921) in Beijing, which it carried out from 1914 through 1950, in order to provide China with western medical care and research, and to provide an institutional model and leaders for the reconstruction of Chinese education.[92]

Between 1925-1949, the two foundations spent about $15 million USD on the development of natural sciences in China.[93] Among the over 100 institutions funded by the two foundations, four major organizations played a profound role in transferring modern science to China, shaping the development of the Chinese science community, and securing accesses for western researchers. They included the National Southeast University (*Guoli dongnan daxue*), the first Chinese university with a biology department in 1921[94]; Yanjing University (*Yanjing daxue*), an American missionary school linked to the Rockefeller Foundation's Peking Union Medical College; Nanjing University, an American missionary school that developed a superior agricultural science program closely tied to Cornell University[95]; and the Science Society of China, whose biological laboratory led pioneering work on discovering China's indigenous flora and fauna and ordering them into the universal knowledge of modern science.[96]

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92 Fosdick RB. *The Story of the Rockefeller Foundation*. New York: Harper, 1952, xi-xv.

93 Schneider LA. *Biology and Revolution in Twentieth-century China*. Lanham, Md: Rowman & Littlefield, 2003, 42.

94 *Ibid*., 33.

95 *Ibid*., 21.

96 Lijing Jiang. "Retouching the past with living things: indigenous species, traditions, and biological research in

Most of the foreign institutions, both western and Japanese, were situated within concessions in China's port cities or leased territories. In the early years of their establishment, the institutions were a symbol of foreignness in China: they were filled with foreign faculty members who did not pay hedince to China's jurisdiction, who used textbooks in any language but Chinese, and who lectured on new scientific subjects.[97] This foreign presence, which reminded the GMD of the limitation of its authority and its capacity to unify and control China, was one of the Nationalist government's primary concerns upon its commencement. However, since the government appreciated the power of science in China's modernization and was perennially short of funds to carry out its ambitious science programs, it was never inclined—on nationalistic or anti-foreign grounds—to prohibit the foreign foundations' largesse to support scientific enterprises.[98] Hence, the strategy developed by the Nationalist government was to nationalize science by gradually eliminating foreign controls over the scientific activities in China.

2.5. NATIONALIZING SCIENCE THROUGH ACADEMIA SINICA

After replacing the Beiyang government in 1928, the GMD was publically devoted to the rapid

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Republican China, 1918-1937." *Historical Study in the Natural Science,* Vol.46 (2), pp. 154-206.

97 Henry, Eric S.. "Lending Words: Foreign Language Education and Teachers in Republican Peking." Brady A, Brown D. edit., *Foreigners and foreign institutions in Republican China*. New York; London: Routledge, 2013, pp. 52-71.

98 Schneider LA. *Biology and Revolution in Twentieth-century China*. Lanham, Md: Rowman & Littlefield, 2003, 8.

expansion of national science in order to serve the regime's nation-building agenda. By the 1920s, Chinese reformers and revolutionaries alike were convinced of the utility of science in supporting progress. They openly advocated the adoption of "scientific culture" as a means for China to energize its lagging social evolution and thereby to survive the challenges of foreign incursion and competition.[99] To deal with the uncomfortable fact that science, the best instrument for China's independence and modernization, remained under the control of foreigners, the Nationalist government attempted to nationalize science by assuming government's control over all scientific enterprises in China. The government intended to ensure that China could, more or less, benefit from the foreigners' scientific activities conducted on its territory, and then to gradually replace the foreign scientists with Chinese foreign-trained scientists and, ultimately, Chinese-trained scientists.

In this regard, the Nationalist government implemented a national education system in which new or restructured public colleges and universities were brought under the Nationalist government's control. The government systematically expanded courses on science and technology in national higher education, gradually replacing foreign faculty members there with Chinese academics, and effectively adopted Chinese textbooks.

Sitting atop this national education system was the establishment of Academia Sinica (*Zhongyang yanjiuyuan*). As a part of the Nanjing regime, it played a central role in the nationalization of science in China. Both as the nation's central academy of sciences and as an administrative center for scientific research, Academia Sinica was founded to formulate

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[99] *Ibid.,* pp. 6-7.

scientific policies for the government and coordinate the government's efforts with the economic development. After its establishment, it was also dedicated to translating and standardizing scientific terminology and nomenclature in Chinese, and presenting the nation's scientific achievements to the international community. Above all, the organization was meant to be a symbol of China's cultural independence and modernization.

The idea of a central academy was not new in China. From the Qin dynasty (221 BCE-206 BCE) to the Qing dynasty (1644 CE-1911 CE), imperial governments established central academic institutions for recruiting talent and training civil servants.[100] It was a political convention that the legitimate central government of China should have a research body that renders the government as the sponsor and protector of culture. In fact, when Yuan Shikai ruled the Beiyang government in Beijing, he passed a new law—the Law of the Central Learning Society (*Zhongyang xuehuifa*)—on the foundation of the central academy in order to promote academic research and education, and legitimize his rulership in China. Though the project was not implemented, the attempt reflected the Beiyang government's desire to promote academic research in China and its belief in the conventional connection between the legitimacy of a central government and the existence of a central academy.[101] In this regard, the Nationalist party had similar concerns with its predecessors for establishing a similar body to justify its legitimacy.

The establishment of Academia Sinica not only served the needs of the GMD, but also reinforced the Nanjing clique in the factional conflicts of the GMD. In the GMD, it was Dr. Sun,

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[100] *Ibid., pp.* 11-13.
[101] *Ibid.,* pp. 18-23.

the founding father and leader of the Party that first proposed to establish an academy of sciences for the nation's independence and reconstruction. In *The General Plan for State-building* he stated as follows:

> Today the civilization entered the age of science. Any [national] construction has to be carried out after seeking and [scientific] knowledge. In order to make our country prosperous and powerful, we have to popularize education and make science universal to the people throughout the country.[102]

At the end of 1924, when Dr. Sun visited Beijing to negotiate China' unification with the Beiyang government, he formally raised a proposal to establish a central academy as the highest research organization of the country in order to serve the nation's reconstruction.[103] After the death of Dr. Sun, Chiang Kai-shek (1887-1975) rapidly rose to power through the Nationalist Revolution. On April 17, 1927, the Nanjing clique held a Central Political Council meeting to prepare for the establishment of the new government at Nanjing. At the meeting, the proposal to establish a central academy as a part of the new regime was unanimously passed. Academia Sinica thus became the first department affiliated with the new government.[104] After a nearly year-long preparation, Academia Sinica held its first inaugural meeting on June 9th, 1928, which ushered in the new nation's central academy of sciences.

Unlike previous central academies in ancient China, Academia Sinica was different in that it was the first national academy that did not center on the study of the Chinese classics, but

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102 Sun Yatsen. *Jianguo fanglue 建国方略*(*The General Plan for State-Building*). Shanghai: Qiuguzhai shuju, 1928, 45. The English translation here refers to Chen's dissertation, see Chen, 1998, 35.

103 Guoli zhongyang yanjiuyuan. *Guoli zhongyang yanjiuyuan shijiu niandu zongbaogao 国立中央研究院十九年度总报告*. Nanjing: guoli zhongyang yanjiuyuan. 1930, 41.

104 Chen, 1998, 44.

rather regarded scientific research as a priority. In its founding years, nine of its eleven research institutions were dedicated to the studies of natural sciences (Fig. A.1).[105]

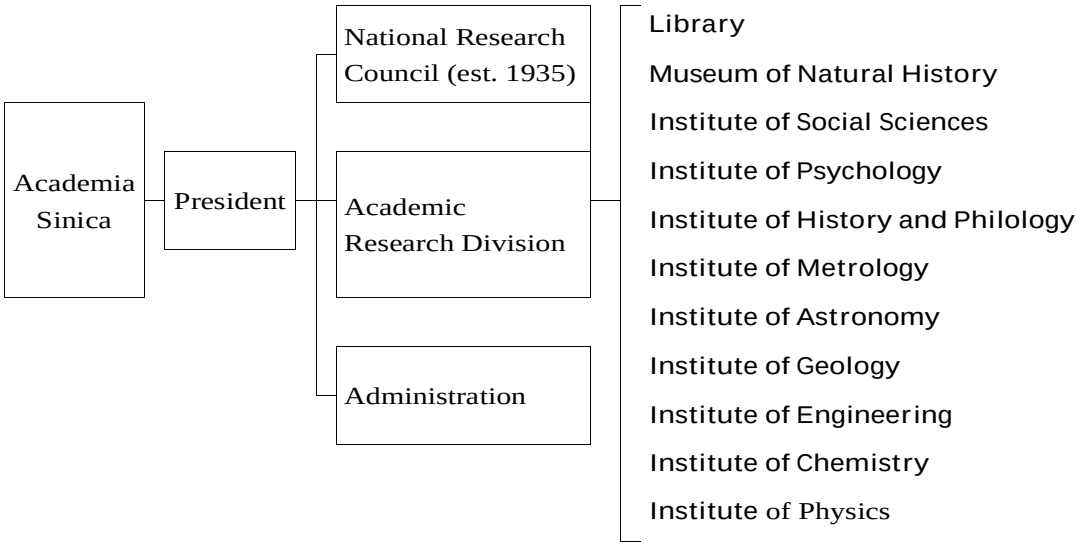

Fig. A. 1. The Structure of Academia Sinica in 1930[106]

The emphasis on scientific research was influenced by the emergence of modern scientific academies in the West from the 17th century onwards. In preparing for Academia Sinica's establishment, three models of academy in the West were considered as options. The first one was an Anglo-American model, a combination of American research universities and the British Royal Society. Supported by most scientists who were trained in America, this model was expected to shape Academia Sinica into a completely autonomous academic community

[105] Guoli zhongyang yanjiuyuan. *Guoli zhongyang yanjiuyuan shijiu niandu zongbaogao* 国立中央研究院十九年度总报告. Nanjing: guoli zhongyang yanjiuyuan. 1930, 48.

[106] The Chart is a simplified structure of Academia Sinica in 1930, regenerated from *Ibid.,* 48; The National Research Council was proposed to be established by 1930, but it was not installed until 1935.

with loosely connected professional researchers and laboratory-centered research approach.[107] The second option was the French model, which was favored by the founding members of Academia Sinica who spent years in France in study and participating in social movements. It allowed, to a certain degree, hierarchical administration in Academia Sinica and the Institute's party affiliation, in order to improve the efficiency of the Institute's scientific studies in serving the nation's needs of industrialization.[108] The final and successful choice was the Soviet National Academy of Sciences. For the leaders of the Nationalist government, the Soviet model could shape Academia Sinica into a completely state-sponsored institution which could both conduct its own research on pure science and support the projects on applied science for the nation's military and industrial interests. In this regard, the model chosen for Academia Sinica enabled the Institute to effectively boost the nation's industrial development with the government's control and support. Thus, it, to a certain degree, rendered the Institute as an agent for the government to tie the Chinese science community to the party rulership, industrial planning strategy, and national defense polity.[109]

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[107] Chen, 1998, 64.
[108] *Ibid.*, pp. 66-75.
[109] *Ibid.*, pp. 77-85.

2.6. CONCLUSION

China in the 1920s witnessed constant reshuffling of power, civil wars, and social unrest until the establishment of the Nationalist government in 1928. From a revolutionary force to a ruling power, one of the greatest concerns of the Nationalist Party was its relations with the foreign states in China, which had played a central part in China's politics for decades. On one hand, the anti-foreign discourse promoted by the Nationalist Party through its Nationalist Revolution, such as "abolishing all unequal treaties" and "the independence of China's education", which increased the Party's capacity to overthrow the Beiyang government, became an unstoppable forces with life for its own. On the other hand, as a newly founded regime aimed at the nation's reconstruction, it was almost impossible for the Nationalist government to immediately free China from all the foreign forces, especially when the government was perennially short of funds, resources, and, most importantly, scientific knowledge to launch the nation's modernization.

As a solution reached in the dilemma, the Nationalist government attempted to attain "independence through dependency." [110] In the realm of politics, the government actively engaged in the negotiation of abolishing unequal treaties while continuing to grant certain *de facto* privileges to the foreigners that might be conducive to China's nation-building.

As for science, which was believed to be the passport of a nation towards industrialization, independence, and modernization in the early 20th century, it could hardly be

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[110] Schneider LA., 2003, 23.

transferred to China without any foreign assistance. These programs, however,, sought rewards for their participation, financially, intellectually, or both. In this regard, the Nationalist government determined to control and support the scientific enterprises in China through nationalization. First, in the case of foreign-funded cultural projects like the American Boxer Remissions and the Japanese Oriental Cultural Work, which had entrenched in the Chinese society, rather than entirely cutting off their accesses to China, the Party sought to continue the presence of selected foreign forces in China with proper government's control. In this way, the government was allowed to benefit from the scientific achievements, which it was yet able to produce on its own. Then, the government could gradually replace the foreign forces in China's science community with Chinese professionals so that the nation's progress could be trusted in the hands of its own people.

Among the government's major steps in nationalizing science, was the establishment of Academia Sinica, both as the nation's supreme research institute of sciences and the administrative center of science for the government. As a state-sponsored institute, which modeled after the Soviet National Academy of Sciences, Academia Sinica, with its western-trained faculty members, was expected to channel modern science into China, especially towards the fields favored by the Nationalist government for its nation-building agenda. In 1929, the first year in its trail, Academia Sinica seized a good opportunity to prove its authority and utility to serve the government's interests in nationalizing science.

3. THE BIRTH OF CHINA'S POLICY ON FOREIGN BIOLOGICAL EXPEDITIONS

3.1. ACADEMIA SINICA'S ENGAGEMENT WITH DR. KISHINOUYE'S BIOLOGICAL EXPEDITION

3.1.1. Dr. Kishinouye's Third Biological Expedition Along the Yangzi River

At the end of 1926, it was announced that the Shanghai Science Institute would launch seven preliminary studies before the official opening of the institute in 1931. Included among the preliminary studies was "A Biological Study of Fishes in the Yangzi River (*Yōsukō gyorui no seibutsugakuteki kenkyū*)."[111] The Institute planned for this study to be jointly carried out by a Chinese bacteriologist, Yan Zhizhong, and a Japanese ichthyologist, Kishinouye Kamakichi (1867-1929).[112] From 1927 to 1929, the Sino-Japanese research team launched three expeditions along the Yangzi River in order to collect fish specimens and explore their habitat along the river. Yan did not participate in any of the expeditions and Kishinouye led all three of the

111 Saeki, 44

112 The life of Yan Zhizhong is hard to trace. After receiving his doctorate degree at the Tokyo Imperial University on bacteriology in 1917, he practiced medicine in Beijing and became a senior officer in the Ministry of Healthy in the Nationalist government at Nanjing. After 1949, he moved to Taiwan with the Nationalist government and became the second president of the college of Medicine at the National Taiwan University.

expeditions with assistance from both Japanese and Chinese team members. The first expedition was launched towards the lower Yangzi region from 20th December 1927 to 18th January 1928. After a fruitful expedition from Shanghai to Hankou, the team brought fish specimens back to Shanghai Science Institute and then to Tokyo for further analysis.[113] The second trip, which was planned for May 1928, was suspended due to the outbreak of fighting between China and Japan in Jinan.[114] In September 1929, after a yearlong suspension, the team was ready to undertake their third journey towards the upper region of the Yangzi River.

The third expedition took place in a very different political environment. By 1929, China had witnessed the transition from the Beiyang government to the new Nationalist government at Nanjing. The prime concern of the newly established government was to implement its nation-building projects, which demanded both China's independence and its modernization. In this regard, the government was dedicated to terminating the foreign control over China's politics through the renegotiation of the Unequal Treaties, while it had to maintain proper governmental control over Sino-foreign interaction in the fields in which China could not yet fully sustain itself, such as the realm of science. Among the government's efforts to expand its control was the establishment of Academia Sinica, the nation's central academy of sciences and the administrative center for science within the government. On the Japanese side, a change in leadership from Tanaka Giichi (1864-1929) to Shidehara Kijūrō (1872-1951) in 1929 led to a temporary shift in Japan's policy towards China. In contrast to his predecessor, Shidehara Kijūrō attempted to restore good relations with the Nationalist government at Nanjing with a non-

113 H-0117, pp. 68-69.
114 *Ibid.*, pp. 70-72.

interventionist policy towards China. The changing circumstances in both China and Japan in 1929 foreshadowed the vicissitude of the team's third expedition along the Yangzi River.

