SCIENCE, SPACE, AND THE NATION: THE FORMATION OF MODERN CHINESE GEOGRAPHY IN TWENTIETH-CENTURY CHINA

by

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THESIS ABSTRACT

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At the turn of the twentieth century, the modern epistemological framework of science superseded indigenous Chinese knowledge categories as the organizing unit for empirical knowledge about space. By the 1920s, pioneering Chinese intellectuals housed spatial knowledge under the new category of modern geography. While this framework for modern knowledge was rooted in the West, Chinese scholars innovated the discipline in ways that enabled them to consistently attend to fluctuating nation-building imperatives. Using autobiography, memoir, and periodicals produced by early Chinese geographers, this study explores how the intellectual shift toward spatial epistemological modernity facilitated modern China's entrance into the global nation-state system. Modern geographic knowledge ushered in new geopolitical claims and notions of citizenship that would define the new Chinese nation and its position in the world until today.

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For my teachers

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CHAPTER I

CLASSIFYING SPACES: SCIENCE AND THE MAKING OF MODERN CHINESE GEOGRAPHY

In the latter decades of the Qing dynasty, *gezhi* (格致 "investigating things and extending knowledge"), a knowledge category with Song-era Neo-Confucian roots, housed technological knowledge that filtered into China from Japan and the West.[1] After China's defeat in the first Sino-Japanese War (1894-95) a knowledge classification called "science" superseded "*gezhi*" as the category by which to store knowledge derived of evidential learning.[2] The term for "science" in Chinese became *kexue* (科学), the Chinese pronunciation of the Japanese neologism *kagaku* that held the literal meaning of "classification by field."[3] From this translingual perspective, at the turn of the twentieth century in China, *kexue* denoted more than a research method; it reordered the world of Chinese evidential learning.

Providing knowledge of the spaces of the earth through the category of science originated in the West, where geography as an academic discipline under the "science" umbrella had been a part of the intellectual fabric since the mid-eighteenth century. Modern philosopher Immanuel Kant (1724-1804) disseminated spatial knowledge that he

[1] Translation from Benjamin A. Elman, *On Their Own Terms: Science in China, 1550-1900*, (Cambridge, Mass.: Harvard University Press, 2005), 409. *Gezhi* is short for *gewu zhizhi* (格物致知). Another translation is "the attainment of knowledge through the investigation of things," from Meng Yue, *Shanghai and the Edges of Empires*, (Minneapolis: University of Minnesota Press, 2007), 237 note 21. Neo-Confucian Zhu Xi likely coined the term *gezh*i in the Song dynasty in Meng Yue, *Shanghai*, 14-15.

[2] Elman, *On Their Own Terms*, 409.

[3] Ibid.

bundled as "physical geography" in the mid-eighteenth century. Alexander von Humboldt (1769-1859) famously traveled the world and systematically observed landscapes, plants, animals, and minerals using forty different kinds of instruments.[4] Carl Ritter (1779-1859) made extensive contributions to the study, particularly regarding regions according to terrestrial phenomena and their relationship to man. Humboldt and Ritter are commonly regarded as the fathers of modern geography. They, along with Kant, strongly believed in geography as a modern science as a means of understanding the spaces of the earth.[5]

In China, the modern scientific understanding of space reordered knowledge from a *gezhi* framework to a *kexue* framework, a development that facilitated a Chinese discourse on space that assisted the project of modern nation-state construction. Conceived as a scientifically founded knowledge category, Western thinkers established geography as an academic discipline in the mid-eighteenth century. In the final decade of the Qing dynasty, as part of the "New Policies" (1901-11) implemented by the government, China imported the knowledge classification of "historical geography." Another neologism borrowed from Meiji Japan, historical geography refashioned the indigenous category of *yange dili* (沿革地理), or "chronological geography," into a category that aimed to instill a sense of national identity.[6] A category of "earth studies"

[4] Robert E. Dickenson, *The Makers of Modern Geography*, (New York: Frederick A. Praeger Publishers, 1969), 27.

[5] Ibid, 22.

[6] Translation and citation from Tze-ki Hon, "Marking the Boundaries: The Rise of Historical Geography in Republican China," in *Transforming History*: *The Making of Modern Academic Discipline in Twentieth-Century China*, Brian Moloughney and Peter Zarrow eds. (Hong Kong: Chinese University Press, 2011), 308.

(*dixue* 地学) arose in the form of a Beijing study society, also with the explicit intention tool of creating a modern citizenry.[7] In the 1920s, Chinese intellectuals institutionalized "geography" (*dilixue* (地理学) as an academic discipline. Geography would become the over-arching category for modern Chinese knowledge production on spaces of the nation and the world (Figure 1). After 1949, shifts in the *kexue* framework caused a shift in geographical thinking that authorized China's rapid industrialization. The various categories for thinking about space "scientifically" and the expression of that thought in a common discourse enabled Chinese to envision themselves as members of a territorially-defined community and impart that image to the world.

The classification of "geography" and "science" became sites of modern Chinese authority that remained consistent across the 1949 divide and would structure Chinese notions of space. Although the categories may have originated in Europe, I argue that Chinese intellectuals appropriated and navigated "scientific" geography, together with its many sub-categories, to suit the changing imperatives of nation-building in China. The aim is not to lament the desuetude of indigenous Chinese knowledge classification systems, nor to offer a critique of Western hegemony, but to explore the agencies that emerged from Chinese recreation of the Western epistemological system in China. Whether refashioning the "old" geography (*yange dili*) into the "modern" discipline of historical geography,[8] or integrating contemporary trends into the Chinese geography

[7] Grace Yen Shen, *Unearthing the Nation: Modern Geology and Nationalism in Republican China*, (Chicago, University of Chicago Press, 2014), 77.

[8] Brian Moloughney and Peter Zarrow, "Making History Modern" in *Transforming History: The Making of a Modern Academic Discipline in Twentieth Century China*, Brian Moloughney and Peter Zarrow eds. (Hong Kong: Chinese University Press, 2011), 3. The authors describe a similar process over the same period in the formation of the modern discipline of history.

disciplines, Chinese intellectuals served the state-building project by wielding the new categories of geography and science.

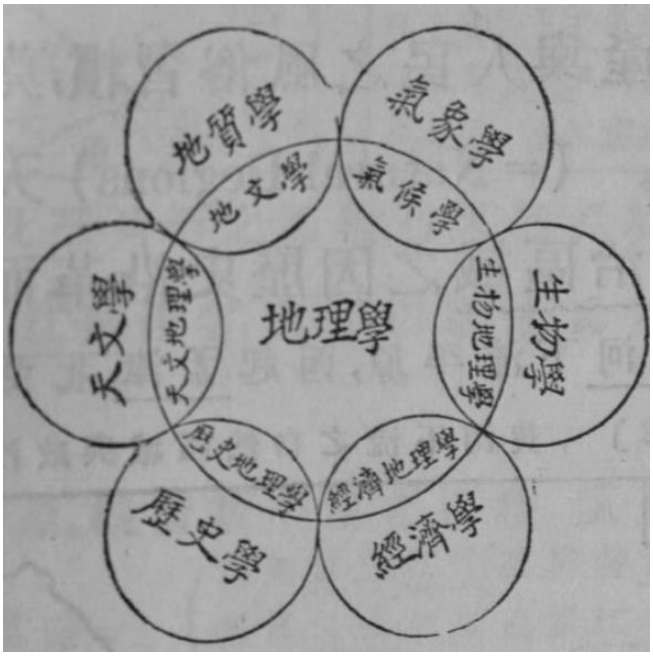

Figure 1. The figure above presents one conceptualization of geography as a modern discipline as illustrated in a 1925 middle school textbook edited by Zhang Qiyun, a Guomindang member and graduate of the historical geography (*shidi* 史地) department of Nanjing Advanced Normal School (now Nanjing University). Text associated with the figure reads, "Not only does geography call upon history for help, but it is founded on all kinds of science (*kexue*)." Illustration from *Chuzhong jiaokeshu rensheng dili* [*Human Geography for Junior Middle Schools*] Vol. 1, Zhang Qiyun ed. (Shanghai: Shanghai Commercial Press, 1925), 3.

Defining Geography in the Early Twentieth Century

Wang Hui, cultural critic and scholar of Chinese literature at Qinghua University who often probes questions of modernity writes, "The power of science lies in the fact that it established an intimate connection between a universalist worldview and a kind of

cosmopolitan/nationalist social system…"[9] In other words, during China's Republican period, science connected Chinese society to a perceived universal knowledge, facilitating the formation of a nation that could aspire to sovereignty and power on the model of Western nation-states. In terms of geography, the scientific mapping of Chinese territories and the scientific gaze upon those territories became a tool that connected China's national spaces to a perceived hegemonic universal. The academic discipline of geography is the product of this "scientific" modernity, or more specifically, a capitalist system[10] and a global system of nation-states. Thus, to give the name "geography" (地理学) to China's technologies and production of spatial knowing prior to 1895 would be anachronistic. The technological capabilities of Chinese cartographers and motives of conquest in the late Qing similar to those in the West do not point to modernity. Such assumptions tend toward a teleological understanding of the past. Knowledge classification and the ordering of the earth's spaces according to paradigms contrived in the West is integral to modernity, especially in terms of national sovereignty in the global system of nation-states. Further, the framework dichotomizing the "West" and "China" usefully reflects a dichotomy in intellectual traditions and sophisticated technologies, not in the content of knowledge libraries, but in the ways intellectuals classified that content.

[9] Wang Hui, "Scientific Worldview, Culture Debates and the Reclassification of Knowledge in Twentieth-century China," *boundary 2*, 35:2 (2008), 125.

[10] McNeely, Ian F. with Lisa Wolverton, *Reinventing Knowledge: From Alexandria to the Internet*. (New York: W.W. Norton and Company, 2008), 161-203.

Historiography

Tze-ki Hon has recently pointed out two differing views in the historiography of historical geography and modernity. One view emphasizes 'institutional innovation."[11] Some scholars contend that geography in China could be called modern in the late Qing,[12] but lacked modern academic and research institutions to foster knowledge production. Two such scholars, Beijing University graduates Jiang Xiaoquan and Hu Xin collaboratively produced an insightful account of the history of "geographic" studies in China. They compiled a history of dynastic technological achievements and a highly sophisticated intellectual tradition of knowing the spaces of the earth. The authors identify three characteristics of modern geography: 1) modern geography has a popularly accepted system and research methods; 2) it has a system of cultivating geographers in higher education; 3) modern geography is characterized by the formation of a "social professional realm" (*shehuixing de zhiye lingyu*, 社会性的职业领域), or the formation of a social network of professionals in geographic studies.[13]

Others do not date the beginning of modern Chinese historical geography until the post-May Fourth period in the 1920s and 30s. Rather than focusing on institutions, these scholars emphasize the "intellectual transformation"[14] that accompanied the May Fourth environment, which involved the veneration of science as a foundation for modern

[11] Hon, "Marking the Boundaries," 304.

[12] The most well-known study is Laura Hostetler's *Qing Colonial Enterprise: Ethnography and Cartography in Early Modern China*, (Chicago: University of Chicago Press, 2001).

[13] Hu and Jiang, *Zhongguo dilixue shi*, 239.

[14] Hon, "Marking the Boundaries," 304.

society. Hon himself makes the case that historical geography "was an attempt to present a self-image of China to the world"[15] in the early decades of the twentieth century.

Grace Yen Shen's recent monograph marks the first attempt at a comprehensive history of modern geological studies in China.[16] She traces the trajectory of geology from the late Qing to 1949. Her work comprises institutional and social aspects of the discipline formation, portraying a lively geological community led by a few pioneering individuals. She ultimately depicts a diverse intellectual world bound together by the shared goal of constructing a strong nation, though beliefs about how best carry out the state-building mission varied widely. Shen articulates the impact of political vicissitudes on the geological intellectual community, both domestically and internationally, without undercutting the contributions of geologists to scientific discourse in China.

All four of the above narratives constructively contribute to the discussion of historical geography in modern China. However, none look critically at the category of historical geography itself as a ticket authorizing participation in the global discourse on modern spaces. Not only historical geography, but most categories of geography, as modern constructions, enabled Chinese to assert the sovereignty of modern Chinese national spaces. The social and epistemological systems of scientific organization imported from the West gave global currency to Chinese nationalist concerns. Geographers who engaged in scientific discourse garnered authority by reframing age-old

[15] Ibid, 305.

[16] Grace Yen Shen, *Unearthing the Nation: Modern Geology and Nationalism in Republican China*, (Chicago: University of Chicago Press, 2014.)

scientific technologies in the light of Western science and led China's discursive shift into modernity. The new categories of science and modern geography blurred the border between culture and science by giving rise to a new class of Chinese geography professionals. They produced a proliferation of educational materials and scholarly journals that emulated a discourse of universal science and popular geography, forming what Wang Hui calls a "discursive community of science."[17] Only the modern classification of knowledge enables what Hon rightly describes as the presentation of modern China to the world. The making of modern knowledge categories was essential in China's struggle for power and sovereignty in the age of colonialism.

Recent literature has also delved into the unfolding of disciplinary trajectories during the Mao years.[18] While most literature on modern Chinese disciplines tends to exclude the Mao period from 1949 to 1978, archival materials dealing with the first decade of the People's Republic of China have recently become accessible. New sources have yet to be explored. Of the more comprehensive studies, Thomas S. Mullaney's work on Republican period ethnography and the *minzu* classification project of the early 1950's stands out as a depiction of intellectual continuity across the 1949 divide. Mullaney shows that Mao era scholars employed Republican-era strategies of ethnic

[17] Ibid, 136.