The third expedition was launched on September 10, 1929, when five team members arrived in Shanghai. The team set Kangding as its planned destination. The object of the expedition, according to the Japanese members, was to study freshwater fish and their habitat along the Yangzi River with a regional emphasis on the Three Gorges area. As the area connected the high-altitude Tibet plateau and the low- altitude Sichuan basin, the team expected the Three Gorges region to contain a high-level of freshwater fish biodiversity, which was unparalleled in Asia.[115]

The instructor of the preliminary study, Kishinouye Kamakichi, was already an Emeritus Professor of Agriculture at the Tokyo Imperial University when he joined Shanghai Science Institute. As a founding member of the study of marine biology in Japan, he dedicated his work to the research and education of ichthyology. His voluminous academic publications and textbooks led to having a new subspecies named after him, such as *Birulia kishinouyei* and *Lepidotrigla kishinouyei*.[116] As a technocrat who supplied his nation with knowledge of marine biology, he was passionately committed to enhancing the aquaculture industry around the Tokyo Bay area when he served in the Aquaculture Bureau in the Ministry of Agriculture and Commerce of Japan. With his academic and governmental achievements, Kishinouye was elected as the honorary member in numerous communities, including the Imperial Academy of Japan and the American Fisheries Society. After the Meiji Emperor and the Taisho Emperor

[115] Saeki, pp. 52-3; Kimura, pp. 1-5.

[116] Kimura, 1948, pp. 1-4.

rewarded him with the Order of the Sacred Treasure of Japan in 1906 and 1912 respectively, he was not only respected as an intellectual leader on Marine Biology but also admired as a symbol of Japan's advancement in science and technology. [117]

Joining Dr. Kishinouye in third expedition, were his assistants from both Japan and China, namely, Kimura Shigeru (1902-1977), Wei Hongmo, Dong Yumao (1897-1990), and Jin Zhaohua (1901-1979). Dr. Kimura finished his doctoral study on Aquaculture at the Tokyo Imperial University as Dr. Kishinouye's graduate student. He later became Dr. Kishinouye's assistant in Aquaculture Bureau and accompanied him to Shanghai Science Institute as a researcher. Dr. Wei also studied in the Agriculture Department at the Tokyo Imperial University and held a position at the Peking University when he participated in the expedition. Dr. Dong was completing his Ph.D. in Biology at the Kyoto Imperial University with a focus on crustaceology when he joined the expedition. He was later employed as the Curator of Zhejiang Provincial Museum from the 1930s to the 1950s. Dr. Jin received his doctorate in Aquaculture at the Hokkaido Imperial University and was a research member of Agriculture Department at the Tokyo Imperial University when he participated the expedition. He then served in Aquaculture Bureau of Zhejiang Provincial Government. In general, all the team members received their higher education on Marine Biology in Japan and thus shared social interactions with one another either as colleague or as friends.

The expedition had been placed under public attention from the start. It was described in contrasting ways through the Japanese and the Chinese newspapers. According to two influential

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[117] On this point, it is suggested that Dr. Kishinoue may also fulfill a request from Emperor Hirohito, a marine biology enthusiast, for collecting samples of freshwater jellyfish. See Saeki, 53.

Japanese Newspapers—Tokyo Nichi Nichi Newspaper and Osaka Mainichi Newspaper—Dr. Kishinouye was depicted as a fearless scientist marching towards the remote area of inner China for the supreme knowledge of pure science regardless of his own safety and comfort.[118] In contrast, in a Chinese weekly journal *Xinghua*, the expedition was presented as the herald of Japan's colonization towards the Yangzi River for China's the aquatic resources.[119] Responding to the suspicion from China, Dr. Kishinouye clarified the object of the expedition in an interview of Tokyo Nichinichi Newspaper as follows:

> The primary goal of the expedition is to investigate the geographical distribution of freshwater fishes among the Yangtze River…[Due to the huge difference in altitudes between its upper region and its lower region], the flow velocity in the Three Gorges area changes dramatically. Hence, we want to look into the differences in fish species and their habitation between the upriver and the downriver areas of the Three Gorges. Moreover, since there are marine fishes, such as shark, stingray, blowfish and sole, which temporarily return to fresh water environment in the Yangzi River, we want to know how far those marine fishes could travel upward from the sea. At last, if there is a chance, we may head to the watershed area between the Yangtze River and Indian Rivers for a comparative study on the fish species between the two water systems. In general, our destination would be to the west of Sichuan Province, Kangting for instance, and then head to the inner area of Qinghai and Tibet if circumstances permit.[120]

On September 10, 1929, the team started their journey from Shanghai. They arrived in Nanjing, the capital of the Nationalist Government, on the next day. While the team was procuring fish specimens through local fish markets in Nanjing, Dr. Kishinouye paid a visit to Academia Sinica, the highest research institute in China founded by the Nationalist government

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118 Saeki, 53.

119 "International News: Japan's exploration on the Fishery Industry of the Yangzi River 国际新讯：日人调查长江渔业 (Guoji xinxu: Riren diaocha changjiao yuye)." *Xinghua 兴华*, Shanghai: Huamei shuju, 26(37), 40-41.

120 Saeki, pp. 52-53.

in 1928, and had a delightful conversation with Chinese intellectuals there, including Cai Yuanpei, the founder and president of Academia Sinica. Dr. Kishinouye was also invited to give lectures at the National Central University and several other local higher educational institutions.[121] In general, during Dr. Kishinouye's stay in Nanjing, though there were public suspicions upon the motivation behind his expedition in China, he maintained friendly communication with the cultural community of China at Nanjing.

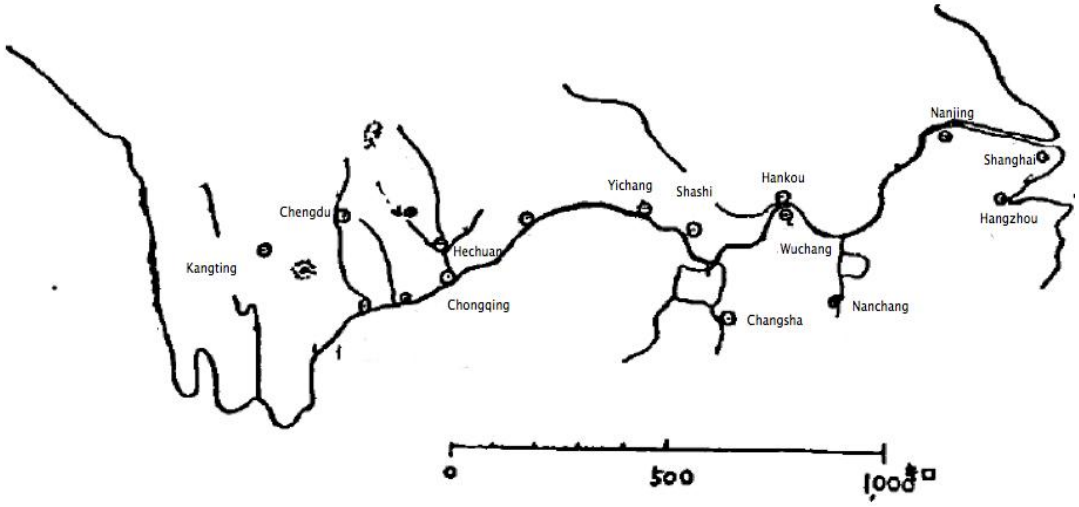

Fig. B. 1. Planned Traveling Route of the Third Fishing Expedition.[122]

According to the unequal treaties, foreign travellers like Dr. Kishinouye, who held a valid passport, were allowed to travel between and conduct activities within the port cities of China. The team planned its travelling route accordingly by making major stops in China's port cities, such as Nanchang, Hankou, and Shashi, along the mainstream or the tributaries of Yangtze River

121 Kimura Shigeru 木村重. *Sengyo Fudoki* 川魚風土記 (*Travel Note about Fishes in Sichuan*). Sapporo: Hoppō Shuppansha, 1948, 3.
122 Regenerated from Kimura, 1948,4.

(Fig. B.1). As it was recalled by Dr. Kimura in his travel log, they had an arduous yet productive time through the journey along the Yangzi River.[123] They purchased fresh fish from local markets in the dim light of the early dawn. They worked with local fishermen to catch the fish less seen in the markets whose indigenous names they barely knew. They processed the fish into specimen, one after another, together with the record of its name, indigenous name, folklore, and even culinary methods. They wrote down the habitations of the fish, as well as the history of the local people who tied their past, present and future to the tiny aquatic creatures. They were invited by local communities, both Chinese and Japanese residents, to share knowledge. On steamships, while Chinese sailors played mahjong, the team members painted the rustic beauty of China and mourned for the death of some scientists who were killed by local bandits during their expeditions. The team members talked about their further studies upon the specimens after their return to Shanghai and Tokyo. They longed for a cozy Onsen at Hakone while preparing to sail against the flow of the Yangzi River towards further discoveries at the next destination. None of them could have possibly foreseen the turning point of their expedition which was about to take place in Chongqing.

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123 This paragraph is mainly based on Kimura's recollection in his travel log and Saeki's interview with Dr. Kishinouye's son. See Kimura, 1948, chapter 7, 8 and 25; Saeki, pp. 52-78.

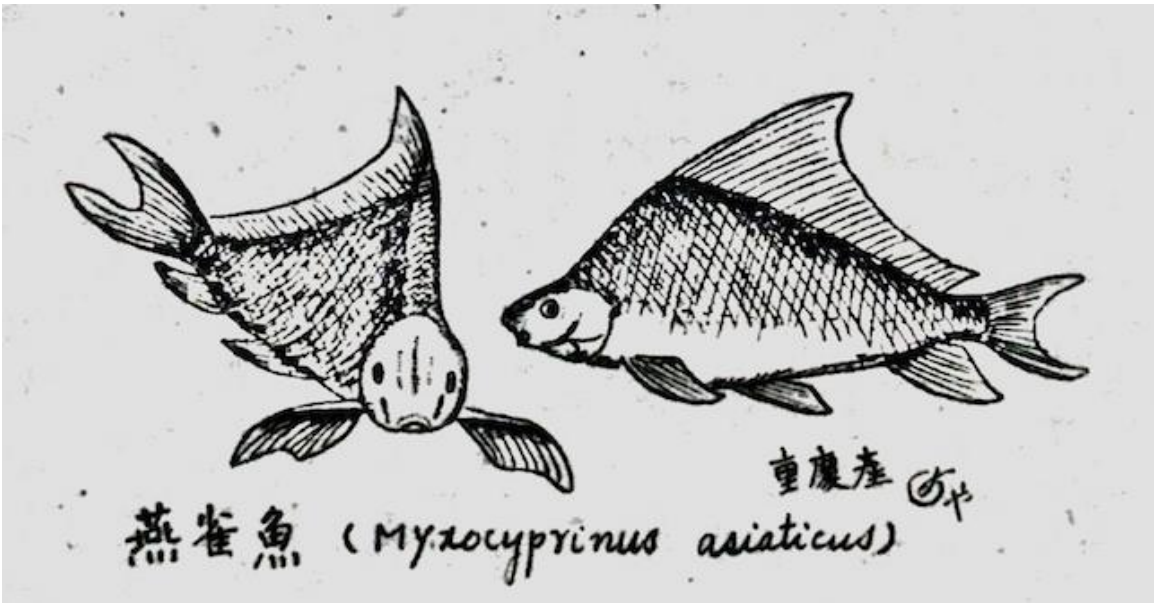

Fig. B. 2. A sketch of Chinese high-fin banded shark drawn by Dr. Kimura during the expedition, with its Latin name in Linnaeus system, *myxocyprinus asiaticus*, and its indigenous name in Chinese, *Yanque yu*.[124]

Fig. B. 3. A distant view of Chongqing painted by Dr. Kishinouye when he proceed towards the city in a steamship

[124] Kimura, 1948, 35.

during the expedition.[125]

3.1.2. A Restraining Order from Academia Sinica

On October 2, the team arrived in Chongqing, another port city in Southwest China. They were welcomed with a warm reception held by local Japanese diplomats and Chinese elites in the evening. All of a sudden, on the next day of the warm reception, the team received a restraining order from Cai Yuanpei, the president of Academia Sinica whom the team met in Nanjing just a month ago. According to the order, the team had to be detained within Chongqing by local Nationalist governors and could not pursue its expedition any further. The team was totally surprised and confused about the unexpected order. As Kimura recalled in his travel log:

> Sudden! All of a sudden! What's wrong? There was a restraining order from China's Ministry of Education[126] that forbade the expedition to proceed any further. Since Chongqing was a port city, [our team's activities had to be restricted within the city, or] we would be arrested even if we left the city for only one step. [Meanwhile,] the Chinese newspapers, who just reported the warm reception for us at the last night, [suddenly changed their tone as easily] as turning over their hands. They denounced Dr. Kishinouye's expedition as an intelligence activity led by an exiled Japanese general who served the military interest of Japan. All of these seem so ridiculous when I recall the occurrence nowadays.[127]

In the following days, while the local Chinese governors cautiously dealt with their

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125 *Ibid.*, 5

126 According to Kimura's original account, he though the order was from the Education Ministry of China, since Cai Yuanpei used to be the head of the Ministry. But the order was sent after Cai Yuanpei resigned from the minister position. Thus, the order was actually from Cai, as the president of Academia Sinica.

127 Kimura, 1948, 5.

Japanese guests and waited for further instruction from Nanjing, the Japanese diplomats in Chongqing attempted to reach related authorities to settle the problem. Based on the telegrams archived in Academia Sinica and Japan's Foreign Ministry, I regenerate the timeline of the occurrences between Academia Sinica and Dr. Kishinouye's expedition as follows.

–9.19	Academia Sinica sent telegrams to China's Educational Ministry and Foreign Ministry with requests for Dr. Kishinouye's trip[128]: 1. Suspend the expedition by confiscating the Japanese' passports. 2. Request the Japanese to submit their research plan and traveling route to China's Educational Ministry and Academia Sinica for approval and further instructions. 3. Academia Sinica will send its faculty members to participate in the trip to ensure the expedition is carried out as the research plan it submitted. 4. One complete duplicate set of the biological specimens collected through the expedition shall be deposited in the Academia Sinica as gifts 5. Prior to shipment abroad, all biological specimens collected through the expedition shall be examined by Academia Sinica.
–9.20	Japanese Consul at Nanjing, Kamimura Shinichi 上村伸一(1896-1983), saw the Academia Sinica's requests in a Chinese newspaper, Central Daily 中央日报(*Zhongyang ribao*), and reported it to Japan's Foreign Minister Shidehara Kijūrō, saying he will come to China's Foreign Ministry for a solution.[129]
–9.21	Kamimura visited China' Foreign Ministry and submitted the expedition's research plan and traveling route. China's foreign officer, Zhou Longguang 周龙光, encouraged Kamimura to directly communicate with Academia Sininca for the solution of the problem.[130]
–9.23	Kamimura dispatched his assistant Shimada 岛田 to Academia Sinica to submit the required documents. As Cai Yuanpei was on a business trip to Shanghai, secretary-general Xu

128 "Zhi waijiaobu han: Wei Riben duizhiwenhuaju qianyuan laihua diaocha changjiang shuichandongwu qingxiang rifang jiaoshe you 致外交部函：为日本对支文化局遣员来华调查长江水产动物请向日方交涉由." *Guoli zhongyangyanjiuyuan yuanwu yuebao* 国立中央研究院院务月报. 1929, 1(3): 38-39.

129 H-0117, pp. 87-88.

130 H-0117, pp. 90-91.

Shoushang 许寿裳(1883-1948) received the documents on Cai's behalf and restated some of Cai's main points concerning the expedition[131]:

- We understand that this is an academic expedition which will have its contribution to the academies of both Japan and China. But as the central research institution of China, it is necessary for us to obtain basic information about the expeditions conducted in China, like yours, especially when Academia Sinica has also been conducting biological expedition along the Yangzi River. We have done our research at the lower region of the River and prepare to launch our trip towards the Upper region as well. Hence, it would be helpful if we could have our members participate in your expedition towards the upper region and have some specimens collected for further study. We are looking forward to your decision on the proposals.