[18] Arif Dirlik, "Marxism and Social History" in *Transforming History: The Making of a Modern Academic Discipline in Twentieth Century China*, Brian Moloughney and Peter Zarrow eds. (Hong Kong: Chinese University Press, 2011); Wang Mingming, "Southeast and Southwest: Searching for the Link between 'Research Regions,'" in *Sociology and Anthropology in Twentieth-Century China: Between Universalism and Indigenism*, Arif Dirlik et al. eds, (Hong Kong: Chinese University Press, 2012.); Wang Jiangmin, "Academic Universality and Indigenization: The Case of Chinese Anthropology in *Sociology and Anthropology in Twentieth-Century China: Between Universalism and Indigenism*, Arif Dirlik et al. eds, (Hong Kong: Chinese University Press, 2012.). Thomas S. Mullaney, *Coming to Terms with the Nation: Ethnic Classification in Modern China*. (Berkeley: University of California Press, 2011.)

classification to resolve the quagmire of ethnic classification in China's most diverse province of Yunnan. The trajectory of Chinese geography in the early years of the PRC also reveals continuity as geographers resisted beginning their studies anew. The discourse of Chinese geographers writing in the journal *Geographic Knowledge* developed in negotiation with the state. This approach reveals formidable intellectual communities committed to state-building, but also agents of their own discipline.

Primary Sources

The narrative presented here draws from a primary source base primarily of memoirs, an oral autobiography, and articles in the periodical *Geographic Knowledge* (地理知识, *dili zhishi*) written by or in collaboration with Shi Yafeng (施雅风, 1919-2011), a second generation Chinese geographer.[19] Shi's accounts and early work provide insight into academic life during the Japanese invasion, the People's Liberation Army (PLA) takeover of Nanjing, and the disciplinary restructuring under the Chinese Communist Party (CCP). More importantly, his accounts and early writings convey the entanglements of ardent nationalism and modern geographic studies along with a sense of improvisation in the scholarly craft. Nationalistic sentiments fueled Shi's early interest in geographic studies, and as a professional he sought to apply his skills in the national cause. After 1949, when the survival of the discipline depended on its practical

[19] I refer to second-generation geographers as those who graduated from Chinese geography departments in the 1930s or later. Many of them have little memory of China before May Fourth and often received their education in geography exclusively in China. Unlike the first generation of pioneering Chinese geographers, the second generation generally held paying positions as geographers, either as researchers or university faculty.

contributions to state-building, Shi pioneered a "new" geography, the approaches to which he developed publicly in the popular magazine *Geographic Knowledge*.

Chapter Summaries

Chapter II introduces the sophisticated and developing technologies and legacies of knowing spaces in premodern China. This knowledge distinguished itself from modern geography beginning from the late nineteenth century when "geography" (*dili* 地理) underwent "translingual practice" the Jiangnan Arsenal of Shanghai.[20] This "new" geography became a tool of nation-building as the Qing government stipulated a geographical education as a means to instill a sense of nationalism among Chinese. Similarly, China's first "earth-science" based study society touted geographic knowledge as a way to connect the individual with the spaces of the nation.

Chapter III explores the establishment of Chinese geography as an academic discipline. Geography in the 1920s and 30s developed rapidly and in relationship to the fluctuating perceptions of hierarchy in the nation-state system. The chapter also introduces Shi Yafeng (施雅风 1919-2011), a member of the second generation of Chinese geographers. Shi's path to becoming a professional geographer sheds light on the scholarly trajectories and professionalization of the growing Chinese geography community.

[20] Lydia H. Liu, *Translingual Practice: Literature, National Culture, and Translated Modernity China, 1900-1937*, (Stanford: Stanford University Press, 1995).

Chapter IV traces the Soviet intellectual pathways that came to provide the preliminary ideological framework for Chinese geographers after the establishment of the People's Republic. Soviet Marxists espoused diverging views of the natural world, a lively debate that became standardized with the publication of Stalin's authoritative *Historical and Dialectical Materialism*. I argue that flexible notions of "science" and "geography" continued to serve the nation-building project in the post-1949 period. As with geography in the Republican period, geographers adapted their discipline to the fluctuating needs of the state. In the case of the early years of the PRC, geography and science authorized China's urgent modernization project.

CHAPTER II

MAKING *DILI* MODERN: THE ORIGINS OF MODERN GEOGRAPHY AND CHINESE NATIONALIST DISCOURSE (1880-1919)

"*Over the course of history, a lack of geographical knowledge has influenced the nation. This is a source of disaster that spreads to the nation's peoples…*"

Dixue zazhi, China's first geographical periodical, 1910[21]

Chinese civilization boasts a long heritage of geographic studies.[22] However, modern appropriations of "geography" (*dilixue* 地理学) that project the term onto the past are misleading. At the turn of the century *dili* underwent what Lydia Liu calls "translingual practice," rendering the indigenous meaning obsolete and giving rise to the new semiotic modernity of *dili*.[23] This chapter explores the genesis of modern geography in China. Here modernity is associated with pulling "studies of space," or *dixue* (地学) out of the knowledge category of *gezhi*, and rendering it an independent subject of intellectual inquiry and pedagogy. The Qing government, together with the Geo-Society (*di xuehui*, 地学会), the first institute in China dedicated to the study of

[21] Quoted from Tze-ki Hon, "*jinru shijie de cuozhe yu ziyou: ershi shiji chu de Dixue zazhi,*" [Entering the world's troubles and freedom: *Geo-Magazine* in the early twentieth century], *Xin shixue* Vol. 19 no. 2 (2009), 158.

[22] Hu and Jiang, *Zhongguo dilixue shi* and Wang Chengzu, Zhongguo dilixue shi, [The history of Chinese geography] (Beijing: Shangwu yinshuguan, 1982).

[23] Lydia H. Liu, *Translingual Practice: Literature, National Culture, and Translated Modernity China, 1900-1937*, (Stanford: Stanford University Press, 1995).

spaces, appropriated *dixue* as a tool of understanding the global system of nation-states and inculcating a sense of individual national identity vis-à-vis land space.

Yange Geography and Western Categories

Though it is anachronistic to survey the "premodern" Chinese history of geographic studies as if spatial thought confined to a modern geo-category were inevitable, a brief encounter with the premodern spatial knowledge of dynastic China reveals a rich epistemological heritage of knowing the earth, especially as a tool of governance. "Traditional" Chinese geographic knowledge, or knowledge about spaces before the *kexue* categorization system, facilitated governance for more than two thousand years.

The historical record began when an unknown scholar mapped the physical and cultural terrain of the Eastern Zhou dynasty (770-256 B.C.E.). Historians today regard the product of his labors, *Yugong* (禹贡, Tribute of Yü), as the earliest Chinese geographical text. Compiled in the fifth century B.C.E., the work provides a narrative record of the nine provinces of the Eastern Zhou, its natural borders, waterways, soil types, and characteristic products. The document concludes with a textual description of the perceived spacio-civilizational order with "royal domains" at the center, followed by the realms identified as "prince domains," "pacification zone," "allied barbarians," and finally "cultureless savagery" extending outward from the royal center in increments of

500 *li*.[24] The geography reflected the political and cultural worldview of the Mandate of Heaven, a notion that the heavenly cosmos bestow ultimate authority to rule the Middle Kingdom upon a ruler, earning him the title of emperor. An emperor who holds the Heavenly Mandate acts as the political, and as *Yugong* shows, cultural, center of "all under heaven" (*tianxia* 天下).

Subsequent dynasties continued to produce geographical writing in accordance with the shifting needs of governance and principles of the Mandate. They also provide expression in artful cartography. Joseph Needham has documented elaborate representations of physical geography in the form of stone-carved maps,[25] together with strong evidence of geometrical surveying technologies. He has located frontier relief maps that date back at least to the Song.[26] Yuan dynasty astronomer, mathematician and hydraulic engineer Guo Shoujing (郭守敬, 1231-1316) developed large-scale land surveys in terms of latitude, though he never applied the technology to map-making.[27] The Ming dynasty traveler (anachronistically known today as a geographer) Xu Xiake (徐霞客 1587-1641) famously traversed and recorded the remote western regions of the imperial borderlands.

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[24] Citation and translation in Colin A. Ronan, *The Shorter Science and Civilisation in China: An Abridgement of Joseph Needham's Original Text*. Vol 2. (New York: Cambridge University Press, 1981), 238. Five hundred *li* would have been roughly equivalent to 210 kilometers.

[25] Ibid, 265-267. Here I specifically refer to the famous *Yu Ji Tu* (禹迹图, Map of the Tracks of Yu), an outstanding work of Song cartography which highlights the river systems of Chinese territory with remarkable precision.

[26] Ibid, 275-282.

[27] Hu, *Zhongguo dilixue shi*, 168.

Qing Empire geographies facilitated Qing territorial expansion. Qing rulers contracted Jesuits to map the empire, engaging Qing officials in an intercultural exchange of geographic knowledge with Europeans.[28] Information exchange enabled officials to position the Qing within the Western world order of modern nations and participate in a competitive state-building process.[29] Landscapes, peoples, and territorial resources, as well as geographic awareness of cultural borders and potential threats all figured into the developing geographies of the cosmological order of the Qing. Geography produced in a dynastic context provided a useful tool of governance. Officials carefully marked administrative regions and the waterways crucial to agricultural production. Relations with outside scholars and powers produced sense of "self" and "other" as polities outside of Qing territory developed into nation-states.

Geographical thought and development of early civilizations in the region we now commonly refer to as the "West" saw a parallel trajectory. However, the modern legacy of Western geography, or a geography categorized as *scientific* in the modern sense of knowledge categorization, begins much later. In 1757, about one hundred years after the Manchus established their Qing dynasty, a young university lecturer announced his intention to conduct academic courses on physical geography.[30] Immanuel Kant began to elucidate the intellectual genealogy of modern Western geography, or geography as an academic discipline, in the Prussian seaside city of Königsberg. Kant himself never

[28] Peter Perdue, *China Marches West: The Qing Conquest of Central Eurasia*, (Cambridge, Mass.: The Belknap Press of Harvard University Press, 2005), 550.

[29] Laura Hostetler, *Qing Colonial Enterprise: Ethnography and Cartography in Early Modern China*, (Chicago: University of Chicago Press, 2001); Peter Perdue, *China Marches West*, 549.

[30] Paul Guyer, "Chronology," in *Kant*, (New York: Routledge, 2007), xi.

published his lecture materials on geography.[31] In general, his ideas on the subject have attracted little scholarly attention. Kantian scholars with some familiarity with his geographical thinking commonly regard the content as insignificant or even embarrassing.[32] Yet Kant taught courses on geography forty-nine times over a forty year period – no small number compared to the fifty-four times he taught courses on ethics and metaphysics.[33] This suggests that Kant was himself convinced of the essential role of geographic knowledge in institutes of education. Kant asserted authority over geography as a category when he stated, "The physical geography, which I herewith announce, belongs to an idea which I create from myself for purposes of useful academic instruction, and which I could call the preliminary exercise in the knowledge of the world."[34] Kant's geographical knowledge, for at least Kant himself, was a fundamental knowledge.

The Kantian legacy in modern geography has been debated with no consensus. Nevertheless, it is clear that his lectures did articulate geography, not only as a discipline of knowledge long before its formal institutionalization, but also as a tool of knowing the world through categories. Kant believed in the merit of geography as a scientific

[31] David Harvey, *Cosmopolitanism and the Geographies of Freedom*, (New York, Columbia University Press, 2009), 28. Kant's *Physical Geography* was published based on materials from his students' notes.

[32] David Harvey, *Cosmopolitanism*, 19. Kant presented a number of environmental determinist and racist ideas in his lectures.

[33] David Harvey, *Cosmopolitanism*, 20.

[34] Immanuel Kant, "Von den verschiedenen Racen der Menschen," *Gesammelte Schriften*. Vol. 2, cited and translated in J.A. May's translation in *Kant's Concept of Geography and its Relation to Recent Geographical Thought* (Toronto: University of Toronto, 1970), 107.

discipline, either as a discipline of spatial "synthesizing" of other sciences,[35] like biology or geology, or a discipline based on the ordering of space into regions such that local truths and laws become evident.[36] It's clear that Kant focused on the phenomena that distinguished regions, whereas his classical predecessors described the features of spatial divisions. In other words, while classical scholars aimed to systematically describe divisions of the Earth in terms of "composite terrestrial units," Kant was interested in "the orderly investigation" of the phenomena that denoted an area or region.[37] These two approaches to geographical inquiry later formed two traditions of scholarship, one theoretical (deductive) and the other empirical (descriptive).[38] Like other early modern geographers, physical geography for Kant still first and foremost meant descriptions of the earth.[39] However, despite his belief in a human universalism, he believed spatial conditions produced human differences that could be explained in terms of the rational categories of science. In the words of Kant, as quoted from his lesser known *Physical Geography*, "Ideas are architectonic; they create the sciences…Our [introduction to physical geography] serves as an idea for knowledge of the world. [We are] making an architectonic concept for ourselves, which is a concept whereby the manifold parts are

[35] David Harvey, *Cosmopolitanism*, 32.

[36] Ibid, 33.

[37] Robert E. Dickinson, *The Makers of Modern Geography* (New York: Frederick A. Praeger, 1969), 11.

[38] Ibid.

[39] Immanuel Kant, Introduction to *Physical Geography*, trans. Olaf Reinhardt in *The Cambridge Edition of the Works of Immanuel Kant: Natural Science*, Eric Watkins ed. (Cambridge: Cambridge University Press, 2012), 445.

derived from the whole."[40] Kant sent forth a structure that rendered spaces of the world knowable through category.

Two other very important architects of modern geography are more commonly recognized for their contribution to modern geography. Alexander von Humboldt (1769-1859) and Carl Ritter (1779-1859) created their own categories of geographic knowledge that came to be widely known and applied to subsequent studies. Kant was among the first to teach geography in a university and advocated for its status as a scientific mode of inquiry, and he is commonly noted as an influential thinker in the formation of geography as an academic discipline.[41] However, Humboldt and Ritter are widely recognized as the founders of modern geography, both inside and outside of China.[42] Humboldt divided geographical knowledge of the natural world into three categories: physiographic (as in a systematic description of nature), historical, and physical.[43] These categories would also

[40] Immanuel Kant, Introduction to *Physical Geography*, 446-447.

[41] Zheng Zhaopei, *Dilixue sixiang shi* [*The history of geographic thought*], (Beijing: Kexue chubanshe, 2008),78. Zheng notes Kant's belief that human action can change the face of the earth, but did not believe in the differentiation between natural and human processes. However, this appears to be a direct uncited quote from Preston E. James, *All Possible Worlds: A History of Geographical Ideas*, (New York: The Bobbs-Merrill Company, Inc., 1972), 144. He also credits Kant for contributing toward a modern systematic treatment of geographic study; Yang Wuyang and Cao Wanru note Kant's "dualist" philosophy as a foundation for modern geographic methodology in ""dilixue fazhanshi (history of development in geography)," *Zhongguo da baikequanshu: dilixue* [*Great Encyclopedia of China: Geography*], Beijing: Zhongguo da baikequanshu chubanshe, 1990), 82. Hou Renzhi also notes Kant in his article on historical geography in the *Great Encyclopedia of China: Geography*, page 276.

[42] Dickinson, *The Makers of Modern Geography*, 22. Preston E. James suggests their work might also mark an end to the classical period of geography in *All Possible Worlds*, 147. Li Xudan and Yu Xiaogan, "A. von *Hangbao* (Alexander von Humboldt 1769-1859)" in *Zhongguo da baikequanshu: dilixue* [*Great Encyclopedia of China: Geography*], Beijing: Zhongguo da baikequanshu chubanshe, 1990), 208-209. This source is one volume of a fifty-five volume series. The editing team for the geography volume is made up of first and second generation Chinese geographers who formed the field. The authors identify Humboldt as a natural scientist who held a strong belief in the natural world as a system of mutual relationships. His methodology is described as empirical and inductive. Li Xudan presents a similar description of Carl Ritter in the *Great Encyclopedia of China: Geography*, page 273-274.

[43] Dickinson, *The Makers of Modern Geography*, 23

come to organize and divide the terrain of Chinese geographical notions during the Republican period together with climatology, a term that Humboldt likely coined.[44] Together the Germans developed a dualistic concept of geography, on one hand, geography considered the earth as a natural body; on the other hand, a social branch of geography regarded earth as the realm of humans.[45]

Both Humboldt and Ritter believed fervently in geography as an empirical science. Humboldt often stated that empirical knowledge was "based on the thoughtful observation of the phenomena revealed to the senses."[46] Ritter also regarded geography as an empirical endeavor, stating, "I have demonstrated that geography has a right to be considered a sharply-defined science, of kindred dignity with the others."[47] Humboldt practiced his beliefs, traveling the world and recording his physical descriptions of the landscapes, animals, and vegetation of South America and Central Asia, a methodology that would come to define the heart of modern geography in China. Empirical methods would come to distinguish modern/scientific geography (empirical) and non-modern/non-scientific geography (philological). As historian Chen Zhihong's research shows, Republican period geographers found useful the notion of on-site exploration as a modern

[44] Ibid, 24.

[45] Ibid, 52.

[46] Ibid, 23.

[47] Ibid, 35-36.

scientific pursuit for state-building projects in the 1920s and 30s.[48] Humboldt and Ritter's approaches to geography under the authority of science points to a broad epistemic project among modern Western scholars to order and rationalize the physical world through classification.

The Qing came closer to adopting new spatial classifications as the gradual encroachment of colonial powers called into question the Mandate of Heaven focused worldview and governance upon which the Qing geographies were based. France encroached upon Yunnan province. Great Britain demonstrated its military prowess in the Opium Wars. Japan followed by defeating the Qing forces during first Sino-Japanese War in 1895. These humiliating defeats engendered a sense of urgency among Qing intellectuals for both revolutionaries and reformers. In this context, the Qing heavenly worldview was threatened. Educational reform along with epistemological re-categorization paved the transition from the Qing empire to the modern Chinese nation.

Epistimological Modernity and Language

Modern Chinese geography as a *Chinese* category of knowledge within a larger framework of Western science began with translation projects conducted in conjunction with the Jiangnan Arsenal in Shanghai. The Jiangnan Arsenal translations of geographic studies in Shanghai facilitated what Lydia Liu has coined "translingual practice," here

[48] Chen Zhihong, "Stretching the Skin of the Nation: Chinese Intellectuals, the State, and the Frontiers in the Nanjing Decade (1927-1937)," PhD diss, (University of Oregon, 2008) She makes this point succinctly on pages 198-200.

adapted to geographic spaces and places. Liu has explored translation as a site of "complex processes of domination, resistance, and appropriation" in which meaning is not transformed, but created anew.[49] This process gives rise to new and powerful discourses that serve as tools of power within the host language and among native speakers. Liu thus renders a more complex understanding of neologisms in twentieth century China that goes beyond the view of neologism as a practice that simply reveals Western colonial hegemony. An imperial edict led to the establishment of the Jiangnan Arsenal in Shanghai in 1865 in the context of the Qing self-strengthening (*ziqiang* 自强) movement (roughly 1861-1895).[50] Qing authorities intended the arsenal to function primarily as a means to a modernized military, but it also became a site of cultural and linguistic exchange. Translations at the arsenal began from 1868 and were widely circulated in official circles.[51] Works categorized as geography in the West were among some of the most commonly translated at the end of the nineteenth century. Translators at the Jiangnan Arsenal in Shanghai introduced several "geo-science" texts to China's bookstores by 1896.[52]

[49] Lydia H. Liu, *Translingual Practice: Literature, National Culture, and Translated Modernity China, 1900-1937* (Stanford: Stanford University Press, 1995), 25-26.

[50] Ting-yee Kuo, "Self-Strengthening: The Pursuit of Western Technology" in *The Cambridge History of China*, Vol. 10, Denis Twitchett and John K. Fairbank eds. (New York: Cambridge University Press, 1978), 499.

[51] Yen-P'ing Hao and Erh-min Wang, "Changing Chinese views of Western relations, 1840-60," in *The Cambridge History of China*, Vol. 11, Denis Twitchett and John K. Fairbank eds. (New York: Cambridge University Press, 1980), 169-170.

[52] Appendix IV "Analysis of the Works Translated by John Fryer" in Adrian Arthur Bennett, *John Fryer: The Introduction of Western Science and Technology into Nineteenth-Century China*, (Cambridge, Mass.: Harvard East Asian Monographs, 1967), 110.

Literature scholar Meng Yue suggests that prior to the late nineteenth century in China, knowledge itself lacked inscribed hierarchical meaning. Early systems of translation and integration of Western science into China operated on an ideal of non-hierarchical translatability across language, culture, and politics until the dramatic shift marked by the first Sino-Japanese War (1894-95).[53] Meng Yue has proposed that technological and "scientific" information was translated into the terms of the existing Chinese *gezhi*[54] epistemological system.[55] As she points out, "…books of modern science were translated, not to be divided from nonsciences but, rather to be mixed with them. The knowledge included in the *gezhi* was non-divided or nondividable from nonsciences and the nonmodern."[56] The *gezhi* category thus housed translated content and integrated it into the Chinese literati world without the Western classification.

A fundamental semiotic shift seems to occur for understandings of spatial knowledge around the 1880s, with translations introduced by John Fryer (1839-1928) and his colleagues. In 1883, Fryer's translated ideas on physical geography are adumbrated in part one of the "Science Outline Series" (*Gezhi xuzhi*, 格致须知)[57] entitling the work,

[53] Meng Yue, *Shanghai and the Edges of Empires*, (Minneapolis: University of Minnesota Press, 2006), 27

[54] *Gezhi* is a category of knowledge with origins in the Song Dynasty. Over time the meaning of the term evolved, but by the late nineteenth century, it referred exclusively to a category of knowledge based on evidential learning.

[55] Meng Yue, *Shanghai*, 27.

[56] Ibid, 16.

[57] Translation from Benjamin A. Elman, *On Their Own Terms: Science in China, 1550-1900*, (Cambridge: Harvard University Press, 2005), 321.

Dili xuzhi (地理须知, *What to know about Geography*).[58] Fryer's geography certainly diverged from Chinese notions of "chronological geography" which were composed primarily of waterways and Qing administrative units. Yet Fryer used the term used in "chronological geography" (*dili* 地理) in his translation. Thus the term, at least at this moment, begins to signify an alternate meaning. *Dili* appears to acquire a Western notion of physical geography, that is, the idea of *dili* as a study of areas under scientific characterization espoused by early Western geographers, even as Chinese literati operated within the epistemic organization of *gezhi.*

The first Sino-Japanese War (1894-1895) would mark a turning point for transnational information flows between the West and China, one that would come to redefine power dynamics imbedded in a new hegemonic discourse of modern science. First, *gezhi*, the Chinese expression for an accumulated body of human knowledge about the world, lost its credibility. Though the term retained a place in the curriculum for the civil service examinations until they were abolished in 1905.[59] In the words of Meng Yue, "The Sino-Japanese War denied or erased, at least at ideological and psychological levels, any possible [Chinese] scientific and technological achievements prior to 1894."[60] Japan's earlier modernization efforts took very seriously the formation of a new national

[58] Adrian Arthur Bennett, *John Fryer: The Introduction of Western Science and Technology into Nineteenth-Century China*, (Cambridge: East Asian Research Center, 1967), 87.

[59] Elman, *On Their Own Terms*, 409.

[60] Meng Yue, *Shanghai*, 29.

defense system that involved the construction of a state-of-the-art navy. This also diminished any remaining sense of Chinese superiority in the region.

Second, Japanese terminology for the modern sciences became more popular among Chinese, particularly those coming home from studies in Japan.[61] The Japanese neologism *kagaku*, or *kexue* (科学) in Chinese, became the term of choice among Chinese students over *gezhi*.[62] The acceptance of *kexue*, literally "knowledge classified by field," indicates more than a nominal shift in the representation of organized inquiry into the world's phenomena.[63] As the literal translation indicates, *kexue* refers to categories of learning delineated by Western scholars. In the case of geography this ushered in ideas adumbrated by scholars like Kant, Humboldt, and Ritter. The gradual integration of the *kexue* classification system after 1895 required not only that China integrate information from the West, but also that Chinese intellectuals adopt the corresponding enterprise of knowledge production and management, a program which posited Chinese knowledge systems as inferior and backward.

As the knowledge categorization system of the West developed in the context of Western colonial enterprises in the late nineteenth and early twentieth centuries, Western neologisms came to impart a new level of value and hierarchy. Thus, Chinese "chronological geography" (*yange dili*, 沿革地理), the term which appeared in earlier

[61] Elman, *On Their Own* Terms, 409.

[62] Ibid.

[63] Cited and translation from Elman, *On Their Own Terms*, 409.

dynastic texts to denote "an account of administrative regions and waterways,"[64] became historical geography (*lishi dili* 历史地理*)* during the late Qing reform. The term represented a combination of "chronological geography" which designated borders of the Qing empire and the universalized geopolitics of modern nationhood. *Dili* in the classical sense served the imperial court as a means naming and knowing places for the benefit of state effectiveness, security, and control. In the late Qing, historical geography became a part of the new education system to denote the study of the world in accord with modern (imported) geo-political understandings of nationhood.

Identifying the Citizen with National Space

The new categories of *kexue*, paired with their corresponding neologisms, connected Chinese intellectuals to the intellectual societies and institutions of the foreign imperial powers. Elman points out that by 1903, state and private schools used Japanese translations for modern classifications. These included social sciences (*shehui kexue*), natural sciences (*ziran kexue*), and applied sciences (*yingyong kexue*).[65] Similarly, Hon notes that the Qing government included historical geography, a neologism by way of Japan, in the national school system that was established as a result of the Qing "New Policies" (1901-11). Thus, a policy aimed to instil a sense of national identity.[66] As the

[64] Tze-ki Hon,"Marking the Boundaries: The Rise of Historical Geography in Republican China," in *Transfroming History: The Making of a Modern Academic Discipline in Twentieth-Century China*, Brian Moloughney and Peter Zarrow Eds. (Hong Kong: The Chinese University Press, 2011), 307.

[65] Elman, *On Their Own Terms*, 409.

[66] Hon, "Marking the Boundaries," 303.

reorganization of knowledge tethered Chinese nationalist efforts to Western systems of learning and knowing, intellectual inquiries outside the realm of *kexue* ran the risk of being labeled non-scientific (*bu kexue*) or non-modern (*bu xiandai)* and, as such, ineffective in the establishment of a new, modern nation. Under this early definition of *kexue* ("knowledge classified by field"), history, too, fit into the category of science.

The institutionalization of geography as a route to modern knowledge production began with one of China's first modern geographers, Zhang Xiangwen (张相文, 1866-1933). In his youth Zhang attended Nanyang Public Teacher's College in Henan province where he acquired proficiency in Japanese and studied Western geographic theory through Japanese language geographic texts.[67] After completing his studies in 1899 he stayed on at the teacher's college to work as a geography teacher.[68] From 1907 to 1911, Zhang moved to the treaty port of Tianjin to teach at an international girls high school[69] There, in 1909, he established China's first Geo-Science Society (*Dixue hui*, 地学会), an institution dedicated to "earth studies" according to modern theories and methods. A few months later in 1910 the society produced its first publication, *Geo-Magazine* (*Dixue zazhi*, 地学杂志) in Beijing. Given Zhang's early experiences in Japan, he likely modeled his *Dixue hui* from Japan's first geographical society, which was established in 1879, the Tokyo Geographical Society (东京地学协会).[70] The journal

[67] Hu Xin and Jiang Xiaoqun. *Zhongguo dilixue shi* [History of Chinese Geography]. (Taipei: Wenjin chubanshe, 1995), 239

[68] Ibid.

[69] Ibid.