–**9.26** Kamimura telegraphed the summary of Secretary Xu's points to Shidehara and Japanese consul in Chongqing for Dr. Kishinouye's opinion. But due to unknown reason, the telegram was **delayed**. The Japanese consul in Chongqing claimed that it was until 5th October when he received the telegram sent on 26th September.[132]

–9.27 Since Academia Sinica had not heard from the Japanese for four days after the conversation between Secretary Xu and the Japanese officer, it sent another telegram to China's Foreign Ministry and Education Ministry urgently repeating its earlier requests.[133]

–10.1 Since neither the Japanese nor the two Chinese ministries replied to Academia Sinica's requests, Cai Yuanpei, the president of Academia Sinica issued a restraining order to all the Nationalist governors along the Yangzi River. In the order telegraphed to the Nationalist governor in Chongqing, Liu Xiang, he stated[134]:

- Japan has dispatched five people, namely, Kishinoue Kamakichi, Kimura Shigeru, Wei Hongmo, Dong Yumao and Jin Zhaohua, to investigate and collect aquatic animals in Chinese river, without consulting Academia Sinica and the Ministry

131 *Ibid.*

132 H-0117, pp. 102-105.

133 "Zhi waijiaobu han: Wei hanqing qiedian Chongqing Chengdu difangzhangguan zuzhi Anshangshi deng qianjin bingqing jixu yanli jiaoshe you 致外交部函：为函请切电重庆成都地方长官阻止岸上氏等前进并请继续严厉交涉由." *Guoli zhongyangyanjiuyuan yuanwu yuebao* 国立中央研究院院务月报. 1929, 1(3): 41-44.

134 "Dian Chengdu Liu Zhiqian zhuxi Chongqing Liu Pucheng zongzhihui: Wei dianqing kouliu riren Anshangshi deng huzhao you 电成都刘治乾主席重庆刘浦澄总指挥：为电请扣留日人岸上氏等护照由." *Guoli zhongyangyanjiuyuan yuanwu yuebao* 国立中央研究院院务月报. 1929, 1(4): 36-37.

	of Education of China for permission. According to the earlier contacts between the Ministry of Foreign Affairs of China and the Japanese, it is imperative for the trip to include participants from Academia Sinica and have all collected specimens examined by [Chinese] experts. I have been waiting for the Japanese reply on these terms for days. Now they probably have already left Chongqing and march further west toward the inner land of China. For this matter, I request to have their passports temporarily confiscated, restrict their activities within port city and prohibit them from any investigation.
–10.2	The team arrived in Chongqing and was welcomed with a warm reception by local Japanese and Chinese elites.[135]
–10.3	The Nationalist governor at Chongqing received the telegram and executed Cai's order.[136]
–10.5	Japanese consul at Chongqing received the telegram Kamimura sent on 26th September about Cai's requests on sending representatives to join the team and having a share of specimens collected through the trip. Dr. Kishinouye showed no objection to the requests. He hoped that Academia Sinica send no more than two representatives and they can join the team at its next stop in Hechuan, since the team was already way behind its schedule and did not want to spend another two weeks in Chongqing for the new participants.[137]
–10.10	Academia Sinica informed Japan's foreign office that it is glad to form an academic cooperation with Dr. Kishinouye and will withdraw its restraining order soon.[138]
–10.14	Academia Sinica telegraphed to the governor in Chongqing to withdraw the order.[139]
–10.17	Chongqing officials received Academia Sinica's telegram and informed the team that they are allowed to leave.[140]
–10.20	The team left Chongqing and headed to Chengdu.[141]

135 Kimura, 1948, 5.

136 *Ibid.*

137 H-0117, pp. 101-105.

138 "Zhi zhujing riben lishiguan jianhan: Wei Anshangboshi fuchuan caiji benyuan zhunbei canjia ruqi qianwang tefu chazhaoyou 致驻京日本领事馆笺函：为岸上博士赴川採集本院准备参加如期前往特复查照由." *Guoli zhongyangyanjiuyuan yuanwu yuebao* 国立中央研究院院务月报. 1929, 1(4): 37.

139 "Dian Chengdu Liu Zhiqian zhuxi Chongqing Liu Pucheng zongzhihui: Wei riren Anshang Lianji canji dongwu shijing jieqia yuanman xizhun gaishi deng jinxingyou 电成都刘治乾主席重庆刘浦澄总指挥：为日人岸上镰吉采集动物事经接洽圆满希准该氏等进行由." *Ibid.*

140 H-0117, 116.

141 H-0117, 119.

According to the telegrams, Academia Sinica had three major concerns regarding Dr. Kishinouye's expedition. First, as the central academy of China, it should be informed anytime there is a foreigner conducting scientific expedition in China. Second, it was Academia Sinica's duty to ensure that the foreign researcher only performs the scientific activities as he/she were given permission and that their scientific activities will not pose any threat to China's national interests. In this regard, the institute had to obtain the foreigner's traveling plan, oversee the expedition through its representative(s) in the trip, and examine the biological specimens collected . Third, as the core of Academia Sinica's requirements, the institute was entitled to keep one complete duplicate set of the biological specimens the foreign expedition collected in China. In general, any foreign researcher, whose research might be benefited from his empirical study on China's natural resources, should reciprocate part of the benefit to the intellectual body of China, *i.e.* Academia Sinica.

Though Academia Sinica requested to confiscate the Japanese team members' passports and detain the team within a port city, its intention was not to terminate the expedition but to force the team to fulfill its requirements. In fact, on October 1st, it turned out that Cai Yuanpei possessed the authority to directly issue a restraining order to local governors. He could have done so ten days earlier without consulting with any other forces, but he did not pursue the option in the first place. He instead chose to consult with the other two Chinese ministries in order to start a conversation with the Japanese researchers about the institute's requirements. It was when Academia Sinnica did not received any reply to its requests for days that Cai finally issued the restraining order.

It is difficult to ascertain what triggered Cai Yuanpei's objection towards Dr.

Kishinouye's trip ten days after he had welcomed his team at Academia Sinica. Cai's objectives were clearly expressed in his demands towards the expedition: to have Academia Sinica's representatives participate in the trip and to ask for examination and partial ownership of the collected specimens. Cai had always been a nationalist dedicated to China's independence from foreign control, especially in the realms of culture and education.[142] Cai regarded Academia Sinica as an institution that he viewed as not only the national academy of sciences, but also as China's administrative center for the conduct of science. All scientific activities conducted in China would be subject to Academica Sinica's regulation, and would therefore contribute to China's modernization.[143]

Another source of the conflict between Academia Sinica and the . Kishinouye team lies in the delayed telegram sent by Kamimura on September 26th but was received two weeks later. According to Japanese documents, for some unknown reason it took two weeks for the telegram to reach to Japanese officers in Chongqing when a telegram would normally be received within two days. There is no explanationas to the "unknown reason" that led to the delay. It could be a simple mistake of a Japanese junior officer, an equipment malfunction, a lack of efficiency among Japan's bureaucratic system, Japan's indifference to China's requests, or an underestimation of the importance of Academia Sinica and its capacity to implement the restraining order. It also remains unclear whether the Japanese would acknowlege and/or fulfill Academia Sinica's demands if the local Chinese authorities had not implemented Cai's

142 Cai Yuanpei. "Jiaoyu duli yi." (On the Independence of Education). Gao Pinshu edit., *Cai Yuanpei Quanji*. Beijing: Zhonghua shuju. 1984, 178.
143 Chen, pp. 40-48.

restraining order. However, the telegrams listed above reconstruct a process in which a delayed telegram, amid the hostility and distrust that was jointly shaped by Japanese imperialism and Chinese nationalism, led to a confrontation between the science communities of Japan and China.

3.1.3. The Aftermath

Accompanied by a Japanese-Sichuan dialect interpreter sent by the local Chinese governor, Liu Xiang, the team resumed their expedition on October 20th. After the team arrived in Chengdu, due to the arduous trip and the accumulated stress, Dr. Kishinouye suffered from acute gastritis. He decided to return to Shanghai due to this health issue and entrusted the rest of the expedition to Dr. Kimura. Unfortunately, before his departure, Dr. Kishinoue fainted in a bathroom and passed away on November 22nd.[144]

Considering Dr. Kishinoue's sudden death and their earlier unpleasant interaction with Academia Sinica, the Japanese side suspected that Dr. Kishinoue was murdered by Chinese agents and demanded an autopsy. On December 20th, the autopsy conducted in Shanghai proved that Dr. Kishinouye died from cerebral anemia and did not support Japanese suspicion.[145] Dr. Kishinouye's body was then transported back to his hometown in Kobe on December 25th. In the end, after several other small conflicts, Academia Sinica examined the specimens collected

144 Saeki, pp. 73-75.
145 *Ibid.*, 75.

through the trip, deposited the promised set of duplicates in its Museum of Natural History, and allowed the rest of the specimens to be shipped to Japan.[146]

Though the expedition encountered numerous unexpected problems, the arduous trip nonetheless proved to be productive . It included 28 families and 63 genera of fish in the specimen collection. Among them were two rare species of sturgeon, whose caviar was distinct from other sturgeon known at that time. As the two species of sturgeon have to perform seasonal migration from the sea up into river to spawn, they carry less primitive characteristics and can be mainly captured in low latitude regions like Sichuan province.[147] More important, the team discovered a new subspecies of catfish and named it after the late Dr. Kishinouye (Fig.B.4).

146 *Ibid*., pp. 76-78.

147 Kimura, Shigeru. "Description of the Fished Collected from the Yangtze Kiang, China, by late Dr. K. Kishinouye and his Party in 1927-1929." *The Journal of the Shanghai Science Institute*. 1934 (1), 12.

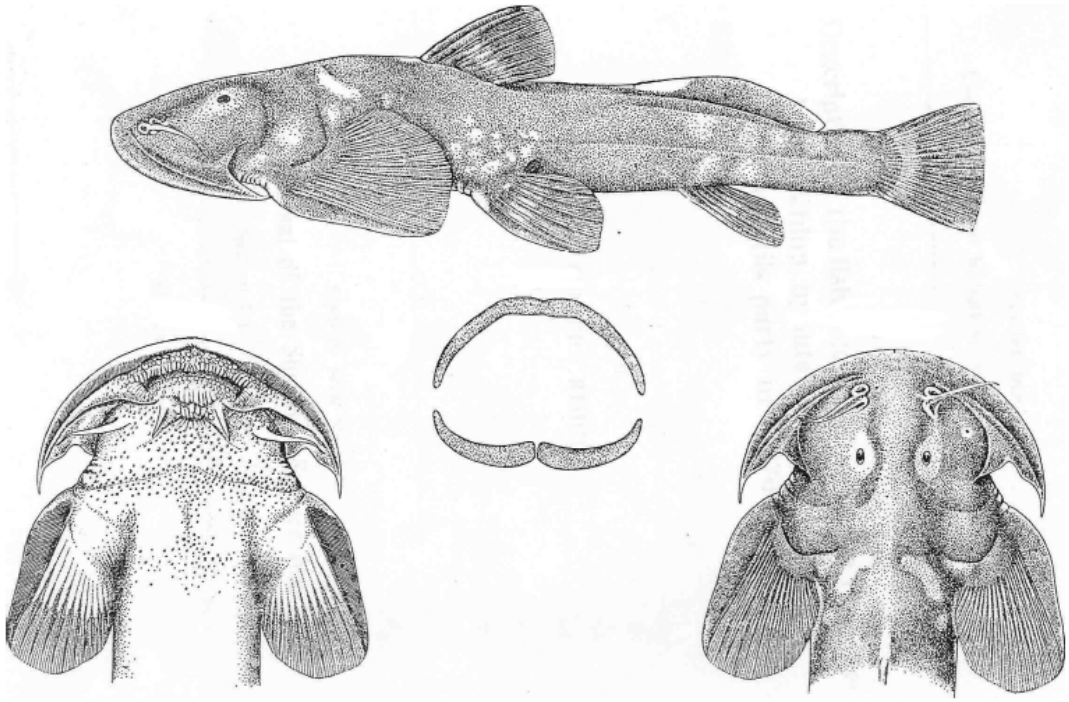

Fig. B. 4. *Euchiloglanis Kishinouyei.*[148]

TABLE B. 1. Measurements of *Euchilogranis Kishinouyei* N. Sp.[149]

Total Length	Body Length	Head	Depth	Snout	Eye	Interorbital Space	D	A	Nasal Barbel	Width of mouth
170mm	143mm	40mm	23mm	20mm	2mm	11mm	1,6	6	13mm	19mm

[148] Kimura, 1934, PL. VI.

[149] *Ibid*., 180.

3.2. THE BIRTH OF ACADEMIA SINICA'S POLICY ON BIOLOGICAL EXPEDITIONS

Due to the Unequal treaties, from the 1844 to 1949, foreigners with valid passports were allowed to live in defined areas of China, such as port cities. They could pursue such daily activities as education, trading, proselytizing and traveling within and between the confined areas. during this period, the Chinese material objects, especially antiquities and botanical resources, had been continuously transported outside of China, displayed in foreign museums, or sold on international markets through foreign merchants and foreign explorers. [150] As China's nationalistic sentiment rose in the early twentieth century, some Chinese literati gradually associated these material objects with China's sovereignty and nationhood.[151] Hence, Chinese intellectuals and the government began to stand assertively on the preservation of the nation's properties against foreign ownership. However, before Academia Sinica's intervention in Dr. Kishinouye's biological expedition, the emphasis of Chinese elites' efforts to preserve the nation's material objects was mainly focused on the protection of China's cultural artifacts. It was not until Academia Sinica's engagement with Dr. Kishinouye, that China began to offer

150 Glover, Denise M., and McKhann, Charles F., eds. *Explorers and Scientists in China's Borderlands, 1880-1950*. Seattle: University of Washington Press, 1997; Fati Fan. *British Naturalists in Qing China: Science, Empire, and Cultural Encounter*. Harvard University Press, 2004, Introduction and Chapter 1; Fati Fan."Circulating Material Objects: The International Controversy over Antiquities and Fossils in Twentieth-Century China." *The Circulation of Knowledge Between Britain, India and China : The Early-Modern World to the Twentieth Century*, ed. Bernard Lightman, Gordon McQuat, and Larry Stewart, Brill, 2013, pp. 209-236.

151 In the early twentieth century, two groups of Chinese literati successively associated ancient cultural materials of China, such ancient texts and antiquities, with China's nationhood and sovereignty. In their interpretations, the cultural materials were "National essence (*guocui*)" and "National heritage(*guogu*)" of China and thus should be properly preserved and thoroughly studied. For National essence group, see Fan Fati. "Nature and Nation in Chinese Political Thought: the National Essence Circle in Early Twentieth-Century China." *The Moral Authority of Nature*, ed. Lorraine Daston and Fernando Vidal. Chicago: University of Chicago Press, 2004, 409-437; for National heritage group, see Luo, Zhitian. *Inheritance Within Rupture: Culture and Scholarship in Early Twentieth-Century China*. Leiden: BRILL, 2015, Chapter 8 and 9.

official protection for its natural resources against foreign expeditions. It was the agreement with Dr. Kishinouye that Academia Sinica based China's future policy on biological specimens.

Early efforts to preserve China's material objects, were generallyimplemented by non-official organizations, such as "the Geological Society of China (*Zhongguo dizhi xuehui*, est.1922, hereafter GSC)" and "the National Scientific Union of China (*Zhongguo xueshu tuanti xiehui*, est.1927, hereafter NSUC)." The former was the first association of Chinese geologists while the latter was a semi-official organization that GSC founded with several other academic associations and the political elites of the Beiyang government. In 1926, the two organizations signed a contract with the Swedish explorer, Sven Hedin (1865-1952), regarding his excavation trip towards Northwestern China. The contract turned Hedin's trip into a cooperative project between Chinese and Swedish geologists. In this joint expedition, the Chinese geologists were not only supported with Swedish funding and equipment but also allowed to preserve a set of antiquities and fossils excavated through the trip.[152]

After the Nationalist government replaced the Beiyang government as China's central regime in 1928, most members of GSC and NSUC were incorporated into a governmental unit of the Nationalist regime, the Committee for the Preservation of Ancient Objects (*Guwu baoguan weiyuanhui*, est., 1928 and 1932, hereafter CPAO). In this regard, through the Committee, the Chinese elites were empowered to exercise governmental authority over China's ancient objects with coercive measures. For instance, as the American Museum of Natural History launched its sixth Central Asiatic Expedition to Mongolia in 1928, the Committee officially interrupted the

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152 *Zhonghua Minguo shi dangan ziliao huibian*, Di 5 ji, di 1 bian, Wen hua, Vol.2 中华民国史档案资料汇编，第五辑，第一编 文化(二). Nanjing: Jiangsu gu ji chu ban she, 2000, pp. 857-861.

trip, while its earlier expeditions during the Beiyang regime met little effective intervention. The Committee had local governments seize over 80 boxes of fossils collected from the expedition for one year until the American Museum of Natural History made a satisfactory offer.[153] In 1930, the Committee's authority over the preservation of China's material objects was institutionalized through the promulgation of the Law for the Preservation of Ancient Objects (*Guwu baocun fa*). According to the Law, the Committee was entitled to enforce state ownership of all archaeological artifacts, establish a registration system for the control of private antiquities, and restrict the circulation of ancient objects within China.[154]

Articles Selected from the Law for the Preservation of Ancient Objects[155]

Article 1: The term "Ancient Objects (*Guwu*)" in this Law refers to the ancient objects related to Archaeology, History, Paleontology and all ancient objects related to cultural matters. The Central Committee for the Preservation of Ancient Objects is entitled to define the scope and category of *Guwu*.