[70] Q. Edward Wang argues the idea of nationalist historiography in China began with Japanese ideas of nationalist historiography. A flow of information in the years following the first Sino-Japanese War

of the Tokyo Geographical Society began publication ten years later in 1889 under the name *Chigaku zasshi*, precisely the name of China's first modern geographical publication published by Zhang's society.[71] Though the content was not immediately and explicitly "science," Zhang founded a society for *kexue* to understand spaces under the categories of Western learning funneled through Japan. It was learning by field, in this case, the field of "knowing the earth," as Kant had stated 150 years earlier.

One of the influential globally circulating discourses current among intellectuals in early twentieth century China was Herbert Spencer's notion of "survival of the fittest." Popular philosopher Yan Fu translated Spencer's ideas several years prior to the founding of the Geo-Science Society. An extreme version of Spencer's ideas were reflected in Friedrich Ratzel's (1844-1904) *Lebensraum*, or "Living Space." The concerns of *Geo-Magazine* were consistent with "Living Space" theory. Ratzel applied an evolutionist notion of "survival of the fittest" to geopolitics, forwarding a notion that stronger, more civilized political bodies would consume the spaces of weaker ones. The theory proved thinking in terms of space was crucial if China survive threats to what were the Qing territories. The first issue of *Geo-Magazine* appears to address readers in terms of the *Lebensraum* mode of thinking: "Land provides us with the food and comfort necessary

brought the notion to China. "Narrating the Nation: Meiji Historiography, New History Textbooks, and the Disciplinarization of History in China," *Transforming History: The Making of a Modern Academic Discipline in Twentieth-Century China*, Brian Moloughney and Peter Zarrow eds. (Hong Kong: The Chinese University Press, 2011), 103-127. One might speculate that Zhang may have adopted a nationalistic understanding of space via Meiji Japan.

[71] Tokyo Geographical Society, http://www.geog.or.jp/journal/en/information-en/about-this-journal-en.html. Publication of China's *Dixue zazhi* ended in 1937, the year Japan's military aggression in the then capitol of Nanjing, perhaps symbolizing the end of Japanese tutelage in the Chinese transition to modernity.

for life. We come together to as a nation to survive, but evolution is fierce."[72] As Hon notes in his analysis of the passage, the message is "the weak become food for the strong."[73] The editors go on to say, "[This] is part of the universal principle (*gongli* 公理) of the natural selection of the fittest."[74] The Ratzelian idea of political geographic study may have spurred Zhang's efforts to form a modern geographic consciousness among his intellectual peers.

As the first geographical institutions in China, the Geo-Science Society and *Geo-Magazine* set a precedent for ways of modern geographical knowing in China, drawing parallels between miscellaneous spatial knowledge and national salvation. Despite the chaos of the political and social arenas in China over its twenty-seven years of publication, *Geo-Magazine* produced a tremendous amount of geographic information. All together the organization published over 1,600 papers on a broad range of topics, including maps, records of the Geo-Science Society, and introductions to new books.[75] Its establishment in the context of Qing decline infused the periodical, at least in its early years, with sharp political objectives. Like the historical geography of the Qing, *Geo-Magazine* was established "with the explicit goal of creating a cosmopolitan modern

[72] Quoted from Tze-ki Hon, "*jinru shijie de cuozhe yu ziyou: ershi shiji chu de Dixue zazhi*," [Entering the world's troubles and freedom: *Geo-Magazine* in the early twentieth century], *Xin shixue* 19, no. 2 (2009), 158. Translation is my own.

[73] Hon, "jinru shijie," 158.

[74] Quoted from Tze-ki Hon, "Marking the Boundaries: The Rise of Historical Geography in Republican China, in *Transfroming History: The Making of a Modern Academic Discipline in Twentieth-Century China*, Brian Moloughney and Peter Zarrow Eds. (Hong Kong: The Chinese University Press, 2011), 309. Translation is Hon's.

[75] Lin Chao, "Dixue zazhi, 1910-1937," [Geo-Study Magazine, 1910-1937] in *Zhongguo dilixue 90 nian fazhan huiyi lu* [Recollections on 90 Years of Geographic Study Development in China], Wu Chuanjun and Shi Yafeng eds. (Beijing: Xueyuan chubanshe, 1999), 632-633.

citizenry."[76] Under the category of "earth studies" (*dixue* 地学) the magazine broadly bundled a unified field of "earth" subfields encompassing politics, economy, geology, and more. In addition, discussions were open to all interested parties, opening the first official public venue for discourse on "the spaces of the earth."

After the May Fourth Movement of 1919, *Geo-Magazine* continued business, but the new wave of science coincided with the developing field of human geography in the United States and France. Social Darwinist ideas had long been a part of Chinese society, but a new conceptualization of the earth-human relationship was forming According to the recollections of Lin Chao (林超 1909-1991), a Chinese geographer and graduate of Nanjing University in 1930, the *Geo-Magazine* underwent a shift in content beginning from 1922. Lin remarks that the magazine editors incorporated a greater number of translated materials from abroad during the 1920s in comparison to the earlier years of the magazine, so much that the editors themselves came to refer to their publication as a "translation periodical."[77] Among the translations were essays on human geography and environmental determinism by the renowned Yale professor Ellsworth Huntington.[78] The circulation of his ideas and those of other Western contemporary geographers would redefine geography as a discipline of knowledge, and soon, as a discipline of higher learning.

[76] Grace Yen Shen, *Unearthing the Nation: Modern Geology and Nationalism in Republican China* (Chicago: University of Chicago Press, 2014), 77.

[77] Lin Chao. "Dixue zazhi," 632.

[78] Ibid, 633.

Conclusion

As we have seen, education reform, translingual practices, and the beginning of a modern intellectual community combined to create a discursive foundation for nation building. Geographic knowledge for the purpose of nation-building disseminated popularly (albeit to a small population of rather privileged students and educators relative to the whole of China's population). The geographic societies and publications assisted in the nation-building project by developing a discourse of nationhood linked to modern territorial claims. These claims were not founded simply on the idea of naturalized Chinese national boundaries derived from the Qing legacy, but forged by individuals like Zhang Xiangwen and his society of interested Chinese.

The next generation of geographers in China would come to inherit the geographical knowledge of the late Qing and early Republican period. New state imperatives would energize a growing number of individuals to participate in geographical knowledge consumption and production. With a reinforced nationalism made urgent by foreign attack, the next generation of mostly Nanjing-based students would coalesce into even stronger intellectual communities and take the reins of knowledge production.

CHAPTER III

FROM *DIXUE* TO *DILIXUE*: THE DEVELOPMENT OF A CHINESE SCHOLARLY COMMUNITY AND DISCIPLINE (1919-1949)

Our society should spare no effort in the promotion of science; it is truly the sole and essential method of rescuing China from impoverishment and plagues.[79]

Huang Changgu (黄昌谷), 1934

Education reform under the "New Policies" of the late Qing incorporated historical geography, a "modernized" version of the indigenous "chronological geography" into public education as a means to build national consciousness. The earliest educational materials from the first decade of the twentieth century presented China and the globe as marked by the geo-political boundaries of the nation-state system.[80] A new "earth studies" category appeared in the form of a study society that fostered open discourse about knowing the nation through spaces.

In light of the tremendous political and social shifts of China in the 1920s and 30s, the "historical geography" and "geo" categories soon expanded to accommodate the growing international field of geography along with China's state-building imperatives. What follows traces a few of these developments in light of Tzi-ki Hon's work which interprets Chinese perspectives on geography in relationship to Chinese collective

[79] Huang Changgu. "*kexue yu zhixing*," [Science and knowledge/practice] in *Kexue tonglun*. (Shanghai: Shangwu yinshuguan 1934), 14.

[80] Tze-ki Hon, "Marking the Boundaries," 308-309.

internalization of the nation-state system.[81] While the nation-state system was perceived as a *hierarchy in space* for acquiring resources, wealth, and land, "historical geography became a study of territorial sovereignty and the nation's resources."[82] While the nation-state system was viewed as a "*hierarchy in time*," historical geography became a study of culture and society, aiming to "catch up" with the West.[83] Geographers' appropriation of spatial knowledge reveals the malleability and usefulness of geography as a knowledge classification in China's state-building project. In addition, as intellectuals established representative and financially supportive Chinese institutions that facilitated international scientific discourse the *kexue* category offered more valuable currency for authorizing the nationalistic ambitions of Chinese intellectuals.

Pioneering Post-May Fourth Geography

The first generation of modern Chinese geographers integrated the geography discipline into the Chinese worldview and education system. Trained abroad within Western education systems in a variety of earth and space related disciplines, foreign educated intellectuals produced geographic knowledge in accord with Western geographic trends and geo-politics. Five individuals stand out as the most influential first-generation agents of modern Chinese geography formation in the early twentieth century: Zhu Kezhen (竺可桢, 1890-1974), Weng Wenhao, (翁文灝 1889-1971), Zhang

[81] Ibid.

[82] Ibid.

[83] Ibid.

Qiyun (张其昀 1901-1985), Hu Huanyong (胡焕庸 1901-1998), and Huang Guozhang (黄国璋 1896-1966) Hu Huanyong particularly influenced the Nanjing geographic community. Hu studied at Harvard and at the University of Paris under the world-renowned human geographer Jean Brunhes (1869-1932). Upon his return from Paris in 1928 he directed the geography department at National Central University, held a position as professor, and served as chairman of the board for Geographic Society of China.[84]

Hu Huanyong and Zhang Qiyun, both geographers and professors at National Central University in Nanjing, advocated for education in scientific geography in China. Together they established *Dili zazhi* in 1928, a periodical aimed at promoting geography in secondary education.[85] Zhang Qiyun also called scientific geography through local gazetteers.[86] In 1925 Zhang Qiyun edited a three-volume textbook simply entitled *Human Geography* in which he quoted geographer and meteorologist, Zhu Kezhen. His didactic introductory note points out appropriate methods for teaching primary and middle school students, suggesting deductive methods for the younger primary students and inductive methods for the older students.[87] The text stipulates not only what to teach students, but how to teach, referring to pedagogical methods employed by Western

[84] Jin Zumeng, "Hu Huanyong," in Zhongguo Da Baikequanshu: Dilixue [*Encyclopedia of China: The Study of Geography*], (Shanghai: Zhongguo da baikequanshu chubanshe, 1990), 210.

[85] Chen, Stretching the Skin, 230.

[86] Ibid, 235-36.

[87] Zhu Kezhen in the preface to *Chuzhong jiaokeshu rensheng dili* [*Human Geography for Junior Middle Schools*] Vol. 1, Zhang Qiyun ed. (Shanghai: Shanghai Commercial Press, 1925), iii.

scholars. The text refers to a number of geographic texts published in the teens and early twenties authored by an international group of scholars.

Establishing Localized and Globalized Scholarly Discourse

The beginning of an institutionalized science program that was, at once, Chinese and international began in 1914, when a group of Chinese students at Cornell University organized the Science Society of China (*Zhongguo kexueshe* 中国科学社). In 1917, the founders formally registered the society with the Guomindang government. A year later the society established administrative and editorial offices in Nanjing.[88] After the Guomindang government became officially established in 1927, the Ministry of Finance granted the society 400,000 yuan, a fantastic sum at the time, along with permanent properties in Nanjing.[89] Zhu Kezhen and Weng Wenhao were among the society's avid supporters.[90] The society published a journal entitled *Science* (*kexue*, 科学). Zhu frequently contributed essays on geography and climatology from 1916 to 1950 and served as president of the society from 1927 to 1930.[91]

The success of Jiang Jieshi's Northern Expedition (1926-28) and Jiang's establishment of the capital in Nanjing produced a relatively stable environment in the

[88] Peter Buck, *American Science and Modern China: 1876-1936*. (Cambridge: Cambridge University Press, 1980), 95-96.

[89] Zuo Yuewang, "Saving China through Science: The Science Society of China, Scientific Nationalism, and Civil Society in Republican China," in *Osiris*, 2nd Series, Vol. 17 *Science and Civil Society* (Lynn K. Nyhart and Thomas Broman eds. (Chicago: University of Chicago Press, 2002), 313.

[90] Peter Buck, *American Science*, 95.

[91] Zuo Yuewang, "Saving China Through Science," 305.

capital that contributed to the development of a scholarly community. The signal event for a new level of state-supported academic structure was the establishment of an official national scientific research institute of the Guomindang government, Academia Sinica (中国中央研究院), in 1928. Members of the earlier Science Society of China led by Cai Yuanpei pushed for its inception. Modeled after French and Soviet systems of state support for research,[92] the administrative body primarily focused on the natural and social sciences. Academia Sinica never created a geography research institute, but it nonetheless guided scientific policy in an effort to build the Chinese nation. It also represented the Guomindang's official ties with the modern global scientific community. Academia Sinica, as a highly politicized managing body for research and publication, further developed geographic studies by supporting research in the natural sciences that often crossed over into the research of geographers.

The early years of the Nanjing Decade (1927-37) also saw the official institutionalization and recognition of modern Chinese geography as an academic discipline in higher education. As one of his first actions as Director of Governmental Examinations for the Nanjing government, Dai Jitao (戴季陶, 1891-1949) petitioned the government soon after its establishment to institutionalize independent geography departments in universities.[93] A "geo-science" category was already in place, the earliest department beginning from 1921 at National Southeastern University (later National Central University, 1928-1949 and Nanjing University, 1949-present) in Nanjing,[94] As a

[92] Ibid, 318.

[93] Chen, "Stretching the Skin," 197.

[94] Ibid, 196.

result of Dai Jitao's petition, an independent geography department was established at the same university in 1928, along with departments at Beijing Normal University, Qinghua University, and Zhongshan University.[95] This disciplinary division marks the beginning of the integration of geography as a category of knowledge and a basis for professional careers. While the pioneers of geography in China concurrently held multiple professional titles under a "Geo-Science" classification (meteorologist, geographer, geologist, etc.), the establishment of Chinese university geography departments made possible a singular professional identity as "geographer." Moreover, a second generation of geographers could receive a geographical education exclusively on Chinese soil. Numerous scholars of high prestige would graduate from the department at Nanjing University in the years to come.

Territorial Anxieties and the Second Generation

The 1930s saw the Xinjiang Upheaval (1931-34), a series of revolts that heightened separatist sentiment in the region,[96] and gave rise to a new movement that called for geographers to travel to frontier regions and conduct research.[97] Scholarly geographic studies took on a new imperative beyond developing the national consciousness of the citizenery. Scientific, scholarly geographic pursuits were called

[95] Ibid, 197.

[96] James A. Millward, *Eurasian Crossroads: A History of Xinjiang*, (New York: Columbia University Press, 2007), 188-206.

[97] This is a salient argument of Chen Zhihong's *Stretching the Skin*.

upon to aid in China's border crisis. At the same time, Japanese threats grew more ominous. The political stability of the capital during Nanjing Decade, together with the political instability on China's borders, produced a favorable environment for the development of the geography discipline. The relative stability of the capital enabled the pioneers of geography to develop strong institutional and educational foundations for the discipline. The instability on China's borders produced a state imperative.

In 1934, Zhu Kezhen and Weng Wenhao established another new institution that would become the most important social networking organization for geographers in China, the Geographical Society of China (*Zhongguo dilixue hui*, 中国地理学会) with Nanjing as its headquarters. Weng Wenhao served as the first president of the society. With its establishment came a periodical called the *Journal of Geographical Sciences* (*Dili xuebao*, 地理学报), a relatively erudite publication that would survive political transitions and the vicissitudes of socialism. It remains an authoritative publication today. In 1935, Zhang Qiyun published part one of a four-part piece in which he listed the sub-branches of geography and announced his aim to review the previous twenty years of development for each one. He described geography as "comprising both natural and human sciences and consisting of many different fields, each with its own merits." He listed fifteen different subfields ranging from cartography to anthropo-geography.[98] Indeed, the Geographical Society of China served as the umbrella society for the wide

[98] Zhang Qiyun, "Jin ershi nian lai zhongguo dilixue zhi jinbu" [Chiense advancements in geography over the past twenty years]in Dili xuebao [*Journal of Geographic Sciences*],vol. 2 no. 3, (1935), 2.

range of geographical sub-disciplines in the 1930s. The society's commitment to the *kexue* category validated a wide variety of studies across the discipline.

In February 1934, Beijing-based geographers Tan Qixiang (谭其骧, 1911-1992) and Gu Jiegang (顾颉刚, 1893-1980) began arranging a new geographic society thoughtfully named the Yugong Society (*Yugong xuehui*, 禹贡学会) after the earliest known map of the Eastern Zhou dynasty (770-256 B.C.E.). One month later, Tan and Gu published a journal of historical geography of the same name, *Yugong Bi-monthly* (*Yugong banyuekan*, 禹贡半月刊). In 1937, the publication was interrupted. However, during its short span, *Yugong* strongly advocated for Chinese territorial sovereignty using the medium of geography and *kexue*.

In their first issue published in 1934, just after the Xinjaing Upheaval, the editorial statement exemplifies the kind of entanglements of nationalism, history, and geography endemic to early twentieth century China: "We have suffered enough from imperialist oppression during the past decades! Therefore, [our] nationalist awareness has been triggered. With such awareness, we hope for a general history of China that can provide an idea of the constitution of our nation, and our territory…Nation and geography are inseparable."[99] The *Yugong* editors insisted that modern geographic knowledge must accompany modern nationhood. *Yugong* was characterized by an unmistakable dramatic mood: "Our own studies in geography are not developed; how can we acquire a basis for historical research of our nation? There's no need to look at other examples; just take a look at our eastern neighbor's premeditated invasion of [our land].

[99] "Fakanci" [Preface] *Yugong*, vol. 1, no.1 (1934) translation from Chen, "Stretching the Skin," 241.

They've made the name "China proper" (*benbu*, 本部) for our eighteen provinces,[100] hinting our frontier lands are not originally ours (*bu shi yuan you de* 不是原有的). We've acted as a crowd of fools and endured their numbing poisons."[101]

Like their southern counterparts in Nanjing, the editors of *Yugong* sought to employ the scientific method, but they sought to apply that science to spatial studies in the past. Written in January of 1934, *Yugong*'s preface states, "On one hand we want to revive the assiduous and precise spirit of Qing scholars who researched works like *Yugong*…On the other hand, we want to use today's most advanced methodology —the scientific method (*kexue fangfa* 科学方法)"[102] The editors add that they called upon natural science scholars to answer questions unresolvable to the geographer.[103] The editors ended their forward on a humble note, calling to be of one heart with their readers: "We all stand in before the spirit of systematic learning (*xueshu* 学术); it is for her we work, debate, celebrate the unfolding of this new realm [of study], and remedy the mistakes of our times." [104] Through their publication they shaped the development of historical geography as a category of learning while asserting a notion of a Chinese

[100] Prior to the 1880s, the Qing administered eighteen provinces that came to be widely recognized in the West, Japan, and China as "China proper." The eighteen provinces were Shandong, Shanxi, Henan, Shaanxi, Hubei, Jiangsu, Zhejiang, Fujian, Guangdong, Guangxi, Guizhou, Anhui, Jiangxi, Hunan, Sichuan, Yunnan, Zhili, and Gansu. In 1884, the Qing declared Xinjiang a province, long after the term "China proper" had been coined. Thus, Chinese geographers attending to territorial concerns in the 1930s took issue with the term. For a map of the eighteen provinces and discussion of Xinjiang's provincialization see William T. Rowe, China's Last Empire: The Great Qing, (Cambridge, Mass.: The Belknap Press of Harvard University Press, 2009), 36 and 210-211.

[101] "Fakanci" [Preface], *Yugong* [The Evolution of Chinese Geography] vol. 1 no. 1, (1934), 2.

[102] Ibid, 3.

[103] Ibid, 4. .

[104] Ibid, 5.

geography that was at once indigenous and modern. Beginning in March 1935, the *Yugong* editors changed the English title of the journal from *The Evolution of Chinese Geography* to *Chinese-Historical Geography*. The shift in translation suggests the editors wished to direct the image of *Yugong* from "traditional," philological studies of *yange dili* to the "modern," scientific study of historical geography.[105] But most importantly, the editors sought to validate state-building efforts and territorial concerns through the discourse of *kexue*.

In the realm of public geographical education, the 1930s produced the first widely available map of China. In 1933, Ding Wenjiang, together with Weng Wenhao （and Zeng Shiying (曾世英), edited a volume entitled *New Maps of the Chinese Republic* (中华民国新地图), published by the Shanghai newspaper office *Shenbao*. As one educator of the time stated, the volume "scientifically express[ed] China's real topographical differences."[106] At 25 *yuan* per copy, most students were unable to afford the book, however a popular edition (*pujiben*, 普及本) was published and became available for three yuan.[107] Under the new rhetoric of modern nationalism and citizenship, this publication enabled a generation of Chinese to more effectively exercise modern citizenship in their understanding of the modern nation space of China. The publication ushered in a new era of thinking about national space and reformulated the constitution of geographic knowledge, tremendously influencing the next generation of Chinese

[105] Yugong, [The Chinese-Historical Geography], Vol. 3 no.1, (1935), 952.

[106] Shi Yafeng, *Shi Yafeng*, 26.

[107] Ibid, 26-27.

geographers. The book's collection remained the authoritative popular spatial representation of China as a modern nation-state until 1958.[108]

The institutions and educational materials and methods forged by the first-generation pioneers of modern geography in China made a significant impact on the subsequent generation. The education of Shi Yafeng (施雅风, 1919-2011), one of China's most highly-regarded second-generation geographers, reflects a strong connection between nationalism, geographic knowledge, and the institutions that enabled him to form and cultivate an interest in modern geography. Shi recalled his years at Nantong Provincial Middle School (省立南通中学), a prestigious middle school located halfway between Shanghai and Nanjing on the Yangtze River. Shi attended the school from 1934 to 1937, graduating in time to avoid the brutal war that was soon to ravage the eastern seaboard. During his years at Nantong, his approach to geography transformed from a playful hobby to a passion that would drive his career. He attributed this development to two factors: the slow advancement (*bubujinbi*, 步步进逼) of the Japanese invaders, and the influence of a teacher who used Zhang Qiyun's *Our Geography* (benguo dili, 本国地理) as the class textbook. His teacher also regularly instructed students to read the *Journal of Geographic Sciences*,[109] the journal Wen Wenghao and Zhu Kezhen established in 1928. Shi explained that, "My aspiration was to study geography, I especially liked the geography textbooks edited by Zhang Qiyun. At the time Zhang Qiyun was director of the history and geography department at Zhejiang

[108] Chen, "Stretching the Skin," 205.

[109] Shi Yafeng and Zhang Jiuchen, *Shi Yafeng*, 24.

University, so I applied and was accepted there."[110] His experience suggests the efficacy of the early epistemic project constructed by first-generation geographer intellectuals. Their efforts, realized with Guomindang support, forged a foundation that did indeed mold a future generation of Chinese geographers.

Unlike the first generation of scholars who understood modern geography as a foreign science, Shi Yafeng and his generation could begin to root themselves in a Chinese social network of professionals with ties to Western international communities. Empowered by the authority of the domestic and international geographic communities and the Western categories of learning upon which they were founded, Shi could envision a pathway to a profession in the discipline of geography.

Building a Chinese Geographical Community in Wartime

The Lugouqiao Incident of July 7, 1937 marks the beginning of the long eight year war with Japan that ended the relatively tranquil academic environment of the Nanjing Decade (1927-37). The two most widely published Beijing-based geographic journals, *Geo-Study Magazine* and *Yugong*, permanently ended publication due to the escalating hostilities with Japan. Only the Nanjing-based *Journal of Geographical Sciences* would remain in publication, though it would only produce yearly issues rather than its original quarterly publication. [111] The journal temporarily migrated to

[110] Shi Yafeng and Zhang Jiuchen, *Shi Yafeng, 28.*

[111] Ibid.

Chongqing where its corresponding Geographical Society of China (GSC) sought shelter from the war.[112] The geographical community followed the institutions that supported them, along with a cohort of second-generation geographers whose careers would be marked by the intense nationalism, displacement, and a strong desire to use their expertise to re-build a formidable state.

In autumn of 1937, Jiang Jieshi moved his government to the inland river city of Chongqing, a mountainous escape that was far from Japanese occupied areas. China's major universities followed suit under the supervision of Minister of Education, Chen Lifu (陈立夫, 1900-2001). Research institutes, and professional societies followed suit, forging new bases in the southwest cities of Chongqing, Kunming, and Guiyang, and providing a new technical base for 'scientific resistance' to Japan, together with the development of technologies to aid in the war.[113] Supported by public funds from various sources, education and research continued in the hinterland. For geographers, Chongqing would become the heart of education and research as the temporary home of National Central University (Nanjing University), the soon to be founded Geographic Research Institute of China, and the Geographic Society of China.

For Jiangsu native and future geographer Shi Yafeng, Japanese aggression escalated at a particularly untimely moment, the summer before he was to begin his undergraduate career at Zhejiang University. In spite of the perils of wartime travel, Shi

[112] Qu Ningshu. "*Zhongguo Dili Xuehui*," [Geographical Society of China], in Zhongguo Da Baikequanshu: Dilixue [*Encyclopedia of China: The Study of Geography*], (Shanghai: Zhongguo da baikequanshu chubanshe, 1990), 500.

[113]Grace Yen Shen, *Unearthing*, 153.

resolutely set out from his hometown of Haimen (海门) to follow a circuitous route to Hangzhou, bypassing treacherous, war-ravaged Shanghai. [114] Only when he arrived at Zhejiang University did he discover that first-year students had been relocated. In 1940, after two peripatetic years, Zhejiang University finally settled in Zunyi (遵义), a small city in Guizhou that would later become famous as the site of Mao's rise to prominence in the Chinese Communist Party. Unlike many of his predecessors, Shi would not study abroad. Moreover, he would graduate from Zhejiang University without having attended any classes in Zhejiang. Even under such difficult circumstances, with assistance of domestic and foreign funds, Shi would be cultivated by the Chinese geographic community and would become a professional Chinese geographer.

Although preoccupied with war and severe social and economic dislocation, the Guomindang government invested in students to keep education, particularly scientific education, functioning, and to maintain research publications in the hinterland. Not long after the war began, the government began granting loans to the students whose sources of income primarily came from war ravaged regions. [115] Shi Yafeng and many of his classmates came from regions in Jiangsu and Zhejiang that were occupied by Japan, thus cutting them off from familial sources of economic support. In January 1938, his funds drained after multiple relocations, Shi temporarily abandoned his studies to undergo military and government training, a prospect that paid a meager stipend of 14 yuan per

[114] Shi Yafeng and Zhang Jiuchen. *Shi Yafeng koushu zizhuan* [Shi Yafeng: An Oral Biography], (Changsha: Hunan jiaoyu chubanshe, 2009), 31.

[115] E-tu Sen Zun, "The growth of the academic community 1912-1949," *The Cambridge History of China*, Vol. 13. (Cambridge: Cambridge University Press, 1986), 416.

month.[116] In summer of 1938, he received word from a friend that modest loans to enable study had become available. Shi summarily returned to school.[117] Upon his return, he realized, "Loans were only enough to pay cafeteria food expenses. If we wanted to buy paper, writing utensils, notebooks, or extra socks, we had to find some other way."[118] Despite the meager stipends, the funds were sufficient enough to enable thousands of students to continue their studies. By 1941, more than 16,000 students received similar aid.[119]

Another important source of support for geographers and geographic research was an indemnity remission program that had been arranged in December 1922. This mechanism redirected Boxer Rebellion indemnity funds paid to Great Britain back to China to be used for purposes beneficial to both countries.[120] As the Second World War escalated, the Allied Powers sought stronger ties with China. In 1943, the British government made a strong gesture of political alliance with the Sino-British Treaty for the Relinquishment of Extra-Territorial Rights in China. As a result, in March 1945, the Executive Yuan changed the name to the Sino-British Educational and Cultural Endowment Fund "in accordance with the spirit of the new treaty."[121]

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[116] Shi Yafeng and Zhang Jiuchen, *Shi Yafeng* 34.