Article 5: The ancient objects that are private properties shall be registered in local government. The local government shall submit all registration forms to … the Committee for the Preservation of Ancient Objects.

Article 7: All ancient objects underground or exposed on the surface belong to the nation…Discovering without reporting [to the CPAO], as well as attempting to hide ancient objects, will be treated as thievery.

Article 8: The excavation of ancient objects shall only be conducted by the Nationalist government's academic institutions. The excavation project must be submitted to the CPAO for approval … and excavation license…

Article 10: It shall be approved by the CPAO in advance when foreign academic institutions or experts have to participate in any excavation.

Article 11: Any excavation shall be accompanied with a representative from the CPAO.

Article 13: Ancient objects' circulation shall be restricted within the border of China. The Nationalist government's academic institutions, when deemed necessary, have to obtain approval and …Certificate from

153 Osborn, Henry F. "Interruption of Central Asiatic Exploration by the American Museum of Natural History." *Science*, vol. 70, no. 1813, 1929, pp. 291-294.

154 Lai, Guolong. "The emergence of 'cultural heritage' in modern China: a historical and legal perspective." Matsuda, A and Mengoni, L. E. eds. *Reconsidering Cultural Heritage in East Asia. London: Ubiquity Press*. 2016, pp. 70-74.

155 *Zhonghua Minguo shi dangan ziliao huibian*, Di 5 ji, di 1 bian, Wen hua, Vol.2 中华民国史档案资料汇编，第五辑，第一编 文化(二). Nanjing: Jiangsu gu ji chu ban she, 2000, pp. 609-611.

the CPAO… to transport ancient objects abroad. The transported ancient objects have to be returned within two years.

In general, China's early efforts to preserve the material objects on its territory mainly emphasized the protection of ancient objects (*guwu*), which, according to the Preservation Law, referred to the objects related to archaeology, history, paleontology and all other cultural matters. In other words, prior to Academia Sinica's engagement with Dr. Kishinouye, China's attention, both governmental and non-governmental, was placed on such non-replaceable cultural objects as ancient scripts and fossils since they were deemed as the embodiment of China's culture, history, and nationhood. In this regard, although the measures Academia Sinica adopted in regulating Dr. Kishinouye's expedition bore resemblance to those practiced by GSC, NSUC and CPAO, Academia Sinica's involvement with Dr. Kishinouye's project was the first time that Chinese government exerted protection on biological resources like fish specimens against foreign expeditions.[156]

Based on its agreement with Dr. Kishinouye, Academia Sinica gradually implemented a set of routine methods for regulating foreign expeditions involving collecting biological specimens in China. Beginning in 1934, any foreign researcher who planned to conduct an expedition in China for biological specimens was required to submit their research proposal and detailed travel itinerary to Academia Sinica for approval and permission. At that point,

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[156] Before Dr. Kishinouye's trip in 1929, China set restrictions on the circulation of certain species' specimens. The specimens were primarily related to fossil specimens for paleontological study instead of biological study. Moreover, by then, China had not come up with any systematic policy or method on regulating the circulation of biological specimens in general. According to the account of Dr. Roy Andrews, leader of the Central Asiatic Expeditions of the American Museum of Natural History, "[by June 1929], Laws already are in force prohibiting the shipping out of China of any bird skins at all, and of more than three specimens of mammals and reptiles of a single species for museums." See Osborn, Henry F. "Interruption of Central Asiatic Exploration by the American Museum of Natural History." *Science*, vol. 70, no. 1813, 1929, 293.

Academia Sinica would inform the expedition party with its regulation concerning the "Conditions under which Foreigners may Collect Biological Specimens in China (*Waiguoren lai hua caiji biaoben tiaoli*, see below)." After the expedition party signed an agreement with Academia Sinica agreeing to the terms, they would be granted an expedition license .[157] Otherwise, if a foreign researcher conducted his expedition in China without the expedition license, he might be detained within a port city, like Dr. Kishinouye's team experienced in 1929, until the foreign researcher fulfilled Academia Sinica's requirements.

Conditions under which Foreigners may Collect Biological Specimens in China[158]

1. Before departure for the field, the Expedition Party shall submit a detailed statement outlining the plans of the party to Academia Sinica for approval.
2. No antiquities or non-replaceable articles that have historical value shall be collected or shipped abroad.
3. One or more staff members of Academia Sinica may participate in the activities of the Expedition.
4. A report giving the actual route of the Expedition Party and the number of specimens collected shall be submitted to Academia Sinica before the Party leaves the country.
5. All biological and ethnological specimens or articles that may be collected by the Expedition Party shall first be submitted to examination by the representatives of Academia Sinica, either in Nanjing or in Shanghai, prior to shipment abroad.
6. One complete duplicate set of the biological specimens collected by the Expedition Party shall be deposited in the Academia Sinica as gifts within the shortest possible time after the specimens have been determined.

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157 The earliest signed document I found between Academia Sinica and a foreign party concerning collecting biological specimens in China was in May 1934, in which Academia Sinica granted permission to a Swedish biologist Dr. Harry Smith to conduct biological expedition in the Sichuan Province. The Second Historical Archives of China, Zhongyang yanjiuyuan dangan 393:631. According to Shiwen Chen, the earliest Academia Sinica's regulation he found on foreign biological expedition in China was related to an American botanists H.G. Macmillan for his trip to Xinjiang. Since Chen does not indicate the exact date of Macmillan's trip, it is difficult to tell which trip came first, Dr. Harry Smith's or Macmillan's. In general, it is safe to say that Academia Sinica first implemented the regulation concerning biological specimens in 1934. See Shiwen Chen. "Government and Academy in Republican China: History of Academia Sinica, 1927-1949." Dissertation, Cambridge: Harvard University, 1998, pp. 117-118.

158 The conditions have been revised for several times from 1930 to 1945. The terms might varied according to different research plans. The conditions outlined here are a synthesis of several versions of regulations in1934. See the Second Historical Archives of China, Zhongyang yanjiuyuan dangan 393:631 and 633.

7. All photographs including moving pictures, which intend to portray the life of the Chinese people in the interior, shall be censored by Academia Sinica, before they are allowed to be shipped abroad or to appear in any foreign newspapers or magazines.
8. Violation of any of the above stipulations will forfeit the right of the Institution, for which the expedition is conducted, to undertake further similar work in China.

The main point of Academia Sinica's requirements, as outlined above, were generally based on the agreement between Academia Sinica and Dr. Kishinouye in 1929: to submit a detailed travel itinerary, to have participants from Academia Sinia, to have all specimens examined before shipment abroad, and to send a complete duplicate of specimens to Academia Sinica as gifts.

As it proved useful in Dr. Kishinouye's case, after the establishment of the Nationalist regime, the administration of a "research passport" began to be an effective measure for government departments, like Academia Sinica, to exert control on foreign activities in China. In this regard, to enforce its regulation on biological specimens with coercive measures, Academia Sinica began to issue expedition licenses to foreign researchers for their biological expeditions in China. Only with the expedition license, could a foreign expedition preempt interruption from Academia Sinica. The earliest record of such license issued to foreign researchers was in May 1934 (Fig. B. 5). Signed by Academia Sinica's President, Cai Yuanpei, the document was granted to a Swedish biologist, Dr. Harry Smith, for his biological expedition in the Sichuan Province.

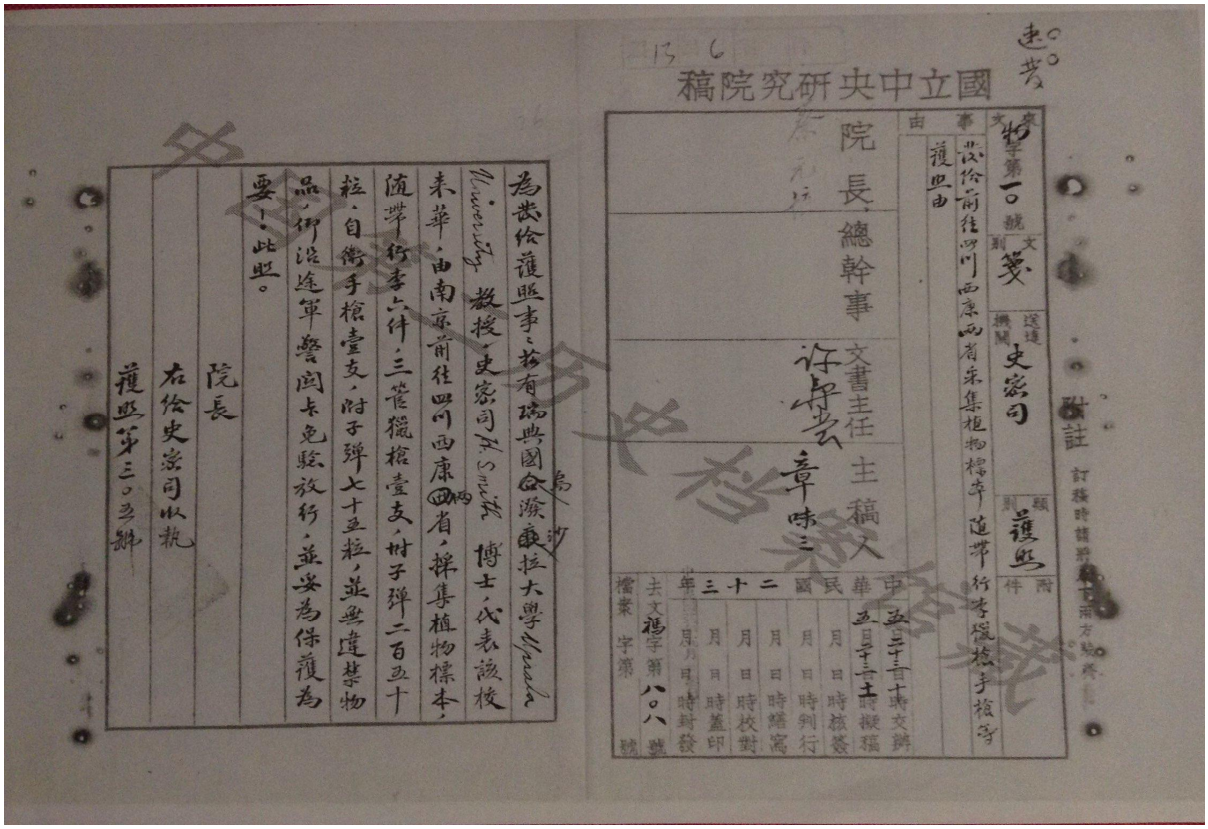

Fig. B. 5. A document issued by Academia Sinica to Dr. Harry Smith for his biological expedition to Sichuan Province in 1934.[159]

As it was indicated in its lower right column, the document was categorized as "*Huzhao* (Passport)," which literally means protection (*hu*) and notification (*zhao*) in Chinese. The content on the left of the document stated as follows:

> Dr. Harry Smith is a professor at Uppsala University in Sweden. He will travel to Nanjing, Sichuan Province and Xikang Province for botanical specimen collection. He carries with him six luggage, three shotguns, one handgun, 320 bullets, and no illegal items. He shall be allowed to enter the provinces listed above without being checked. Academia Sinica asks for proper protection and assistance from local governments for Dr. Smith's visit in China.

159 *Ibid.*, 393:631.

Though the document was labeled as a "*Huzhao* (passport)," it was different from a standard. According to the content of the passport issued to Dr. Smith in 1934, the document bore a four-fold function: (1) it granted Dr. Smith permission from the Nationalist government to conduct biological expedition in China. It establishes that the bearer is a trustworthy researcher with the Chinese government's backing and thus his activities in China will not raise suspicion;(2) It notifies the authority in charging of the place visited by the foreigner of his identity, carrying items, and purpose and schedule of the visit; (3) It allowed the bearer to pass checkpoints on the road with handguns and some pieces of scientific equipment, which otherwise might be suspected, checked and confiscated; (4) It asks for protection of the bearer from local military forces.

Besides issuing the Passport for Expedition, Academia Sinica also strengthened the enforcement of its regulation on biological specimens through the institute's access to another two types of governmental licenses: the Passport for Inland Travel (*Neidi youli huzhao*) and the Passport for Duty-free Exportation (*Mianshui chukou huzhao*).

Before the abolishment of the Unequal Treaties, Inland China (*neidi*) referred to the areas other than port cities and leased territories where foreigners' activities were subjected to certain restrictions. According to the Article IX of the Treaty of Tientsin, signed between Britain and the Qing China in 1858, "British subjects are hereby authorized to travel for their pleasure or for purposes of trade, to all parts of the interior [of China], under passports which will be issued by

their Consuls and countersigned by the local [Chinese] authorities."[160] Because of the non-reciprocal most-favored nation clause, with the countersigned passports, the citizens of all treaty powers were allowed to travel to inland China. In Republican China, the authority to issue such a passport was restricted to China's Foreign Ministry. In this regard, foreigners, who intended to visit inland China had to obtain the Passport for Inland Travel either from China's Foreign Ministry and its deputies in each province, or from China's provincial governments.[161] In Dr. Kishinouye's expedition, the Japanese team members were travelling with valid Passports for Inland Travel when they were detained in Chongqing.[162] By requiring a Passport for Expedition, Academia Sinica added an additional layer of restriction upon foreign activities in China. It was now necessary for foreign researchers to obtain both the Passport for Inland Travel and the Passport for Expedition in order to launch research trips towards inland China. As Academia Sinica was entitled to issue the latter and could apply for the former from China's Foreign Ministry on behalf of foreign researchers, with the two passports, the institute essentially oversaw foreign researchers' access within inland China.

Additionally, foreign researchers had to obtain a third official document if they intended to have their biological specimens transported abroad: the Passport for Duty-free Exportation (*Mianshui chukou huzhao*). In both Dr. Kishinouye and Dr. Smith's cases, after examined their biological specimens, Academia Sinica requested the Exportation Passport from China's

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160 Mayers, William Frederick and China. *Treaties between the Empire of China and Foreign Powers: Together with Regulations for the Conduct of Foreign Trade*. Taipei: Ch'eng-Wen Pub. Co., 1966, 13.

161 For the Passport for Inland Travel(*Neidi youli huzhao*), see "Yingguo dashi han-suo 'Waiguoren lai-hua caiji biaoben tiaoli'英国大使函索'外国人来华采集标本条例'." Zhongyang yanjiuyuan dangan 393:633.

162 Kimura, 1948, 4.

Ministry of Finance (*Caizheng bu*) on behalf of the expedition parties. With the Passport for Duty-free Exportation, the foreigners were allowed to transport the Chinese biological specimens abroad without being checked and taxed by China's Customs. In other words, if a foreign party finished its expedition in inland China but refused to send the promised duplicate of specimens to Academia Sinica, the party would still be unable to ship the specimens out of China. Hence, Academia Sinica's access to the Exportation Passport became its ultimate check to regulate foreign expeditions and the circulation of China's biological specimens.

Among Academia Sinica's efforts to regulate foreign biological expeditions in China, the application of the three types of passports as coercive measures was not exclusively created for biological specimens. Rather, the three types of passports were measures the Nationalist government set up for larger projects in its nationalistic agenda, while Academia Sinica adopted the measures to facilitate the nationalization of science in China and establish its monopoly of power through the process.

To start with, both the Passport for Inland Travel and the Passport for Duty-free Exportation were among the Nationalist government's efforts to regain the control over China's territory and its Customs authority, which had been jeopardized by foreign encroachment through Unequal Treaties for decades. As for the Passport for Expedition, before 1934, Academia Sinica already issued such passport for its own faculty members to launch scientific expeditions in China.[163] Similar to the passport granted to Dr. Smith, the major function of

163 "Qing fagei bensuo yanjiu renyuan fu gedi diaocha dizhi kuangchan de huzhao 请发给本所研究人员赴各地调查地质矿产的护照." Zhongyang yanjiuyuan dangan 393:48.

Academia Sinica's earlier passport was to exempt its bearer from being suspected and examined at local checkpoints when he carried weapons and scientific equipment in his expedition.

In the Nationalist era, the idea to regulate the circulation of China's material objects with official licenses was not initiated by Academia Sinica, but by the Committee for the Preservation of Ancient Objects. As quoted above, the Law for the Preservation of Ancient Objects in 1930 stated, "the excavation of ancient objects shall only be conducted by the Nationalist government's academic institutions. The excavation project must be submitted to the CPAO for approval … and excavation license. Ancient objects' circulation shall be restricted within the border of China. The Nationalist government's academic institutions, when deemed necessary, have to obtain approval and …Certificate from the CPAO… to transport ancient objects abroad. The transported ancient objects have to be returned within two years."[164] Supported by the other departments of the Nationalist government, the CPAO began in 1928 to regulate the excavation and circulation of China's ancient objects, such as ancient scripts and fossils, with exclusive passports: "the Passport for Excavating Ancient Objects (*Caijue guwu huzhao*)" and "the Passport for Exporting Ancient Objects (*Guwu chuguo huzhao*)."[165] Then, the President of Academia Sinica, Cai Yuanpei, who was also the committee member of the CPAO, adopted the strategy to enforce Academia Sinica's regulation on scientific expeditions and biological resources.

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164 *Zhonghua Minguo shi dangan ziliao huibian*, Di 5 ji, di 1 bian, Wen hua, Vol.2 中华民国史档案资料汇编，第五辑，第一编 文化(二). Nanjing: Jiangsu gu ji chu ban she, 2000, 610-611.

165 *Ibid.*, 625-632.

3.3. CONCLUSION

Through its engagement with Dr. Kishinouye's expedition, Academia Sinica, as a governmental department, paid formal attention to a foreign scientific expedition that related to China's natural resources for the first time. Based on its agreement with Dr. Kishinouye, the Institute later stipulated the "Conditions under which Foreigners may Collect Biological Specimens in China." According to the regulation, Academia Sinica granted foreigners accesses to China's natural resources for their scientific studies in exchange for the institute's participation in the foreign expeditions and partial ownership of the specimens collected through their trips. Since then, all foreign scientific expeditions for China's natural resources should be subject to Chinese government's regulation through Academia Sinica. In this regard, with the policy on biological specimens, Academia Sinica did not only provide official protection for China's natural resources, it also appropriated the achievements that the foreign expeditions yielded with China' s resources.

The enforcement of Academia Sinica's policy on biological specimens fundamentally relied on the Nationalist government's efforts to exert absolute control over China's territory, people, and resources. Immediately after its establishment, the Nationalist government undertook negotiations over the Unequal Treaties. Among the government's emphasis on the negotiation were the abolition of foreigners' extraterritorial rights and the autonomy of China's Customs. As the Nationalist government was engaged in settling new provisions with treaty powers in terms of foreign presence in China and Sino-foreign trade, the government implemented regulative measures on foreign activities in China and on the circulation of commodities on China's border,

which included issuing the Passport for Inland Travel, the Passport for Exportation, and the Passport of Duty-free Exportation. Building on the government's nationalistic efforts, Academia Sinica was empowered to enforce its policy on foreign biological expeditions with coercive measures.

Meanwhile, by issuing the Passport for Expedition and securing its access to the other governmental licenses, Academia Sinica not only exerted its administrative authority over all foreign biological expeditions in China, but also strengthened its position as a governmental department to defend the nation's sovereignty, territory and natural resources. In this regard, the implementation of the policy essentially consolidated Academia Sinica's position as the Nationalist government's administrative center to facilitate the nationalization of science in China. In the nationalized community of science, all materials available on China's territory for scientific research were under the ownership of the Nationalist government and thus should only be administered by the government's representative in the realm of science: Academia Sinica.

Moreover, as Academia Sinica served the government's nationalistic agenda in the realm of science, the institute essentially established China's science community as its sphere of influence with the application of the governmental passports. As the institute already issued such passports for its own faculty members to launch scientific expeditions in China before 1934, by granting the passport to foreign researchers, Academia Sinica actually categorized its foreign collaborators as the insiders of the nationalized science community of China. In this regard, the Passport for Expedition issued by Academia Sinica was more than a coercive method for regulating foreigner's biological expedition in China. With the Passport, Academia Sinica shared

governmental protection and the access to China's natural resources with those foreigners who complied with its rules and paid their tributes to the institute.

Hence, as Academia Sinica fulfilled its governmental duty to defend the nation's sovereignty and natural resources against foreign expeditions, it was also empowered through the process of nationalizing science in the Republican China. As it suggests by Dr. Kishinouye's case and the policy on foreign biological expeditions in China, it was the obedience to Academia Sinica's rules, rather than a simple binary between the Chinese and the foreigners, that demarcated the nationalized community of science in the Republican China. In this regard, as Academia Sinica was nationalizing the Chinese science community for the Nationalist government, it was not only the government's representative but also the embodiment of nation in the scientific realm of China who possessed the ultimate right to define science and nation.

4. THE EMPOWERMENT OF ACADEMIA SINICA IN A NATIONALISTIC ERA

Academia Sinica's intervention in Dr. Kishinouye's expedition paved the way for its future policies on foreign biological expeditions. Through this process, both scientific resources and scientific activities were incorporated as a part of the nation. Science deserved the government's protection and patronage. Due to its leading role in the nationalization of science, Academia Sinica established its authority in the realms of both science and politics. The institute was no longer a national research center that exclusively engaged with the sciences and arts;it was also a governmental agency with practical utility in matters of science administration.

In 1928, the Nationalist government underwent a structural re-organization. On October 10th, a refurbished administration was inaugurated at Nanjing. Under the Central Executive Committee (*Zhongyang zhixing weiyuanhui*), five separate boards, or Yuan, constituted the main body of the government—the Executive Yuan (*Xingzheng Yuan*), the Legislative Yuan (*Lifa Yuan*), the Judicial Yuan (*Sifa Yuan*), the Examination Yuan (*Kaoshi Yuan*) and the Control Yuan (*Jiancha Yuan*).[166] Though Academia Sinica held an equal position in official ranking with the five boards, it did not have the same administrative power corresponding to its position. In

166 Fairbank JK, Twitchett D. *The Cambridge History of China.* Vol.12, Pt. I. Cambridge: Cambridge University Press, 1983, pp.716-717.

1928, it was two departments within the Executive Yuan—the Ministry of Foreign Affairs and the Ministry of Education—that had the authority to issue governmental license to regulate foreign activities, and to formulate cultural policies for China. Academia Sinica's battle with Dr. Kishinouye's expedition, however, allowed the institute to establish its political authority over the administration of science. After it institutionalized its authority biological expeditions, any international research party that intended to perform fieldwork in China had to comply with Academia Sinica's oversight. In this regard, the institute became more than a national research center which exclusively engaged with the studies of sciences and arts, but a body that oversaw scientific activity in China.

The process of the nationalization of science and Academia Sinica's capacity building was a temporal creation of three interrelated factors that were embedded in the context of the nationalist China. Namely, China's political instability and its troubled relations with Japan in the late 1920s, the necessity of the Nationalist government to assert its legitimacy and authority in its founding years, and the utility of Academia Sinica in connecting science and politics.

4.1. NATIONALISM IN A TRANSITIONAL ERA

Prior to Dr. Kishinouye's expedition in 1929, he had led two prior trips along the Yangzi River for fish specimens. These earlier expeditions encountered little effective intervention or regulation from Chinese authorities. In this regard, it was certainly the tension between the newly

established Nationalist regime and a foreign-funded expedition that primarily necessitated Academia Sinica's intervention in Dr. Kishinouye's third expedition. Unlike his earlier trips, Dr. Kishinouye's expedition in 1929 was conducted amid China's political instability. Hence, in the transitional year of 1929, Dr. Kishinoye's third expedition offered the newly founded government an opportunity to test its ability and enforce its rules upon the foreign activities in China.

In the 1920s, the Nationalist Party led a nationwide revolution to replace the Beiyang government as the central regime of China. Through the Party's revolutionary propaganda, the Beiyang government was denounced for its incompetence in abolishing the Unequal Treaties that foreign imperialism forced upon China. The era's nationalistic propaganda not only mobilized massive support for the GMD's military expedition, but also led to a new height of nationalism in China, which including labor strikes, xenophobic attacks on foreign residents, and an anti-Christian movement.[167]

As the Nationalist Party ascended to central power, amid the nationwide nationalistic sentiment unleashed through its military expedition, the new regime was obliged to fulfill its patriotic commitments, among which the issue of the Unequal Treaties was the government's primary concern. Though some of the Western treaty powers began to sign new agreements with the Nationalists in 1928, the scope of the treaties were quite limited—they only contained one or two provisions. The only equal right acquired by the Nationalists was the treaty powers' recognition of China's tariff autonomy. Hence, in 1929, one of the government's major goals

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[167] Hodous, Lewis. "The Anti-Christian movement in China." *The Journal of Religion*, 1930, 10 (4): 487.

was the termination of extraterritoriality, bringing all foreigners in China under Chinese jurisdiction.[168]

On June 15, 1928, the Nationalist government announced its intention to begin the nation's reconstruction by negotiating China's new international treaties on the basis of equality and mutual respect.[169] As a consequence, in 1929 all unequal-treaties-based Sino-foreign relations prior to the reign of the Nationalist government were invalidated. At the same time, however, the Nationalist government's new equal-treaties-based diplomatic relations had not been fully established.[170] As the Nationalist government was formulating its foreign policies, it was not until May 1930 that Japan finally signed a new treaty with the Nationalists and thus *de jure* acknowledged the legitimacy of the Nationalist regime in governing China.[171]

Hence, it was amid China's rising nationalism and political instability that Dr. Kishinouye launched his third biological expedition in China. In this transitional period, no Nationalist-Japanese agreement had been reached on Japanese citizens' activities in China, neither was there any interim policy regarding foreign academic expeditions. Therefore, it was the Nationalist government's judgment as to whether to interrupt the expedition or not. It is important to note that whatever the decision, it would create a precedent for China's formal regulation on foreign expeditions. At that moment, the new regime was obliged to fulfill its nationalistic commitments on which its legitimacy rested. As a part of this nationalistic impulse, Academia Sinica had to fulfill its duty as the protector of the nation by taking an assertive stance

168 Wang, 2005, 89.

169 Wang, Dong. *China's Unequal Treaties: Narrating National History*. Lanham: Lexington, 2005, 88.

170 Fairbank JK, Twitchett D. *The Cambridge History of China*. Vol.12, Pt. I. Cambridge: Cambridge University Press, 1983, 716.

171 Wang, 2005, 89.

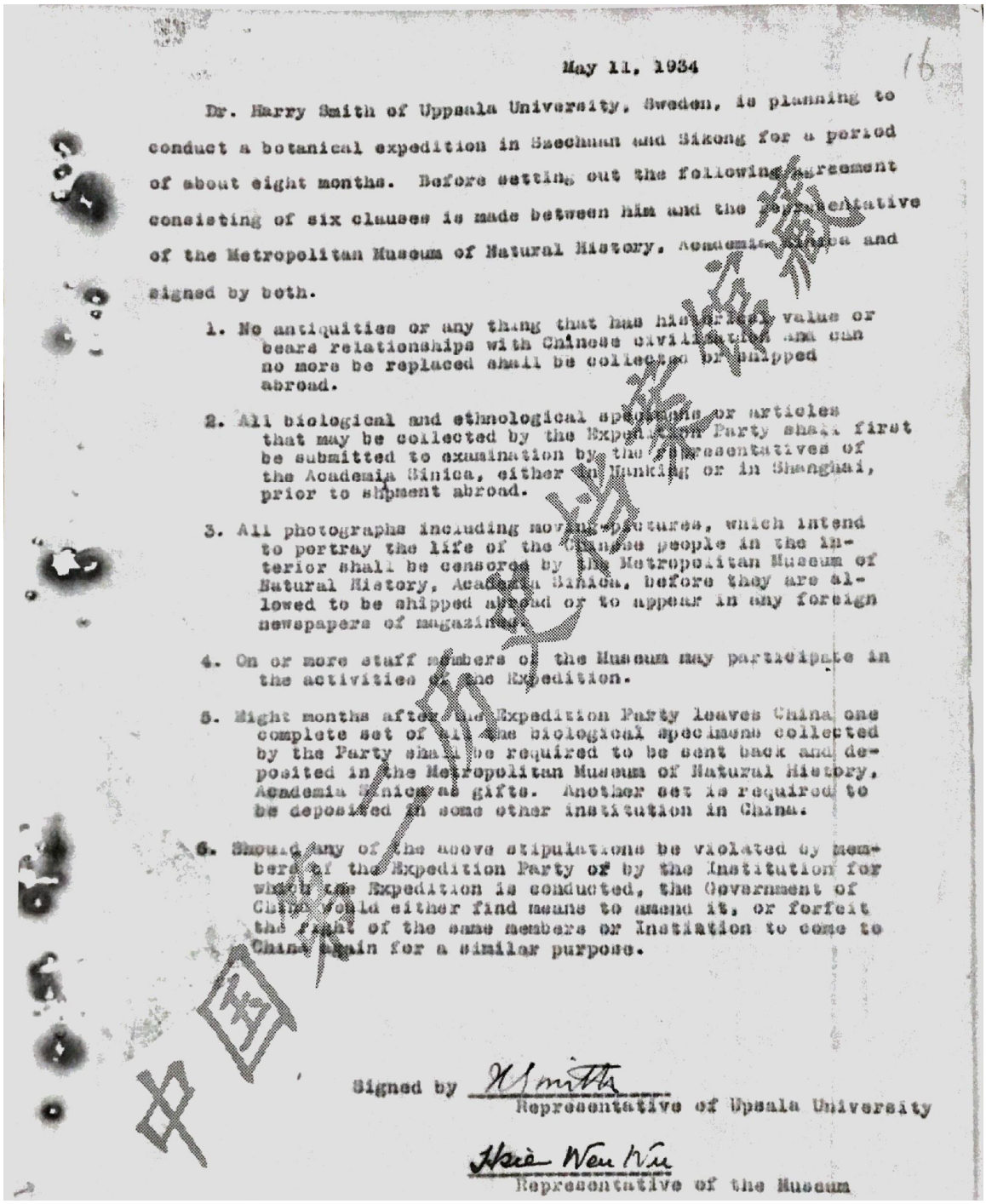
against the Japanese biologists who traveled towards inland China without their permission. Its intervention paved the way for China's future policy on international biological expeditions.

More importantly, by claiming the Japanese expedition was a violation to China's sovereignty and then interrupting the trip, Academia Sinica was delivering a message to both domestic and international societies that the Beiyang governance was destroyed, and now it was the Nationalist government's duty to defend the nation. Academia Sinica's action was an announcement that, from now on, any foreign activities conducted in China would be subjected to the Nationalist's rules, and thus any and all foreign research in China should be supervised by Academia Sinica.

Outside of highlighting the Nationalist government's new authority and legitimacy, the engagement with the Japanese and its policy on biological specimens, Academia Sinica also justified the competence of China to participate in global conversations on science and on politics. On the one hand, with its regulation of foreign biological expeditions, Academia Sinica represented the scientific competitiveness of the nation by proving that Chinese professionals were capable of speaking the standard language of science and thus qualified to hold conversations with foreign scientists. With the establishment of Academia Sinica, China was able to represent and voice itself in the realm of science.