[117] Ibid, 35.

[118] Ibid, 41.

[119] E-tu Sen Zun, "The growth," 416.

[120] Hollington k. Tong, et al, eds. "Education and Research," in *China Handbook 1937-1945: A Comprehensive Survey of Major Developments in China in Eight Years of War*. (New York: The Macmillan Company, 1947), 346

[121] Ibid.

In 1940, the Geographic Research Institute of China (*Zhongguo dili yanjiusuo* 中国地理研究所) was established in Beibei (北碚), an area now classified as a district of Chongqing. The institute was funded entirely from Sino-British Boxer indemnity funds.[122] Academia Sinica had planned to establish the institute and instate Li Siguang as director.[123] Financial difficulties in the Guomindang government deferred the plans and the board of trustees for the indemnity funds stepped in to offer assistance.[124] As a member of the board of trustees for the indemnity funds, Zhu Jiahua (朱家骅 1893-1963), the Education Minister of the Guomindang government, helped to allocate funds for the institute.[125] Jia also worked closely with Huang Guozhang (黄国璋 1896-1966) the managing director of the research institute. [126] Huang would later be heavily criticized in the PRC-era for his close ties with Guomindang officials during his years at the institute. He was also chastised for his careerism, his critics citing his constant desire to selfishly "climb upward."[127] Indeed, the institute was a career building resource for aspiring professional geographers. Shi Yafeng himself, after graduating from the

[122] While it is beyond the scope of my research here, the implications of British funding might be explored further. Grace Yen Shen argues, in terms of the Geological Survey of China, funding from nongonvernmental sources enabled a liberated research agenda. Here, that such an agenda may have been compromised. *Coming to Terms*, 109-143.

[123] Shi Yafeng, "Cong zhongguo dili yanjiusuo dao zhongguo kexueyuan dili yanjiusuo" [From the Geographic Research Institute of China to the China Geographical Research Institute of the China Science Association] in *Zhongguo dilixue 90 nian fazhan huiyi lu* [Recollections on 90 Years of Geographic Study Development in China], Wu Chuanjun and Shi Yafeng eds. (Beijing: Xueyuan chubanshe, 1999), 238

[124] Hollington, "Education and Research," 348.

[125] Shi Yafeng, "Cong zhongguo dili," 238

[126] Ibid, 239.

[127] "*Huang Guozhang zai zhongguo dilixuehui Beijing fenhui di si ci huiyuan dahui shang de jiantao*" [Huang Guozhang's self-criticism at the fourth member meeting of the Beijing chapter of the China Geographic Society] , *Dili zhishi* [*Geographic Knowledge*], vol. 3 no.1 (1952), 184.

temporary Zunyi campus of Zhejiang University in 1944, went to work in the Geographic Research Institute in Beibei.

The Geographic Research Institute of China, with funds from Great Britain, produced a quarterly periodical simply titled *Geography* (Dili, 地理). Geographers, taking advantage of their western location, led expeditions in the western provinces and published numerous articles on the lesser-studied regions. *Geography* published a total of 136 articles in 6 volumes from 1941-1949,[128] compared to 36 articles published in the *Journal of Geographic Sciences* over the same period. Significantly, the journal circulated to geographic societies abroad. The periodical earned a favorable review in the *Annals of the Association of American Geographers* in 1948,[129] a premier journal of the time led by some of the United States' most influential geographers. The connection of the research institute to foreign funds, together with the periodical's contribution to an international discourse on geography, suggests ties between Chinese geographers and the larger international community of geography specialists. This international community helped to further establish the authority and profession of Chinese geography as an academic discipline.

[128] The years are given in Guo Yang, "*dili kanwu* (geographical periodical)" in Zhongguo da baikequanshu: dilixue [Great Encyclopedia of China: Geography], Beijing: Zhongguo da baikequanshu chubanshe, 1990), 72. The number of *juan* and articles comes from Shi Yafeng, "Cong zhongguo dili yanjiusuo dao zhongguo kexueyuan dili yanjiusuo" [From the Geographic Research Institute of China to the China Geographical Research Institute of the China Science Association] in *Zhongguo dilixue 90 nian fazhan huiyi lu* [Recollections on 90 Years of Geographic Study Development in China], Wu Chuanjun and Shi Yafeng eds. (Beijing: Xueyuan chubanshe, 1999), 240.

[129] Norton S. Ginsburg, "Comments on Some Publications of the China Institute of Geography," in *Annals of the Association of American Geographers*, Vol. 38 no. 2 (1948), 147-150.

Indemnity funds from Great Britain also enabled scholars to study abroad. Beginning from 1933, funds were awarded to students based upon competitive examinations. Xu Jinzhi (徐近之 1908-1982), a 1932 graduate of National Central University, furthered his education in Edinburgh after participating in the competitive exam in 1938 at the urging of Hu Huangyong, a first-generation pioneer who spent several years abroad. Hu spent a total of nine years abroad in Britain and the United States, studying and avoiding the war. In 1947, British indemnity funds paid for Xu Jinzhi to send to Nanjing volumes, numbering in the thousands, on various scientific topics.[130] His sojourn made him an attractive candidate for a position at National Central University (Nanjing University), a position he held from the fall of 1946 to July 1950.[131] After 1950, Xu continued to manage geographic institutions in Nanjing.

The Communist presence in Chongqing during the war, while not overt, was somewhat influential for Shi Yafeng during his time with the research institute. The second United Front required concessions in both corners of the civil battle, and the GMD begrudgingly permitted the CCP to publish its *New China Daily* in Chongqing. Zhou Enlai resided in the city as representative of the Eighth Route Army, the appellation for the Red Army under the United Front.[132] Communist activity and organization in Chongqing during the war survived and became accessible under the second-united front.

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[130] Xu Jinzhi, "Xu Jinzhi de huiyilü —1936 nian zhi 1950 nian" [Xu Jinzhi's memoir— 1936 to 1950] in *Zhongguo dilixue 90 nian fazhan huiyi lu* [Recollections on 90 Years of Geographic Study Development in China], Wu Chuanjun and Shi Yafeng eds. (Beijing: Xueyuan chubanshe, 1999), 331-332.

[131] Ibid, 334.

[132] John K. Fairbank and Merle Goldman, *China: A New History*, 316.

Acting troupes and organizations within the school system facilitated the flow information.[133]

The Geographic Research Institute's proximity to Chongqing made CCP literature more accessible to Shi. It was there he drew his attention to the Chinese communist texts that would come to redefine his studies and career. He states, "When I was working in Chongqing, I often had opportunities to read *New People's Daily* and *The Masses*, progressive communist newspapers. I read Mao Zedong's 'On New Democracy,' 'On Coalition Government,' and others. I also studied Engels' *Natural Dialectics* and Mao Zedong's 'On Practice.' He continues, "'…practice, cognition, practice again, the cycle repeats and never ends.' 'In research avoid subjectivity, one-sidedness, and superficiality.' These words would often circle in my mind and had a great impact on my scientific study."[134] Shi's memoirs suggest that Guomindang corruption and failure led him to seek out CCP-related literature, but there is no way to ascertain his motivation. Regardless of incentive, Shi's exposure to Marxist-Leninist theory would enable him to help lead the process of accommodating the geography discipline to the new political environment after 1949.

In 1947, the Geographic Institute of China moved to Nanjing, one of the most important "earth studies" centers in China. After the move the institute lost its funding from the British indemnities. The institute survived by relying on funding from the

[133] Danke Li's recent work illuminates this activity through oral accounts of Chongqing women. *Echoes of Chongqing: Women in Wartime China*. (Urbana: Univeristy of Illinois Press, 2010.)

[134] Shi Yafeng and Zhang Jiuchen, *Shi Yafeng*, 83.

Guomindang's education bureau led by Zhu Jiahua.[135] The funding was insufficient to support the institute's more than forty employees. Half of the researchers and staff left in the months following the funding change-over.[136] For the employees who remained, few resources were available to conduct field research and they were designated to mundane work inside the institute offices.[137] Shi Yafeng, a young intellectual with few other prospects, remained at the institute and joined the Nanjing-based CCP underground.

The Continuity of Intellectual Authority

In January 1940, in the dusty caves of Yan'an, Mao Zedong delivered a speech that presented his vision for Chinese society under the rule of the Chinese Communist Party. "On New Democracy" would guide party policy in the critical early years of the CCP takeover and transition. Before China could realize a socialist revolution, Mao contended, the nation had to first go through a democratic revolution. The two revolutions were "by their very nature…two different revolutionary processes."[138] Significantly, Mao declared the possibility of a "united front" between the "scientific thought of the Chinese proletariat" and that of "progressive" members of the Chinese bourgeoisie, including "natural scientists."[139] Historians have recently periodized the

[135] Shi Yafeng and Zhang Jiuchen, *Shi Yafeng*, 81.

[136] Ibid.

[137] Ibid, 82.

[138] Mao Zedong, "Xin minzhu zhuyi lun," [On New Democracy] in Mao Zedong xuanji [*The Collected Works of Mao Zedong*], Vol. 2, (Beijing: Renmin chubanshe, 1961), 658.

[139] Ibid, 700.

early years of the CCP as the New Democracy Period (1949-1953). This refers to the roughly three years between CCP victory over Guomindang forces and the launch of China's first Five Year Plan (1953-57), in which the party welcomed intellectuals and capitalists into Chinese society as powerful state-building agents.[140] With the exception of Zhang Qiyun, a central figure in the development of modern Chinese geographic studies and education during the Republican era, who hastily retreated with the defeated Guomindang to Taiwan, the majority of China's prominent geographers remained on the mainland. In 1949, Mao fulfilled his united front promise to China's scientific intellectuals and geographers were welcomed as a fundamental building block of China's New Democratic society. Many foreign-trained "bourgeois" geographers maintained professorships in academia and were honored with high positions in state-organized research institutes.

Soon after the CCP came to power in 1949, the party set to work on the business of consolidating scientific research in concise governmental bodies. In the view of the new state, the Geo-Science Society of China (*dixue hui* 地学会), established in Beijing in 1909, and the Geographical Society of China (*zhongguo dili xuehui* 中国地理学会), established in Nanking in 1933, reflected a bifurcated field. A four-character saying was coined in geography circles that said, "In the south there is Hu [Huangyong], in the north there is Huang [Guozhang]" or alternatively, "In the south there is Zhang [Qiyun], in the north there is Huang [Guozhang]."[141] The geographic community would later criticize

[140] See Jeremy Brown and Paul G. Pickowicz eds., *Dilemmas of Victory: The Early Years of the People's Republic of China*, (Cambridge, Mass.: Harvard University Press, 2007.)

[141] "*Huang Guozhang zai zhongguo dilixuehui Beijing fenhui di si ci huiyuan dahui shang de jiantao*" [Huang Guozhang's self-criticism at the fourth member meeting of the Beijing chapter of the China

Huang Guozhang for fomenting factionalism in the intellectual world of Chinese geography.[142]

On February 7, 1950, leadership for a new geographic association was placed under the guidance of the newly established China Association for Science and Technology (CAS), the replacement for Academia Sinica, which had moved to Taiwan with the Guomindang.[143] A gathering of prominent geographers, led by the new head of CAS, Zhu Kezhen, decided on the governance and organizational structure of the new institution. Huang Guozhang became chairman, Wang Chengzu (王成组 1902-1987), a Harvard and University of Chicago-educated scholar, became secretary general. Huang would soon lose his position because of his suspected political alliances,[144] presumably as a result of his close ties with the Guomindang while he served as director of the Geographic Institute of China. All of the other members of the geographic society retained their positions under the New Democracy principles. Many would enjoy long

Geographic Society] *Dili zhishi* [*Geographic Knowledge*], vol. 3 no.1 (1952), 184. Also in Qian Jinxi, "dili xue dashi Hu Huanyong" [Hu Huanyong, master of geographic studies], in *Zhongguo dilixue 90 nian fazhan huiyi lu* [Recollections on 90 Years of Geographic Study Development in China], Wu Chuanjun and Shi Yafeng eds. (Beijing: Xueyuan chubanshe, 1999), 50.

[142] *Huang Guozhang zai zhongguo dilixuehui Beijing fenhui di si ci huiyuan dahui shang de jiantao*" [Huang Guozhang's self-criticism at the fourth member meeting of the Beijing chapter of the China Geographic Society] , *Dili zhishi* [*Geographic Knowledge*], Vol. 3 no.1 (1952), 184

[143] Wu Chuanjun. "Annex: The Geographical Society of China," in *Geography in China*, Wu Chuanjun, Wang Nailiang, Lin Chao, and Zhao Songqiao eds. (Beijing: Science Press, 1984), 221.

[144] Shi Yafeng, "Choubei yu juxing jiefang hou zhongguo dili xuehui di yi ci huiyuan daibiao dahui" [Preparing and holding after liberation the Geographical Society of China's first member representative meeting] in *Zhongguo dilixue 90 nian fazhan huiyi lu* [Recollections on 90 Years of Geographic Study Development in China], Wu Chuanjun and Shi Yafeng eds. (Beijing: Xueyuan chubanshe, 1999), 264.

academic careers. The party officially named the geographical institution as the "new" China Geographic Society in 1953.[145]

Conclusion

The Chinese Communist Party, led by Mao Zedong, institutionalized Marxist-Leninist theory in a way that touched nearly every aspect of Chinese modernity. This included the sciences, Western-originated fields of study that had established their knowledge as immutable, absolute, and universal. Marxist-Leninist science produced new ways of knowing, a new epistemological paradigm to suit the needs and the narrative of the CCP. *Geographic Knowledge* was a platform both for voicing Marxist ideology and for exploring its application to geographic study. The publication combined dialectical materialism with science in the production of a new kind of geographical knowing that was both affirmed by scientific principles and in accord with Mao's state-building project and pursuit of sovereignty. Like the geographies of the Republican period, the post-1949 geography was deeply concerned with China's border regions and many of the earlier issues discussed border regions inside and outside of China. To that science was added the new element of Marxist-Leninist ideology imported from the Soviet Union, a key addition to the "new geography" of the post-1949 period.

[145] Guo Yang, "Dili xuehui (geographical society)" in *Zhongguo da baikequanshu: dilixue* [*Great Encyclopedia of China: Geography*], Beijing: Zhongguo da baikequanshu chubanshe, 1990), 84.

CHAPTER IV

THE POWER TO TRANSFORM: MARXIST SCIENCE AND NEW GEOGRAPHY (1949-1953)

Everyone has praised [Jean Brunhes], and rightly so. But his achievements have definite limits. Because he can't cast off his bourgeois position or grasp the concept of social development, he has no way of understanding the different man-environment relationships produced by other societies and classes. Therefore, he was unable to establish real scientific geography.

Shi Yafeng and Gao Yongyuan, 1950[146]

On the night of April 23-24, 1949 the People's Liberation Army (PLA) took control of the Republican capital of Nanjing.[147] On the early morning of April 24th, Shi Yafeng emerged from his simple one-room sleeping quarter behind the China Geography Institute to investigate the situation in the city. For months, the ten remaining researchers and workers at the institute waited apprehensively for the inevitable Communist victory. Just a few months before, the institute had been home to twenty individuals, but half of them, fearing armed conflict in the city, fled to Guangzhou or returned to their hometowns early in 1949. Shi, by his own account, was not afraid. An underground Communist of two years, he eagerly made his way to North Zhongshan Street where he gazed with amazement upon the PLA soldiers as they lounged casually, weapons on their

[146] Shi Yafeng and Gao Yongyuan, "Lun Bai Lüna de rendixue sixiang" [A discussion of Jean Brunhes' ideas on the study of the human-environment relationship], in *Dili zhishi* [*Geographic Knowledge*] vol. 1, no. 3 (1950), 3.

[147] Frederic Wakeman, "'Cleanup': The New Order in Shanghai," in *Dilemmas of Victory: The Early Years of the People's Republic of China*, Cambridge, Mass.: Harvard University Press, 2007), 26.

hips and in their laps. He hurried back to the institute and shared the news of the peaceful city center. The members took turns writing big-character posters welcoming the PLA, hung them above the door of the institute, and waited.[148]

At the time no one could say for sure what life under the new regime would mean for the institute and the larger community of intellectuals in the sciences. Information from areas already under Communist control, passed along by colleagues, friends, and relatives allayed some anxieties about the party's treatment of intellectuals. Mao's "On New Democracy" had circulated widely. In the document Mao makes clear his intention to welcome the "materialists and natural scientists"[149] willing to work in cooperation with the party to eradicate the superstition of the masses and forge a new nation founded on science. How would *dili* and *dilixue* be employed as a state-building technology under the new regime?

This chapter looks at the rhetoric, discourse, and new scientific approach that geographers employed in the early years of the People's Republic of China. The first section offers an overview of the localization of Marxist ideas in China. These ideas in their Chinese adaptation provided the epistemological and rhetorical framework for geographic research and methodology in the early years of the People's Republic. Similar to scientific knowledge transformation at the turn of the century, new semiotic transformation accompanied Mao's epistemological revolution. In 1937, beginning with

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[148] Shi Yafeng, "Cong zhongguo dili yanjiusuo dao zhongguo kexueyuan dili yanjiusuo" [From the Geographic Research Institute of China to the China Geographical Research Institute of the China Science Association in *Zhongguo dilixue 90 nian fazhan huiyi lu* [Recollections on 90 Years of Geographic Study Development in China], Wu Chuanjun and Shi Yafeng eds. (Beijing: Xueyuan chubanshe, 1999), 245.

[149] Mao Zedong, "Xin minzhu zhuyi lun," [On New Democracy] in Mao Zedong xuanji [*The Collected Works of Mao Zedong*], Vol. 2, (Beijing: Renmin chubanshe, 1961), 700.

his essay "On Practice," Mao gradually articulated a distinctive form of Marxism, a Marxism that Mao understood, in part, as a scientific theory and method.[150] The new Maoist science fostered a radical epistemology that challenged assumptions of Western scientific superiority through a more advanced, dialectical understanding of the world. The following section shows how China's second generation of geographers grappled with the reformation of their discipline. In the process they found ways to reassert their intellectual and social authority in the new People's Republic. I map this process as evident in the formation of *Geographical Knowledge*, a publication that became widely popular in the 1950s and 60s and remains so today. Nanjing-area geographers published thoughtful discussion and debate on new *dilixue*, offering a window into geographers' relationship to the new state-building project under the CCP.

Mao's Indigenized Science of Soviet Marxism

Between the early Yan'an years of 1937 and 1941, following Soviet theory, Mao came to promote Marxism as science in his most important theoretical works. In his 1938 notes on dialectical materialism he wrote, "Materialist dialectics is the only scientific epistemology, and it is also the only scientific logic."[151] Marx's corpus of nineteenth-century writings did not advocate the application of dialectical materialism to the natural environment. Marxist philosopher and political theorist Herbert Marcuse (1898-1979) noted that "emphasis on the dialectics of nature is a distinguishing feature of

[150] Arif Dirlik, "Mao Zedong and 'Chinese Marxism,'" in Marxism in the Chinese Revolution (New York: Rowman and Littlefield Publishers, 2005), 85.

[151] Cited and translation from Mao Zedong, "Dialectical Materialism," Marxists.org.

Soviet Marxism- in contrast to Marx and even Lenin."[152] Mao certainly adopted this Soviet emphasis as his own revolution progressed, taking his theory ready-made from Stalin's writings before adapting it to his own purposes.

Because Marx and Engels did not articulate a clear position on scientific approaches to the natural world, later Marxist scholars engaged in lively debate over the topic.[153] In the Soviet Union, in the 1920s, Marx and Engels' relative disinterest in the natural world led to heated debate over properly "orthodox" approaches to nature, natural science, and the human-environment relationship. Factions formed, each aligned with a version of Marxist philosophies of science. Some claimed the works of Marx and Engels allowed for metaphysical truths beyond empirical sciences. Others argued that only "positivist" approaches that were characterized by exclusive reliance on empirical methods could yield true science.[154] The "positivist" outlook, or the notion that the world functions on absolute laws that can present the only "truths" of the world, was thought to "have very deep roots in bourgeois science"[155] for its failure, in part, to adhere to laws of dialectics. Beginning from 1925, Abram Deborin (1881-1963), one of the Soviet Union's

[152] Herbert Marcuse, *Soviet Marxism: A Critical Analysis*. (New York: Columbia University Press, 1958), 143.

[153] Debates on Marxism and natural science were part of a larger discourse on the relationship between Marxism and science. J.D. Bernal (1901-1971), for example, a high profile British Marxist scientist, emphatically stated in a 1937 issue of *Science and Society*, "Marxism is not scientific method, nor is it in any sense an alternative method; it is at the same time more comprehensive and more advanced." Mao's understanding of Marxism was clearly that Marxism was a science. Mao's ideas were quite contrary to Bernal's.

[154] David Joravsky, *Soviet Marxism and Natural Science 1917-1932*, (New York: Columbia University Press, 1961), 3-23.

[155] Maurice Cornforth, *Dialectic Materialism and Science*, Marxism Today Series, Ed. Benjamin Farrington, (London: Lawrence and Wishart, 1949), 32.

most important advocates of dialectical materialism, challenged "mechanist" views, or approaches to science that understood mechanical motion as the only possible motion of matter.[156] Citing Engels' *Dialectics of Nature* as an authoritative source, Deborin asserted that the philosophy of dialectical materialism and scientific theory were, in fact, inseparable.[157] Deborin believed in a dialectic materialism of the entire world as an all-encompassing unit for knowledge accumulation that ought not to be forced into separate parts by divisive scientific disciplines or notions of mechanical systems. In 1925 he publicly stated his position: "…We demand the re-working of the new data in each field of knowledge from the point of view of materialist dialectics, while various 'critics,' often without being aware of it, are inclined towards the 're-working' of dialectical materialism from the point of view of particular facts, of a particular science…"[158] Several years later, what Joravsky calls the "Stalinist version of dialectical materialism"[159] emerged as dominant during a scientific "great break" (1929-1932)[160] in the midst of Stalin's first Five Year Plan. Shi Yafeng quotes Stalin's 1938 work, "Dialectical and Historical Materialism," in his first issue of *Geographic Knowledge* in

[156] Ibid, 40.

[157] Frederic Wakeman, Jr., *History and Will: Philosophical Perspectives of Mao Tse-tung's Thought*, (Berkeley: University of California Press, 1973), 224.

[158] Abram Deborin, in Pod znamenem marksizma [*Under the Banner of Marxism*] No. 1-2, 1925, p 5. Translated and quoted from David Joravsky, *Soviet Marxism*, 173.

[159] Joravsky, *Soviet Marxism*, 312.

[160] The "Great Break" in Soviet history commonly marks a period of economic upheaval and collectivization. Joravsky borrows the term for his sixteenth chapter entitled "The Great Break for Natural Scientists" in *Soviet Marxism*, 233.

1950. Stalin's theoretical tract begins with the following statement, which emphasizes the melding of political and scientific authority:

> Dialectical materialism is the world outlook of the Marxist-Leninist party. It is called dialectical materialism because its approach to the phenomena of nature, its method of studying and apprehending them is *dialectical*, while its interpretation of the phenomena of nature, its conception of these phenomena its theory is *materialistic*.[161]

In this definitive work, Stalin made official the politically orthodox scientific authority of dialectical materialism and codified it under a Stalinist banner of Marxist thought that allowed no space for alternate approaches to natural science.

Stalin's definitive elaboration of the Marxist-Leninist "world view" and science in the Soviet Union came at a fortuitous time for Mao. Just three years earlier he overcame opposition within the party to emerge the dominant leader of the CCP in the wake of the Zunyi Conference held in January of 1935. After extremely arduous encounters with the wide rivers and precipitous mountains of western China, the CCP's Long March (1934-1935) ended in the dusty caves of Yan'an, Shanxi, where Mao and his beleaguered party would recover and regroup. The CCP enjoyed a reprieve from Guomindang harassment as a result of the second United Front (1937-1945), an uneasy alliance between the two parties in the name of resisting Japanese military aggression. The relatively peaceful environment of the Yan'an period (1935-1945) provided Mao the time and space to

[161] Joseph Stalin, "Dialectical and Historical Materialism," in *Leninism: Selected Writings*, (Westport, Conn.: Greenwood Press, 1975) originally published in English in 1942, 406.

explore Marxist theory and philosophical works from the Soviet Union.[162] During these crucial years, works of Soviet leaders became available in Chinese, including those of Deborin.[163] With ample time and adequate resources, Mao developed his theoretical proficiency and public speaking ability, both absorbing and contributing to Marxism. Mao's own contribution to dialectical theory was often crude. His theoretical lectures borrowed so heavily from Soviet sources that in Stuart Schram's view they bordered on plagiarism.[164] Nonetheless, his work gave rise to a unique "Maoist" ideology.

Marxist science hailed directly from the Soviet Union, but Mao engendered his own unique kind of epistemological shift by way of semiotic transformation. Mao took words that were extant in the Chinese vocabulary for decades, sometimes centuries, and imbued them with meaning that served a purpose in the state-building project under the CCP. Words like "science" (*kexue*, 科学), for example, a Chinese appropriation of a Japanese kanji neologism dating to the turn of the twentieth century, came to popularly signify a path to technological advancement and social reconstruction made possible by revolution and the party. This *kexue* differed from the *kexue* of the Republican era in that *kexue* after 1949 became a unilateral endeavor. Mao's indigenized Stalinist-Leninist-Marxism, commonly referred to as Maoism, superimposed its own meaning upon the foundation of "Western science," defying the hegemony of Western science and forging for itself a semiotically sovereign scientific authority and modernity. Arif Dirlik clarifies

[162] Stuart Schram, "Mao Tse-tung's Thought to 1949" in *An Intellectual History of Modern China*, Merle Goldman and Leo Ou-Fan Lee Eds. (Cambridge: Cambridge University Press, 2002), 315.

[163] Wakeman, *History and Will*, 223.

[164] Schram, "Mao Tse-tung's Thought," 316.

the indigenization of Marxism in China, stating that the notion is best grasped "as the creation of a vernacular Marxism in the course of revolutionary praxis."[165] Mao translated the Soviet Marxist science that was codified by Stalin in "Dialectical and Historical Materialism," and introduced a new epistemology on Chinese terms that could incite revolution among Chinese citizens. By infusing new meaning into an existing vocabulary, the new discourse on knowledge seemed both revolutionary and intimate. In Dirlik's words, "What made Mao's Marxism authentically radical…was not his nationalization of Marxism…but his localizing of Marxism within the nation at the level of everyday life—indigenizing it, in other words to the point where Marxism appeared as a natural growth from Chinese soil."[166] Micromanagers of the new indigenous scientific modernity of Maoism, those like Shi Yafeng, adapted to the new epistemological framework. Although geographers certainly lost some autonomy, many developed proficiency in the new framework enabling them to present and forward their own ideas using the new vocabulary and rhetoric.[167]

Beginning with Mao's 1937 lecture, "On Practice" (实践论 *shijian lun)* we may see examples of Mao's linguistic naturalization of Marxist-Leninism accompanied by the theoretical concept of perpetual revolution through practice. These became the building blocks of China's new scientific modernity. As such they shaped Chinese geography as a modern discipline. The subtitle of Mao's lecture, "discussing the relationship between

[165] Arif Dirlik, *Postmodernity's Histories: The Past as Legacy and Project*, (New York: Rowman and Littlefield Publishers, Inc., 2000), 98.