On the other hand, to settle the issue of foreign expeditions, Academia Sinica adopted the form of the international treaty as a formal way to conclude and ratify agreements between countries. To be more specific, Academia Sinica, to a certain extent, applied the essential spirit of the unequal treaty in engaging with the scientists of the treaty powers. As treaty powers obtained unilateral privileges in China with their military, their scientists gained access to

China’s natural environment and resources, and thus acquired knowledge in China that might not be found anywhere else. Academia Sinica adopted the protocol and reversed the roles played by China and the treaty powers. Academia Sinica forced the acceptance of the treaty, which stipulated “Conditions under which Foreigners may Collect Biological Specimens in China,” upon the treaty powers’ scientists via the Nationalist government’s coercive measures (Fig. C. 1.). After all, based on the passport-system, the Nationalist government had the ultimate authority to regulate international visitors’ activities. Any international explorer, who was unwilling to sign the academic contract, would be denied the access to inland China, or be detained in a port city as Dr. Kishinouye experienced. According the treaty, the institute was allowed to participate in and benefit from foreign expeditions as much as it desired. In this way, supported by the government’s police and coercive measures,, Academia Sinica secured its privilege over the foreign scientists.



May 11, 1934

Dr. Harry Smith of Uppsala University, Sweden, is planning to conduct a botanical expedition in Szechuan and Sikong for a period of about eight months. Before setting out the following agreement consisting of six clauses is made between him and the representative of the Metropolitan Museum of Natural History, Academia Sinica and signed by both.

1. No antiquities or any thing that has historical value or bears relationships with Chinese civilization and can no more be replaced shall be collected or shipped abroad.

2. All biological and ethnological specimens or articles that may be collected by the Expedition Party shall first be submitted to examination by the representatives of the Academia Sinica, either in Nanking or in Shanghai, prior to shipment abroad.

3. All photographs including moving pictures, which intend to portray the life of the Chinese people in the interior shall be censored by the Metropolitan Museum of Natural History, Academia Sinica, before they are allowed to be shipped abroad or to appear in any foreign newspapers of magazines.

4. One or more staff members of the Museum may participate in the activities of the Expedition.

5. Eight months after the Expedition Party leaves China one complete set of all the biological specimens collected by the Party shall be required to be sent back and deposited in the Metropolitan Museum of Natural History, Academia Sinica as gifts. Another set is required to be deposited in some other institution in China.

6. Should any of the above stipulations be violated by members of the Expedition Party or by the Institution for which the Expedition is conducted, the Government of China would either find means to amend it, or forfeit the right of the same members or Institution to come to China again for a similar purpose.

Signed by H. Smith
Representative of Uppsala University

Hsia Wen Wu
Representative of the Museum

Fig. C. 1. A Treaty Signed by Dr. Harry Smith .for his biological expedition to Sichuan Province in 1934.[172]

172 The Second Historical Archives of China, *Zhongyang yanjiuyuan dangan* 393:631.

Amid the political instability of China during the transition from the Beiyang government to the Nationalist government at Nanjing, Dr. Kishinouye was not the only foreign scholar who had led field surveys in China. From 1921 through 1928, the American Museum of Natural History organized six Asiatic Explorations to the north and northwest China for geological fossils. In August 1928, when the Asiatic Exploration team launched its sixth expedition in Mongolia, local Chinese government seized the team's fossil collections at the request of the National Scientific Union of China (*Zhongguo xueshu tuanti xiehui*, est.1927, hereafter NSUC).[173] As a semi-governmental organization, the NSUC also imposed cooperation upon a Swedish explorer Sven Hedin (1865-1952) in order to conduct a joint excavation trip in central Asia one year earlier. Though both the Swedish and the American expeditions were asked to fulfill similar demands as those proposed by Academia Sinica to Dr. Kishinouye, unlike the Japanese expedition, none of the scholars in these two Western expeditions had been detained in a port city by the government's restraining order.

In this regard, distinguished from its Western peers, the Japanese team's experience in China could not be explained solely by China's nationalistic or anti-foreign sentiments . Apart from China's rising anti-foreignism and the Chinese elites' growing concerns regarding sovereignty issues, Academia Sinica's engagement with the Japanese expedition was also driven by the troubled Sino-Japanese relations in the late 1920s.

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173 Osborn, Henry F. "Interruption of Central Asiatic Exploration by the American Museum of Natural History." *Science*, vol. 70, no. 1813, 1929, pp. 291-294.

4.2. CHINA'S TROUBLED RELATIONS WITH JAPAN

After the Qing Empire lost the first Sino-Japanese War and was forced to cede Taiwan to Japan, the relations between China and Japan moved into a very troubled era. On the one hand, after the defeat in 1895, Chinese elites began to reevaluate the competitiveness of its Japanese neighbor and attempted to modernize Chinese society, partly after the model set up in Meiji Japan. In the first decade of the 20th century, there certainly were constructive interactions between China and Japan in which Japan played an auxiliary role in China's social reforms, .[174] For example, Chinese students left in droves for Japan to pursue higher education. Among the Chinese students, were several future leaders of the Nationalist Party, including Chiang Kai-shek, Wang Jingwei, and Hu Hanmin.

On the other hand, however, after World War I, Sino-Japanese relations were jeopardized by the rise of Japanese colonialism, and Japan's influence on Chinese society was gradually replaced by America. Japan took over German concessions in Shandong, forced another unequal treaty—the Twenty-one demands—upon the Beiyang government, militarily confronted the Nationalist troops at Jinan, and actively interfered in China's domestic politics in Manchuria. As a consequence, Chinese elites protested for the return of the Shandong peninsular and the termination of the Twenty-one demands. The CCP and the GMD jointly led labor strikes against Japanese corporations in Shanghai and Hong Kong. After the Jinan Incident, the Nationalist government at Nanjing officially dropped its plan on improving Sino-Japanese relations, listed

174 Reynolds, Douglas R. *China, 1898-1912: The Xinzheng Revolution and Japan*. Vol. 160, Council on East Asian Studies, Cambridge: Harvard University, 1993, chapter 1.

Japan as the nation's primary threat, and turned to the United States for unprecedented cooperation.[175] Through this series of unpleasant encounters, Japan not only proclaimed its colonial ambition in China, but also effectively pre-empted any possibility to cooperate with the Nationalist government. In fact, by 1928, when Great Britain and America were moving towards negotiating the return of China's 'lost rights' , Japan was acting forcefully to protect and enhance its economic dominance of Manchuria, and did not officially recognize the legitimacy of the Nationalist government at Nanjing until 1930.[176]

Outside of the political tension between Japan and the Nationalist government, Academia Sinica's intervention in Dr. Kishinouye's expedition was also driven by the disputes between China and Japan regarding fishing resources and the colonial implication of "scientific expedition" in the era of global imperialism. In the 1920s, a series of violent competitions over fishing resources between Japan and China were taking place in China's coastal waters. From the East China Sea to the Zhoushan Archipelagos (located in the delta of the Yangzi River) (*Zhou shan qun dao*), Japan's mechanized trawlers severely depleted the Yellow Croakers of the region. The Japanese incursion into China's waters rapidly reduced the catches of the local Chinese fishermen, who were less equipped with mechanized fishing technology.[177] The Chinese fishermen at the time were already organized into a quasi-guild network—fishing lodges—which was regarded as an influential social force in the coastal areas of China. Meanwhile, China's fishing activities not only constituted the major source of local governments' revenue, but also

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[175] Luo, Zhitian. "Jinan shijian yu zhongmei guanxi de zhuanzhe," *Lishi yanjiu*, Vol.2, 1996, pp. 72-89.
[176] Fairbank JK, Twitchett D. *The Cambridge History of China*. Vol.12, Pt. I. Cambridge: Cambridge University Press, 1983, 719.
[177] Micah S. Muscolino. *Fishing Wars and Environmental Change in Late Imperial and Modern China*. Cambridge: Harvard University, 2010, Chapter 4.

directly funded Academia Sinica. Immediately after the establishment of Academia Sinica, the Nationalist government had drawn up a 100,000 *yuan* monthly budget for the institute, and the responsibility was mainly fulfilled by the Fishing Industrial Bureau of Jiangsu and Zhejiang.[178] In this regard, the Chinese fishermen's loss and suffering in the Sino-Japanese fishing wars soon caught attention from the public, the Nationalist government, and Academia Sinica.

When the news was released to the public that Dr. Kishinouye would lead a research trip along the Yangzi River, the trip immediately raised suspicion among the Chinese society as it was related to the ongoing Sino-Japanese fishing wars. Considering Dr. Kishinouye's previous service at the Aquacultural Bureau of Japan, the GMD's Shanghai division publicly denounced Dr. Kishinouye's expedition as another Japanese invasion of China's fishing resources with the aid of modern science and technology.[179]

In addition to the fishing conflicts, the Chinese distrust of Dr. Kishinouye's team also lay in the disputes between China and Japan regarding the colonial implication of "scientific expedition" in an era of global imperialism. As a typical biological expedition, in order to study the habitat of freshwater fish, it was necessary for the team to acquire information on the topography of the Yangzi River. Considering there were precedents for such "expeditions" in which Japanese soldiers based in Manchuria stepped out of Japan's leased territory and conducted "expeditions" in the Northern China, the Chinese had a valid reason to suspect that Dr. Kishinouye's "expedition" was also collecting China's topographic information to serve

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178 Chen, 1998, 97.

179 *Tōhō Bunka Jigyō* 東方文化事業 (Oriental Cultural Work). Series H: Oriental Cultural Programs, call number: H-0117. Japan Center for Asian Historical Record, pp. 98-100.

Japan's military purpose.[180] As Dr. Kimura recalls it, Chinese newspapers denounced his team as Japanese agents who worked for an exiled Japanese general.[181]

Apart from the popular suspicions held by the Chinese towards Dr. Kishinouye's field research, Academia Sinica had another concern . In Cai Yuanpei's telegrams, he repeatedly associated the expedition with "a matter of sovereignty (*shi-guan zhuquan*)." As mentioned earlier, amid the growing nationalism in China, anything related to foreign people and their activities in China could be associated with the issues of China's sovereignty. In a nationalistic discourse, the foreign presence in China was not only yielded by the Unequal Treaties which the Chinese government signed under duress, it also kept reminding the Chinese nationalists of their failures to liberate China from foreign privileges.

In addition to its unpleasant light on China's nationalist politics, the Japanese expedition was also negatively perceived by the Chinese due to the fact that "expeditions", or "explorations," are practices that have been deeply embedded in the tradition of imperial expansion. In general, governance always requires the knowledge of natural and social conditions of its domain. The process of modernization marked a government's increasing ability to increase the visibility and control of their societies, with the assistance of science and technology.[182] This was also true with the establishment of colonial governance. At least since the age of discovery, "expedition" was accompanied by explorers' claims to the territory, resources, and people on the discovered land. More importantly, the very idea of "discover" in

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180 "Riren celiang Yalujiang jiaoshe (日人测量鸭绿江交涉)." *Dongfang zazhi*, Shanghai, 1921(18): 137.

181 Kimura, 1948, 5

182 Scott, James C. *Seeing Like a State: How Certain Schemes to Improve the Human Condition have Failed*. New Haven: Yale University Press, 2005, pp. 225-247.

the process of an expedition suggested that it was because of the imperial power that humanity that is lying outside the unmarked category of Western civilization, could finally be known to the world. It also bespoke a cultural hierarchy in that because of the foreign explorers, who were masters of science, that the indigenous species in the new land could be discovered, properly named, and studied for the production of the universal knowledge of nature.[183]

From Dr. Kishinouye's perspective, as he clarified on various occasions, "...the biological expedition along the Yangzi River had no intention other than pure scientific study."[184] He might not have intended to deploy the study for Japan's economic and military purposes. He might not have intended to name a China indigenous species after himself. He probably had not conducted any crime at all.. Nonetheless, he cannot deny the direct connection between his pure scientific studies and Japan's colonial enterprise. Since his research was funded bythe Boxer Indemnity, funds that were extracted from the Chinese customs and railway revenues, his expedition was a colonial enterprise. His access to inland China was opened by the imperial power built by Japan on the deaths of the Chinese soldiers and commoners who participated in the first Sino-Japanese War. Additionally the area of his field research, ranging from the Sakhalin Island to Indonesia, from the port city in western China to Korea, coincided with the expansion of Japan's colonial map.[185] Though he might regard his expedition as a pure scientific study, for the Chinese intelligentsia, however, Dr. Kishinouye's "pure study" marked China as an unknown land in international academy, and presented the Chinese biologists' incapacity to study, preserve and

183 Kimura, Shigeru. "Description of the Fished Collected from the Yangtze Kiang, China, by late Dr. K. Kishinouye and his Party in 1927-1929." *The Journal of the Shanghai Science Institute*. 1934 (1): 12.

184 Saeki, pp. 56-57.

185 Kimura, 1948, 37.

display its own nation's natural resources. Therefore, regardless of the purpose of the Japanese expedition, for the Chinese intellectuals the very image that Japanese scholars leading an expedition towards inland China to "discover" and study the freshwater fish in China's territory was a violation of the nation's sovereignty and a humiliation for China's national pride.[186]

All of the reasons listed above offered Academia Sinica cause to intervene in Dr. Kishinouye's expedition. Nevertheless, did Academia Sinica and its director, Cai Yuanpei, agree with all of these suspicions? If Cai was convinced of the connection between the Japanese trip and Japan's military agenda, and accordingly categorized the research as an urgent threat to China's sovereignty, he could have requested to permanently terminate the expedition just like he did during Aurel Stein's field research in western China on May 1930.[187]. Rather than directly issuing a restraining order, Cai chose to contact China's education and foreign offices first in order to start a conversation with the Japanese through the intermediates. In its negotiation with the Japanese, Academia Sinica's primary concern was not about the termination of the expedition, but about specimen collections and participation of Academia Sinica's representatives.

Moreover, after Academia Sinica reached an agreement with the Japanese team, instead of dispatching its own specimen technicians, the institute invited Bing Zhi, a biologist who had graduated from Cornell University, to participate in the Japanese expedition on the institute's

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186 *Tōhō Bunka Jigyō* 東方文化事業 (Oriental Cultural Work). Series H: Oriental Cultural Programs, call number: H-0117. Japan Center for Asian Historical Record, pp. 98-100; "Guoji tongxun: riren diaocha Changjiang yuye."国际通讯:日人调查长江渔业. *Xinghua*, vol.26 no. 37, 1929, pp. 40-41.

187 "Zhi Waijiaobu gonghan: hanqing chaoshi Sitanyin wang Xinjiang kaogu wei-jing benyuan shenhe yiqian fu-fa huzhao."致外交部公函:函请抄示斯坦因往新疆考古目的并未经本院审核以前弗发护照由. *Guoli zhongyang yanjiuyuan yuanwu yuebao*, vol.1 no,11, 1930, pp. 42-43.

behalf.[188] As trained biologists, Academica Sinica's specimen technicians could perform in the same professional capacity as Bing Zhi as to evaluating whether the Japanese scientists collected specimens and other information beyond its permitted research. By considering Bing Zhi as the primary candidate for this mission, however, what Academia Sinica demanded was more than just dispatching a representative to oversee the Japanese expedition, and proving the existence of the Chinese scholars who were capable of science. Academia Sinica also intended to highlight the fact that there were Chinese scientists, like Bing Zhi, whose professionalism were recognized by the international academy and were qualified to engage as equals in scientific cooperation with an eminent Japanese scientist like Dr. Kishinouye.

In all, Academia Sinica's intervention in Dr. Kishiouye's trip and its capacity building afterwards were largely facilitated by the context of Chinese politicsin this transitional era between the Beiyang and Nationalist governments. First, growing Chinese nationalism in the 1920s required the central government to implement a proper policy on foreign activities in China, particularly when the foreign activities were related to Japan. Second, when the Japanese team launched its third expedition, Academia Sinica was not only a part of the newly established Nanjing government, but also a recently founded intellectual body of China, awaiting domestic and international recognition. Through its engagement with the Japanese expedition, Academia Sinica tested its authority as the central manager of scientific research in China, both internationally with foreign research institutes and domestically with provincial governors. It intended to demonstrate that a new generation of Chinese scholars were capable of scientific

188 "Dian Beiping Bing Nongshan zhuren: wei-qing shuailing caijituan jiandu riren qing fuyun shifu you."电北平秉农山主任:为拟请率领采集团监督日人请俯允示复由. *Guoli zhongyang yanjiuyuan yuanwu yuebao*, vol.1 no. 4, 1929, 37.

research in a manner as professional as any scientist with international reputation. More importantly, it set its engagement with Dr. Kishinouye as a precedent for further international cooperation in the realm of natural science. It announced to the world the legitimacy of both the Nationalist government and itself, whose power everyone in China would haveto comply from then on.

4.3. THE DUAL-IDENTITY OF ACADEMIA SINICA

Besides being facilitated by the political context of China in the late 1920s, the process of Academia Sinica's capacity-building was driven by the unique role of the organization itself, both as the head of China's intellectual body and a research division within the Nationalist government. Upon its establishment, modeled after the Soviet National Academy of Sciences, Academia Sinica was designed to serve the nation's industrial construction with scientific studies under the government's control and support.[189] Nonetheless, as indicated through Academia Sinica's engagement with Dr. Kishinouye, the institute not only served the government with scientific studies, but also secured governmental support for the Chinese academic community in its nascent stage.

By the 1920s, most treaty powers had engaged in scientific expeditions like Dr.

[189] Chen, 1998, pp. 77-85.

Kishinouye's biological trip in China, and utilized Chinese resources for their commercial and academic interests.[190] Prior to Academia Sinica, several Chinese academic associations attempted to contain the rampant circulation of Chinese material objects. Some of their efforts were endorsed by the Chinese government. For example, the National Scientific Union of China imposed a cooperative project on the Swedish explorer Sven Hedin and conducted a joint excavation trip in central Asia in 1927.[191] However, due to a lack of institutional communication between the Beiyang government and the Chinese academic associations, it was impossible for any organization to implement consistent and effective measures towards foreign academic expeditions in China.

After the establishment of the Nationalist government, the new administration implemented a passport-based policy on regulating the mobility of people and resources within and across China's borders. These regulationsincluded the application of the Passport for Inland Travel, Passport for Exportation, and so forth. It was through this passport system that Academia Sinica could enforce its policy on biological specimens. Hence, unlike any previous academic associations, as a division of the Nationalist government, Academia Sinica was able to institutionalize its efforts to defend the biological resources for China's scientific research with governmental authority.

Though multiple divisions within the Nationalist government were entitled to participate in the administration of foreign activities in China, such as the Ministry of Foreign Affairs,

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190 Fati Fan. *British Naturalists in Qing China: Science, Empire, and Cultural Encounter*. Harvard University Press, 2004; Glover, Denise M., and McKhann, Charles F., eds. *Explorers and Scientists in China's Borderlands, 1880-1950*. Seattle: University of Washington Press, 1997.

191 Grace Shen. *Unearthing the Nation: Modern Geology and Nationalism in Republican China, 1911-1949*. London: University of Chicago Press, 2014, Chapter 4.

Ministry of Education, and the Ministry of Industry and Commerce, few officers in these departments were qualified to settle disputes over scientific studies. In the realm of science, professional training was required to understand the difference between disciplines . For example, a trained biologist could perform a better job than a law student in judging whether a piece of rock was a reptile fossil for biological studies, or a rare mineral specimen with a potential application in industry. Hence, as science rose to a disciplined enterprise, it required a new division in the government, like Academia Sinica, whose officers were capable of speaking the standard language of science to administrate scientific activities in China. In this regard, though there were overlaps among the responsibilities of these ministries regarding foreign administration, Academia Sinica's monopoly on scientific knowledge enabled the institute to be the only governmental authority that was suitable for the negotiation with Dr. Kishinouye's team. In this way, with its duel identity, Academia Sinica connected the realms of science and politics in China. By institutionalizing the connection between science and governmental authority, Academia Sinica was the place where science and politics could mutually authorize each other.

This mutual authorization could not be attributed to the context of 1920s China and the qualification of Academia Sinica alone. From the institute's establishment, to its intervention in Dr. Kishinouye's expedition and its policy on biological specimens afterwards, Academia Sinica's capacity building was driven by the sense of mission established by the institute's founding members to modernize the nation with science. Led by Cai Yuanpei, Zhang Jingjiang (1877-1950), Wu Zhihui (1865-1953), and Li Shizeng (1881-1973), four elder statesmen who had great prestige and influence in the Nationalist Party, Academia Sinica gradually secured

governmental support for China's academic community.

In the case of Dr. Kishinouye's expedition, as a research institute, it was not Academia Sinica's duty to intervene in the Japanese trip. It was rather the responsibility for the Ministry of Foreign Affairs or the Ministry of Education to ensure the Japanese team's obedience to China's new policies. In this regard, prior to Cai Yuanpei issueing the restraining order, he first wrote to these two Chinese ministries to request their opinion towards the matter. Though the two ministries reached out to Japanese diplomats to express their concerns, they were not inclined to take any coercive measures as Cai requested because these two ministries were also preoccupied with their own governmental duties. The Foreign Affairs office was engaged with the negotiation over international treaties, and the Education office was preoccupied with theprotests regarding the Movement for the Independence of China's Education. As the tasks required the two ministries to cautiously handle China's relations with Japan, if they assertively intervened in Dr. Kishinouye's expedition, it might jeopardize the delicate balance they themselves were attempting to maintain between China and Japan. Despite of the two ministries' unwillingness to be involved in the Japanese expedition, was it necessary for Academia Sinica to be in charge?

From raising government's concerns about Dr. Kishinouye's expedition to promulgating the specimen law, what primarily motivated Academia Sinica's engagement through the whole process was not its governmental duty, but its founding members' belief in the connection between preserving China's material objects and defending the nation's sovereignty and pride. Consistent among all of the associations mentioned , which had attempted to regulate foreign expeditions in China, such as the National Scientific Union of China and the Committee for the Preservation of Ancient Objects, was the participation of Academia Sinica's founding members,

particularly Cai Yuanpei. From the early age of their adult lives, the four founding members of Academia Sinica had been dedicated to the independence and modernization of China's education. They helped to promote the Movement for the Independence of China's Education, attempted to reform China's educational system, lent support and resources to the establishment of the most influential scientific organizationin China—the Science Society of China (*Zhongguo kexue she*, est. 1914), and proposed to found the museums for cultural and natural histories in China.[192] They regarded Western science and education as an effective means for China to achieve independence, prosperity and modernization. Hence, when they founded Academia Sinica, regardless of the Nationalist government's expectation for the institute, it was very much a Promised Land for these nationalist intellectuals to institutionalize government's support for their decade-long pursuit of modern science and education in China.

Nonetheless, good intention alone could not lead to Academia Sinica's intervention in Dr. Kishinouye's expedition and the promulgation of its specimen law . Academia Sinica required political power to facilitate its capacity building. In the beginning years of the Nationalist government, no such policy or precedent that granted Academia Sinica the right to detain a foreign team, which was clearly beyond the institute's authority at the time. Academia Sinica's effective intervention in the Japanese expedition, which initiated the institute's capacity building, fundamentally depended on the political influence of its founding members, especially its president, Cai Yuanpei.

Besides his efforts to modernize China's education, Cai had served as the President of a

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192 Chen, 1998, pp.40-49; Sheng, Jia. "*The Origins of the Science Society of China, 1914-1937*," Dissertation, Ithaca: Cornell University, 1995, pp. 54-56.

prestigious university, Peking University, and the head of the Ministry of Education in both the Beiyang and the Nationalist governments. He was thus one of the most respected intellectual leaders in the Republican China. More importantly, as Chiang Kai-shek rapidly rose to power after the Northern Expedition, he split from the Nationalist government at Wuhan, which was mainly dominated by leftists, and helped Chiang reestablish another Nationalist government at Nanjing. Cai and the other three founders of Academia Sinica were among the first group of Nationalists who chose to stand with Chiang in this factionalism.[193] Their participation in the Nanjing regime at that decisive moment did not only consolidated Chiang's position in the party, but also rendered themselves important allies for the President of the Nanjing regime. Hence, Cai, as well as the other founders, was not only an intellectual leader who accumulated social reputation and political capital in Nationalist movements, but also a founding father and Chiang's close ally in the Nationalist government at Nanjing. In this regard, it was not just Academia Sinica's authority, which Cai relied on to issue the restraining order for the Japanese team. Therefore, it was because of Cai's political influence, rather than Academia Sinica's authority, that the restraining order could be effectively executed by the provincial governors.

In all, facilitated by the nationalistic context of China in a transitional era and the unpleasant Sino-Japanese relations in the late 1920s, Academia Sinica's engagement with Dr. Kishinouye's expedition and its later capacity building were fundamentally motivated by the institute's founders' intention and political authority to institutionalize governmental administration for scientific activities in China. They deemed it a matter of national pride to

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193 Chen, 1998, pp. 44-49.

prove Chinese scientists' competitiveness and a matter of sovereignty to preserve China's scientific resources from foreign encroachment. Standing between the realms of academia and politics, Cai Yuanpei, as well as the other founding members, utilized their own political influence to mobilize governmental support for Academia Sinica's intervention in Dr. Kishinouye's expedition. By setting the engagement as a precedent for Academia Sinica's policy on foreign biological expeditions, the research institute empowered itself as the administrative center for science for China. With its dual-identity, Academia Sinica institutionalized the connection between science and politics. Academia Sinica became a place where science and politics could mutually authorize each other: the newly established Nationalist government could seek support from the authority of science to consolidate its position by proving its intention and ability to defend and modernize China, while the Chinese scientific community at its nascent stage was able to secure its access to scientific resources with government's protection.

5. CONCLUSION: SCIENCE, NATION, AND MODERNITY

In China, 1929 was a pivotal year. The Nationalist government at Nanjing had not yet fully entrenched itself into Chinese society, while the Beiyang government had already collapsed. In this transitional year, political instability and inconsistency between the two governments' policies generated both crisis and opportunity. This point is exemplified in Academia Sinica's engagement with Dr. Kishinouye. For Dr. Kishinouye, his scientific research in China, which was based on the agreement between the Japanese and the Beiyang governments, was suddenly invalidated by the Nationalist government. For Academia Sinica, as the Nanjing regime had no regulation on foreign expeditions in China, any decision and measures the institute adopted towards Dr. Kisninouye's expedition at the time had the potential to become institutionalized as the government's policy. Joined by rising nationalism in China and an escalated hostility between China and Japan, this pivotal year also marked the end of foreign scholars' unlimited access to China's natural resources and the beginning of the nationalization of science by Academia Sinica. As Academia Sinica institutionalized the connection between science and nationalism, some new features developed in the relationship between science and nation.

5.1. REDEFINING NATION AND SCIENCE

Prior to Dr. Kishinouye's third expedition in 1929, the discourses of both Chinese nationhood and science were mainly related to Chinese language, literature, and history, or, in general, cultural materials that embodied China's glamorous past. Since 1928, the Nanjing Regime had already founded the Central Commission for the Preservation of Antiquities to regulate the circulation of China's artifacts with coercive measures. In contrast, it was not until Academia Sinica's intervention in Dr. Kishinouye's trip that China's government first granted protection over its biological resources. This essentially extended the connection between science and nation in the 1920s from antiquities bound to China's past to more tangible entities, such as fish, related to China's natural environment, and the nation's present

At the turn of the 20th century, due to unequal treaties, the increasing foreign presence in China in the realms of commerce, politics and culture led Chinese intellectuals to reconsider the issues related to Chinese nationhood and westernization. Among their various pursuits, two terms successively constituted influential strands of the discourses around Chinese nationhood: "National Essence" (*guocui*) and a more neutral term "National Heritage" (*guogu*). Regardless of their differences, the two terms and their attendant discourses fundamentally tied the concepts of nation and science to cultural studies and written materials.

The National Essence group claimed that the essential nature of Chinese nationhood was preserved in pre-Qin Studies (*zhuzi-xue*), which flourished in the late Zhou dynasty (480 BCE-220 BCE), but perished with the bibliocaust of the Qin (221 BCE-206 BCE) and was suppressed by the state-sponsored monopoly of Confucianism during the succeeding dynasties. To revive

this genuine Chineseness, the National Essence scholars attempted to retrieve Chinese language, culture and history through pre-Qin texts.[194] Two major points were embedded in the scholars' pursuit of Chinese nationhood. First, their understanding of Chinese nationhood was based on an ethno-nationalism. The standards they used to distinguish the Han race from the others were not based on any physical differences or various biological types. Instead, in the National Essence scholars' terms, the Chinese nation was a kinship-based ethnic community that was demarcated by surnames and social customs.[195] In other words, it was the common culture rather than natural or physical features that shaped the Chinese into a historical nation (*lishi minzu*).

Moreover, though the National Essence scholars pursued the study of nature, their scholarship was neither about gaining more knowledge about nature nor discovering Nature's laws. Instead, by studying the natural history of China, the scholars attempted to compare the living creatures with ones recorded in ancient texts, and thus to revive the lost knowledge about the ancient world. Meanwhile, the study of plants served as a part of their pursuit of local history since plants were symbols of the land.[196] Thus, the aim of their research on nature was not about gaining knowledge about present or future ecosystem, but to summon the collective memory of the people and thus foster a sense of belonging among the Chinese to their land and their past.

At the turn of the 1920s, the movement to Reorganize National Heritage (*zhengli guogu*) turned the discourse of Chinese nationhood toward a new trend. Similar to the National Essence scholars, the supporters of the movement also attempted to recover the lost knowledge of ancient

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194 Fan Fati. "Nature and Nation in Chinese Political Thought: the National Essence Circle in Early Twentieth-Century China." *The Moral Authority of Nature,* ed. Lorraine Daston and Fernando Vidal. Chicago: University of Chicago Press, 2004, 409-437.
195 *Ibid.*
196 *Ibid.*

China through rigorous scholarship. Hence, except for adopting a more neutral term—National Heritage—to refer to the materials and objects related to ancient China, the National Heritage scholars still associated Chinese nationhood with culture and history.

What distinguished the National Heritage scholars from their predecessors was that they regarded their study of ancient China as an enterprise of science. Since they thought they were analyzing ancient China by utilizing a scientific spirit and its methods, their research would be considered accordingly as scientific as the research in history, philosophy, philology, and archaeology. The National Heritage scholars' claim suggested the very vague understanding the Chinese elites held towards science at that time. Though science was the slogan of the May Fourth Movement in 1919, which gained increasing attention and popularity in China at the time, it nonetheless remained an abstract and fragmentary notion, which was only loosely connected with the natural sciences. For the National Heritage scholars, who were eminent public figures in China, regardless of the content of study, any research adopting scientific methods, like observation, investigation, and reasoning, could be categorized as science.[197] As the leader of the National Heritage movement, Hu Shi (1891-1962), for example argued to recover the ancient meaning of a Chinese character was no less scientific than discovering a new planet in so far as both forms of research employed scientific methods.[198] In this regard, by the early 1920s, the concept of science was more associated with cultural studies, such as humanities, than being associated with the experimentation and numerical calculation in natural sciences.

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197 Luo, Zhitian. *Inheritance Within Rupture : Culture and Scholarship in Early Twentieth-Century China*. Leiden: BRILL, 2015, Chapter 8 and 9.

198 *Ibid*., 247

The National Heritage movement faced a downturn by the late 1920s. For one thing, the National Heritage scholars failed to find for their scientific approach to Chinese ancient knowledge a place in modern academic system. As they proposed to establish an independent discipline, the National Learning (*guoxue*) department in Peking University and Tsinghua University, they were continuously questioned whether National Learning should be considered a subject at all.[199] Moreover, the National Heritage scholars also failed to prove the utility of their studies in serving the nation-building agenda of the newly established Nanjing Regime. Even Hu Shi, the leader of the movement, then abandoned his earlier argument and encouraged young students to pursue the studies of natural science and technology, which were more urgent and could better serve the nation.[200] He suggested that, rather than digging in ancient texts and scripts, Chinese youth should achieve something in a science laboratory or on expeditions.[201]

As the fall of the National Heritage movement suggested a change in Chinese elites' perceptions of science, Academia Sinica's engagement with Dr. Kishinouye then marked a new trend in which both the connotations of science and nation were essentially extended. Before Dr. Kishinouye's third trip in 1929, the only governmental effort to protect China's biological resources was a restriction on shipping bird feathers abroad.[202] Thus, by institutionalizing governmental administration on the biological expeditions, Academia Sinica essentially established the biological resources as China's national property, and natural sciences as national

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199 *Ibid*., pp. 249-255.

200 *Ibid*., 247.

201 *Ibid*., pp. 273-274.

202 Osborn, Henry F. "Interruption of Central Asiatic Exploration by the American Museum of Natural History." *Science,* vol. 70, no. 1813, 1929, pp. 291-294.

enterprises.

5.2. SCIENCE AS A NATIONAL ENTERPRISE

Science's institutional relations with Nationalist politics in Republican China could both be a blessing and a curse for its development, especially when an authoritarian regime attempted to assume comprehensive control over science and subject it to the collectivist interest of the nation.

First, since the Nationalist government's legitimacy was primarily based on nationalism, science remained a secondary consideration to politics. According to Academia Sinica's policy on foreign biological expeditions, "no antiquities or non-replaceable articles that have historical value shall be collected or shipped abroad." In contrast, after a routine inspection, biological specimens were allowed to be transported abroad.[203] The government offered an explanation for its different levels of concern by pointing out the irreplaceability of the antiquities. After all, in terms of quantity, the biological resources in China were not as exhaustible as the nation's antiquities. Nonetheless, as suggested by the catfish which was indigenous to China but named after Dr. Kishinouye, the opportunity to discover unspecified creatures, name them, and categorize them into taxonomy was certainly no less irreplaceable than the Chinese antiquities. In this regard, rather than the irreplaceability of the antiquities, the government's emphasis on

[203] The Second Historical Archives of China, *Zhongyang yanjiuyuan dangan* 393:631 and 633.

the ancient objects were largely motivated by the very idea that the antiquities were the embodiment of the nation's history and culture, and proof that China had been a nation. Therefore, due to their lack of irrelevance in nationalistic discourse, the importance of biological studies remained a secondary concern to the Nationalist government.

Second, due to the nationalization of science through Academia Sinica, the development of science became dependent on the preference and the capacity of the Nationalist government. Since applied science could directly serve the government's agenda for industrialization, it received more governmental support.[204] Moreover, despite the uneven distribution of the government's resources, the political and financial impotence of the Nationalist government also limited the development of science in this national scientific center of China.

On the one hand, since Academia Sinica suffered from the government's perennial shortage of funds, Chinese scientists had been maximizing any opportunities that came their way by piggybacking on foreign expeditions and strove to appropriate foreign cultural imperialism.[205] On the other hand, in addition to its financial limitations, the Nationalist government's political impotence also set a limit on Academia Sinica's scientific activities. In Dr. Kishinouye's expedition, Academia Sinica's intervention was fundamentally facilitated by the government's authority over the governor of Sichuan Province. In turn, the Nanjing regime's inability to influence some provincial leaders negatively affected Academia Sinica's ability to regulate the scientific activities in those areas. For instance, in 1933, Sheng Shicai (1897-1970) established a

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[204] Chen, 1998, pp. 129-170.

[205] Grace Shen. *Unearthing the Nation: Modern Geology and Nationalism in Republican China, 1911-1949*. London: University of Chicago Press, 2014, Chapter 4.

relatively autonomous authority in Xinjiang with a pro-Soviet policy. Prior to Sheng's reign, the Xinjiang provincial government followed most of Academia Sinica's requests to regulate the foreign expeditions in the area.[206] In contrast, during Sheng's reign, between 1934 and 1942, 20 separate Soviet geological expeditions were operated in Xinjiang for industrial minerals, while none stated that Academia Sinica had been informed with and granted permission to any of the 20 Soviet expeditions.[207]

Third, in the marriage between science and Nationalistic politics, a group of Chinese scientists were also severely suffered when science became a collectivist interest of the nation. In accordance with the Chinese archival materials, this paper refers the expedition along the Yangzi River in 1929 as Dr. Kishinouye's expedition or the Japanese expedition. Nonetheless, the very presences of the three Chinese assistants in the trip and the fact that the expedition was a cooperative project between the Beiyang government and the Japanese government were entirely ignored by Academia Sinica and Chinese newspapers. By so doing, it was more effective for Academia Sinica to denounce the expedition as a violation to China's sovereignty, which in turn helped to mobilize the support of the public and the government, and ultimately justify the institute's intervention.

As Academia Sinica detained the team in Chongqing and sent its own representatives to monitor the expedition, the three Chinese team members were not only detained by their

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206 Jin Shuren, as Sheng's predecessor, had closely worked with Academia Sinica on regulating the foreign trips in Xinjiang, which were led by British archeologist Aurel Stein, Dutch geographer Philips Christiaan Visser (1882 –1955), and French explorer Georges-Marie Haardt (1889-1932). The telegrams between the Xinjiang provincial government and Academia Sinica regarding the trips were available at Academia Sinica's Monthly Journals in 1929 and 1930. See *Guoli zhongyang yanjiuyuan yuanwu yuebao,* vol.1 no. 1, 1929, pp. 38-39; vol.1, no.3, 1929, pp. 52-54;vol.1, no.4, 1929, 46; and vol.2 no.5, 1930, pp. 44-45.

207 Kinzley, Judd C. "the Spatial Legacy of Informal Empire: Oil, the Soviet Union, and the Contours of Economic Development in China's Far West." *Twentieth-Century China,* vol. 40, no. 3, 2015, pp. 224-225.

government on their homeland, but were also categorized as the untrustworthy. Nonetheless, all three Chinese researchers had dedicated themselves to the development of China's biological study.[208] In contrast, the two representatives of Academia Sinica—Fang Bingwen and Chang Linding—were not only keeping an eye on the Japanese activities and collecting the resources for their own research, but were also entrusted with the task of collecting the specimens of freshwater sponges along the Yangzi River for an American biologist, Gist Gee, who was a committee member of Academia Sinica's long-term sponsor, the Rockefeller Foundation.[209]

The disenfranchised Chinese scientists were also a reflection of a group of Chinese scholars who were marginalized in the scientific community after it had been nationalized by Academia Sinica. The nationalization of science, in turn, escalated factionalism within the Chinese academic community. At that time, Chinese students overseas generally formed associations with regional bases, like a group of Chinese students in America founded the Science Society of China at Cornell University in 1914 and another group in Japan founded Bingchen Association (*Bingchen xueshe*) in Tokyo in 1916.[210] Based on their educational backgrounds and social network, there was a division among the students who were trained in Japan, Europe, and America. In the late 1920s, the Jinan Incident marked China's growing hostility toward Japan and the beginning of the Nanjing Regime's pro-America policy. In such context, the patronage from the American funds, together with American-trained Chinese

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208 When they participated in the trip, Dr. Wei was already a faculty member at Peking University while Dong and Jin were employed by the Zhejiang Xihu Museum and Shandong Aquaculture Bureau soon after the expedition.

209 "Ziran lishi bowuguan shiyuefen gongzuo baogao 自然历史博物馆十月份工作报告," *Guoli zhongyang yanjiuyuan yuanwu yuebao,* vol.1, no.4, 1929, pp.20-22.

210 Fan, Tiequan. *Jin dai Zhongguo ke xue she tuan yan jiu*. Beijing: Renming chubanshe. 2011, pp. 41-47.

scholars, jointly led Academia Sinica towards a pro-America trajectory. In contrast, the Chinese scholars who were exclusively trained in Japan were largely marginalized in the Academia Sinica-centered scientific community. In fact, according to Academia Sinica's faculty list in 1929, the institute was composed of 200 Chinese researchers and 2 scholars from America and France. Among the 200 Chinese faulty members, only 8 individuals received their professional training in Japan while 55 pursued their degrees in the West, such as America, France, Britain and Belgium, in which 32 American graduates accounted for the largest proportion.[211] Therefore, the unfair treatment of the Chinese scientists on the Kishinouye was irrelevant to their behavior, activities, or professionalism, but resulted from their Japanese educational backgrounds and the very fact that they were not insiders of the Chinese scientific community that was being monopolized by a pro-American Academia Sinica.

In Republican China, 1929 was a pivotal year when the Nationalist government at Nanjing had not yet fully entrenched itself while the Beiyang government had already collapsed. In this transitional year, the political instability and the inconsistency between the two governments' policies generated both crisis and opportunities. For Dr. Kishinouye, his scientific research in China, which was based on the agreement between the Japanese and the Beiyang governments, was suddenly invalidated by the Nationalist government. For Academia Sinica, as the Nanjing regime had no policy yet to regulate the foreign expeditions in China, any decision and measures the institute adopted towards Dr. Kisninouye's expedition at the moment had the

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211 "Guoli zhongyang yanjiuyuan zhiyuanlu 1929 (国立中央研究院职员录)," *Guojia tushuguan cang guoli zhongyang yanjiuyuan shiliao congbin* 国家图书馆藏国立中央研究院史料丛编. Beijing: guojia tushuguan chubanshe,Vol.7, 2008, pp. 501-534.

potential to be institutionalized into the government's policy upon the matter. Joined by rising nationalism in China and an escalating hostility between China and Japan, this pivotal year marked the end of foreign scholars' unlimited accesses towards China's natural resources and the start of the nationalization of science by Academia Sinica.

Academia Sinica was founded to serve the Nanjing regime's nation-building agenda with scientific research, policy-making, and technocratic education. Through its efforts to nationalize science, Academia Sinica became the place where science and nationalistic politics could mutually empower each other. For the newly-founded Nationalist regime, science both served as an instrument in its nation-building agenda and a modern discourse with which it could represent and voice itself in the international community. Meanwhile, as Academia Sinica served the government with science, it also secured governmental patronage and protection for the nascent Chinese scientific community. In the institute's intervention in Dr. Kishinouye's expedition and its policy on foreign biological expeditions, it essentially denied foreign scholars' unlimited accesses to China's biological resources. The efforts, to a certain degree, placed the Chinese scientific community in a less disadvantaged position in the global competition of science. Moreover, by limiting foreign scholars' accesses towards biological resources in China with governmental authority, Academia Sinica nevertheless incorporated biological resources into China's national property. It accordingly extended the connotation of nation in 1920s China, which was once only tied to China's culture, history, and antiquities.

Through the mutual empowerment of science and nationalist politics, Academia Sinica also established its authority in both realms . As the representative of science in the government, it gradually built up its political capacity with its monopoly on knowledge of science. As the

governmental authority in the realm of science, it also exerted authoritarian control over the Chinese science community.

The nationalization of science seemed to be a win for science, for the government, and for Academia Sinica, but not for the individuals previously discussed. The death of Dr. Kishinouye certainly marked the Yangzi River expedition with a tragic end. In the nationalization of science, both the Japanese and the Chinese scientists held responsibility for each other's sufferings, while they also paid the price for their intellectual pursuits. For Dr. Kishinouye, his biological career was facilitated by Japan's colonial expansion. After he had retired from all the duties in Japan and dedicated his retirement to an arduous expedition in China, he was detained and died in the semi-colony he helped Japan to conquer. For Cai Yuanpei, his entire adult life was spent working for the independence and modernization of China's education. For this purpose, he utilized coercive measures against the unarmed colonial scientists, which partly led to the death of the latter. Regardless of his efforts to protect the scientific enterprise in China, he finally lost the autonomy of science to the party-state government. For the marginalized scientists, they followed China's social trend to pursue professional training in Japan during a time when Japan and China had a very close and positive relationship. When they returned to China, expecting to serve the nation with their knowledge, they were instead detained, distrusted and marginalized by the scientific center in their own nation. As science became a collectivist interest of nation-state, institutions rose from the suffering of these individuals.

While I am writing the history of the nationalization of science in Republican China, the Nationalist government had been replaced by another anti-hegemonic party-state regime for

decades. The Chinese Academy of Sciences and the Chinese Academy of Social Sciences took the place after Academia Sinica relocated itself in Taiwan. The Passport for Expedition, which put a tragic end to Dr. Kishinouye and his Chinese assistants' research in China, was renamed as Introducing Letter (*Jieshaoxin*) in the People's Republic of China. As I, a Chinese student studying history in America, intend to trace the history of the Passport for Expedition in China's National Archives, my access was denied unless I obtained its modern reincarnation, an Introducing Letter, from Chinese authorities. Then, it occurs to me that the marriage between nation and science, however, has never ceased.

APPENDIX A

[GLOSSARY]

Beifa 北伐

Beiyang jun 北洋军

Beiyang junfa 北洋军阀

Beiyang zhengfu 北洋政府

Bencao gangmu 本草纲目

Bingchen xueshe 丙辰学社

Bing Zhi 秉志

bugong 不公

bupingdeng tiaoyue 不平等条约

bupingdeng zhi tiaoyue 不平等之条约

Caijue guwu huzhao 采掘古物护照

Cai Yuanpei 蔡元培

Chang Linding 常麟定

Chiang Kai-shek 蒋介石

Chubanpin guoji jiaohuanchu 出版品国际交换处

dangguo 党国

danghua jiaoyu 党化教育

dadao lieqiang chu junfa 打倒列强除军阀

dōbun dōshu 同文同種

Dōjinkai 同仁会

Dong Yumao 董聿茂

Fang Bingwen 方炳文

gaiding tongshang tiaoyue 改订通商条约

gaizheng tiaoyue 改正条约

Gengzi peikuan 庚子赔款

Guo cui 国粹

Guo gu 国故

Guoli dongnan daxue 国立东南大学

Guomindang 国民党

guo xue 国学

Guozijian 国子监

Guwu baocunfa 古物保存法

Hanlinyuan 翰林院

Hu Hanming 胡汉民

Hu Shi 胡适

Huzhao 护照

Irisawa Tatsukichi 入澤達吉

Jiancha Yuan 监察院

Jianguo fanglue 建国方略

Jin Zhaohua 金炤华

Kamimura Shinichi 上村伸一

Kaoshi Yuan 考试院

Ke xue 科学

Kimura Shigeru　木村重

Kishinouye Kamakichi 岸上鎌吉

Lifa Yuan 立法院

lishi minzu 历史民族

Li Shizeng 李石曾

Mao Zedong 毛泽东

Mianshui chukou huzhao 免税出口护照

Minamimanshū tetsudō kaisha 南満洲鉄道株式会社

neidi　内地

Neidi youli huzhao 内地游历护照

Nikka gakkai 日中学会

Nishi bunka teikei 日支文化提携

Okabe Nagakage 岡部長景

Osaka Mainichi shinbun 大阪毎日新聞

pianmian zuihuiguo daiyu 片面最惠国待遇

Shanghai ziran kexue yanjiusuo 上海自然科学研究所

Sheng Shicai 盛世才

Shina hozen 支那保全

Sifa Yuan 司法院

Sun Yat-sen 孙中山

Taishi bunka jigyō hiseishiki bibōroku 対支文化事業非正式備忘録

Taishi bunka jigyō tokubetsu kaikei hō 対支文化事業特別会計法

Taishi bunka jimukyoku 対支文化事務局

Taiwan Shōtokufu 台湾総督府

Tai xue 太学

Tō-A dōbunkai　東亜同文会

Tō-A dōbun shoin 東亜同文書院

Tokyo Nichi nichi shinbun 東京日々新聞

Tōhō bunka jigyō 東方文化事業

Tsinghua xuetang 清华学堂

Wei Hongmo　尉宏谟

Wu Zhihui 吴稚晖

Xiandaihua 现代化

Xiangdaixing 现代性

Xianzheng 宪政

Xiehe yiyuan 协和医院

Xinghua 兴华

Xingzheng Yuan 行政院

Xunzheng 训政

Yanjing daxue 燕京大学

Yanque yu 燕雀鱼

Yokote Chiyonosuke 横手千代之助

Yōsukō gyorui no seibutsugakuteki kenkyū 揚子江魚類の生物学的研究

Yuan Shikai 袁世凯

Zhang Jingjiang 张静江

zhengli guogu 整理国故

Zhongguo dizhi xuehui 中国地质学会

Zhongyang guwu baoguan weiyuanhui 中央古物保管委员会

Zhongyang xuehuifa 中央学会法

Zhongguo kexueshe 中国科学社

Zhongguo xueshu tuanti xiehui 中国学术团体协会

Zhongguoren bu da zhongguoren 中国人不打中国人

Zhonghua jiaoyu wenhua jijinhui 中华教育文化基金会

Zhongyang ribao 中央日报

Zhongyang yanjiuyuan 中央研究院

Zhongyang yanjiuyuan pingyihui 中央研究院评议会

Zhongyang zhixing weiyuanhui 中央执行委员会

Zhou Longguang 周龙光

Zhoushan qundao 舟山群岛

zhuquan 主权

zhuzi xue 诸子学

Ziyuan weiyuanhui 资源委员会

Zujie 租界

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