[166] Dirlik, *Postmodernity's Histories*, 99.

[167] The concept of managing semiotic modernity comes from Meng Yue, *Shanghai*, 33.

cognition and practice----- the relationship between knowing and carrying out" (论认识和实践的关系-----知和行的关系， *lun renshi he shijian de guanxi----- zhi he xing de guanxi*),[168] illustrates the multiple meanings of knowing and the different ways Mao's new epistemological discourse applies Marxist-Leninist theory to Chinese language. Mao first assigns Marxist (scientific) significance to the term *renshi* (认识), a term that originally signified recognition of a subject upon sight. Mao embeds the term in his explanation of basic Marxist principles. The development of production, for example, moves from low levels to high levels just as people's understanding (*renshi*) also moves from low levels to high levels, from shallow to deep, from one sided to many sides. Mao's idea of *renshi* refers primarily to the act of cognition which signifies understanding the essence and laws of development of the world as acquired through practice, that is, a way of knowing in the Marxist sense. Mao engenders a shift in the connotation of *renshi* (in both verbal and nominalized forms) as the term came to signify *a way* of knowing.

Mao also inscribes Marxist meaning onto the characters *zhi* (知) and *xing* (行), characters which also appear in the subtitle of "On Practice." *Zhi* and *xing* evoke a deeply rooted meaning with a long history. In his work on the many philosophical approaches to Mao Zedong Thought, Frederic Wakeman eloquently explains the philosophical nexus invoked by Mao of Wang Yangming (1472-1529),[169] Marx, and

[168] Mao Zedong, "Shijian lun," [On Practice] in Mao Zedong xuanji [*The Collected Works of Mao Zedong*], Vol. 1, (Beijing: Renmin chubanshe, 1961), 271.

[169] Wang Ying ming was a Ming dynasty Neo-Confucian philosopher who, like Mao, was concerned with the relationship between knowledge and action, or *zhi* and *xing* (知行). He is famously quoted for his aphorism (idiom?) *zhixingheyi* 知行合一 which suggests one must gain knowledge through action.

Mao, noting that despite Mao's attempt to evoke the congruencies between Wang and Marx, their notions of practice differed significantly.[170] Mao was not the first to draw parallels between a modern scientific epistemology (*kexue*) and *zhi* and *xing*. In 1931, Guomindang member and lecturer at Zhongshan University Huang Changgu (1891-1959) published an article called "Science and Knowledge/Practice" (*kexue yu zhixing* 科学与知行) in which he discussed the applicability of Wang Yangming's "unity of knowledge and practice" (*zhixingheyi*, 知行合一) in the pursuit of advancing modern science for the sake of national salvation.[171] Mao reinvented *zhi* and *xing* as knowledge (*renshi*) and practice（*shijian* 实践） to represent Marxian notions of theory and praxis. He asserts their applicability to science by framing them as building blocks of Marxist science and clarifying the centrality of practice in acquiring knowledge.

Mao also clearly explains the science of Marxism in "On Practice." He writes, "It was not until the modern proletariat emerged along with immense forces of production that man was able to acquire a comprehensive historical understanding of the development of society and turn this knowledge into a science…"[172] Mao goes on to emphatically state, "…*this* is Marxist science" (italics added, 这就是马克思主义的科学 *zhe jiu shi makesizhuyi de kesxue).*[173] Beginning from the first article of *Geographic*

[170] See Wakeman's chapter "Wang Yang-ming: Existential Commitment," in *History and Will,* 259-273.

[171] Huang Changgu, "Kexue yu zhixing," [Science and knowledge/practice] in Kexue Tonglun [A Survey of Science] (Shanghai: Zhongguo kexue she, 1934), 11-19. Originally published in 1931.

[172] Mao Zedong, "On Practice," (1937) translation by Marxists.org at https://www.marxists.org/reference/archive/mao/selected-works/volume-1/mswv1_16.htm

[173] Mao Zedong, "Shijian lun," 285.

Knowledge, Shi Yafeng proposes that readers should apply this "comprehensive" understanding of the world the new *dilixue.* In doing so he asserts the scientific nature of the study, particularly the science of the salient debate on human-environment relations, and thus the utility of the discipline in the formation of a modern socialist state.

"Discover the truth through practice…"[174] also became a rhetorical tool geographers would apply in discussions on *dilixue* and its proper role in the process of post-1949 disciplinary reformation. Mao first uses the concept of practice in "On New Democracy," a work written in 1940 which Arif Dirlik calls the "crowning achievement of the 'sinicization of Marxism."[175] For geographical science after 1949, this work presents an important idiom that occurs repeatedly in discussions of disciplinary methodology and mission. "New democratic culture is scientific," Mao contends, "it stands for seeking truth from facts, for objective truth, and for the unity of theory and practice."[176] The idiom "to seek truth from facts" (实事求是, *shishiqiushi),* before Mao's Marxist gloss on the term, meant to find the truth through empirical evidence. After it first appeared in "On New Democracy" the term began to represent scientific modernity. Mao stated, "'Seeking truth from facts' is the scientific approach…"[177] Later in Mao's 1941 discussion, "Reform Our Study," he further clarifies the term in the Marxist-Leninist sense: "To take such a [Marxist-Leninist] attitude is to seek truth from

[174] Ibid.

[175] Dirlik, *Postmodernity's Histories*, 94.

[176] Mao Zedong, "Xin minzhu zhuyi lun," [On New Democracy] in Mao Zedong xuanji [*The Collected Works of Mao Zedong*], Vol. 2, (Beijing: Renmin chubanshe, 1961), 700.

[177] Mao Zedong, "Xin minzhu zhuyi lun," 655.

facts (*shishiqiushi*). 'Facts' are all the things that exist objectively, 'truth' means their internal relations, that is, the laws governing them, and 'to seek' means to study."[178] With this simple explanation, Mao established a term that is both firmly embedded in Chinese cultural history and modern scientific exploration.

Marxist science in the PRC, an epistemology which developed under the influence of Marxist debates on natural science in the Soviet Union, began to take distinct shape beginning in the late 1930s. Until 1949, scientific geography had developed in close connection with Western classifications of geography and science. Mao proposed an alternate modernity and a science that claimed a new authority over Western scientific knowledge, a modern authority that seemed naturally and inseparably intertwined with China's cultural past. It was up to geographers to learn the new language of the modern nation-state and apply it constructively to *dilixue*, to ensure their social position and careers.

New Democratic Society and Producing a "New Geography"

When the PLA took Nanjing on that late April night in 1949 the Geography Research Institute was in financial straits. Beginning from 1947, the Department of Education, led by Zhu Jiahua, provided funds to keep the institute running, but this wasn't enough to maintain the institute's publication, *Geography* (地理) on a regular

[178] Mao Zedong, "Gaizao women de xuexi," [Reform Our Study] in Mao Zedong xuanji [*The Collected Works of Mao Zedong*], Vol. 3, (Beijing: Renmin chubanshe, 1961), 801.

publishing schedule.[179] Half of Shi's colleagues left the institute to find other employment. Shi, dissatisfied with his plight and the failures of the Guomindang, became an underground Communist in October of 1947.[180]

By 1948, the impending PLA victory became evident, and the remaining twenty scholars and workers in the institute faced the difficult choice between remaining in the capitol and fleeing the city. By February 1949, only ten members of the institute remained, to face an uncertain future. The other members fled for Guangzhou or the relative safety of their hometowns. Among those remaining was Zhou Lisan (周立三, 1910-1998), a 1933 graduate of National Central University (Nanjing University), Guomindang member, and close friend of the Guomindang minister of education, Zhu Jiahua. Though Zhou understood his precarious position, given his political background, he chose to stay. Many years later, he would explain his decision saying, "The Guomindang was getting progressively worse at handling scientific research…We worked so hard for so many years in the old society and I wasn't willing to become some vagabond, so I stayed."[181] Shi also stayed behind along with three other researchers, a cartographer, an affairs manager, and two manual laborers.[182]

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[179] Shi Yafeng, "Cong zhongguo dili yanjiusuo dao zhongguo kexueyuan dili yanjiusuo" [From the Geographic Research Institute of China to the China Geographical Research Institute of the China Science Association] in *Zhongguo dilixue 90 nian fazhan huiyi lu* [Recollections on 90 Years of Geographic Study Development in China], Wu Chuanjun and Shi Yafeng eds. (Beijing: Xueyuan chubanshe, 1999), 242.

[180] Ibid.

[181] Ibid, 243.

[182] Ibid

In the months leading up to the Communist takeover the remaining researchers and staff agreed upon a set of measures to help them cope with the anxiety of uncertainty and protect against the potential dangerous of political instability. They reorganized the duties for each remaining individual. Zhou Lisan was called upon to manage outside contacts and serve as general director. The measures dictated everyone was to show up at the office each day to engage in discussion, or "bump heads" (*pengtou*, 碰头). One individual set to work securing food. Everyone shared information on the political situation and areas under Communist control, as word came in from departments at Nanjing University or media broadcasts. Zhou Lisan accepted the managed the responsibility of communicating frequently with Guomindang offices in effort to secure monthly funds. Using his GMD connections, he managed to secure sufficient funds to support the institute until the Communist victory in Nanjing.[183] Through organization, comradery, and effective leadership, the Geographic Research Institute survived the difficult and uncertain months leading up to the Communist takeover.

After liberation, Shi served as secretary for the Nanjing branch of the China Association of Science Workers, a Communist organization led by forestry expert Liang Xi (梁希, 1883-1958).[184] He used his position to organize a geography branch of the China Association of Science Workers. Members came from all parts of the Nanjing-based intellectual world in geographic studies. They included members of the Geography Research Institute, professors in the Nanjing University Geography

[183] Ibid, 244-245.

[184] Shi Yafeng, ""Cong zhongguo dili yanjiusuo," 246.

Department, and educators in Nanjing's secondary schools. The organization held meetings once or twice a week[185] where they discussed a desperate need for teaching materials. Available materials were insufficient and lacking in depth. They needed materials founded on knowledge (*zhishixing de* 知识性的) and useful for those who wished to educate themselves on geography and China's geographic studies.[186]

Shi and some of his colleagues at the Geography Research Institute took the initiative and began the process of establishing their own, knowledge-based, popularly accessible periodical. Their institute was intact and staffed with workers funded by CCP allocated stipends. Nonetheless, the future of the profession remained uncertain. The geographers had yet to earn a place in the new nascent political system. The thirty-year-old Shi Yafeng together with Zhou Lisan, Wu Chuanjun (吴传钧 1918-2009), and Gao Yongyuan (高泳源 1914-?), blazed a trail that opened up a public scholarly dialogue on the issue. Shi used the name of the Geography Branch of the Science Workers' Association to obtain formal registration approval for the publication of the periodical.[187] Significantly, they titled the journal, *Geographic Knowledge* (dili zhishi 地理知识), connoting the publication's epistemological authority under the new knowledge paradigm. They requested Li Xudan (李旭旦 1911-1985), then the director of the geography department at Nanjing University, to serve as the publication's chief editor.[188]

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[185] Shi Yafeng and Zhang Jiuchen. *Shi Yafeng*, 119.

[186] Shi Yafeng, ""Cong zhongguo dili yanjiusuo," 246.

[187] Shi Yafeng and Zhang Jiuchen. *Shi Yafeng*, 118-119.

[188] Ibid, 119.

After several months of preparations, in January of 1950, the first issue of came off the press into the hands of 600 readers.[189] The first issue offered only a delicate eight pages. However, but by the second year of publication, the issues regularly reached 20 pages. By the fourth year 30 page issues were published containing more than 80,000 characters.[190]

The early years of the publication provided readers with a miscellany of geographic information. Topics included teaching methods, China's natural resources, the geographies and histories of other countries, China's border regions, American imperialism, and instructions on how to read a map, introductions to geographical societies and university departments, and book reviews. Contributors ranged from professionals like Zhu Kezhen, Shi Yafeng, and Li Xudan to lesser-known secondary school educators from the surrounding area. The publication earned the accolades of the authorities. By the mid-nineteen fifties distributed somewhere between forty and fifty thousand copies every month.[191]

Marxist Science and the Human-Environment Relationship in *Geographic Knowledge*

Republican geographers engaged in lively debates on the nature of the human-environment relationship. Prestigious Western scholars like Yale professor Ellsworth

[189] Ibid.

[190]Ibid, 121.

[191] Ibid, 122.

Huntington articulated environmental determinist notions. The content of his works circulated widely in educated society in 1920s China. By the 1940s environmental determinism had fallen out of fashion, both in the West and in China. Chinese intellectuals came to favor Jean Brunhes and his mentor Paul Vidal de La Blache (1845-1918) for their espousal of "possiblism," or the notion that neither humans nor the environment hold absolute power to manipulate the other.

While the fervor of the environmental determinist debates waned in the early 1940s, they were later roused when American geographer and China scholar George Babcock Cressey (1896-1963) published his work *China's Geographic Foundations* on the mainland in the late 1947. Published by the Zhengzhong Publishing House (*Zhengzhong Shuju*, 正中书局), a party-state publisher of the Nationalist government, the book gave an analysis of China's overpopulation, concluding that China would never actualize its modernization goals.[192] Marxist critics, armed with a science that argued otherwise, attacked those ideas with full force.

For China, the significance of developing a rhetoric on a scientific human-environment relationship was two-fold. First, the party sought to eradicate the legacy of "moral meteorology," or the "officially promulgated Chinese belief in human responsibility for the weather, mediated through the responses of Heaven to humankind's moral or immoral behavior."[193] To ensure the revolutionary claims of the new state,

[192] G.B. Cressey, *Zhongguo quyu dili* [*China's Geographic Foundations*], trans. Chen Yada (Shanghai: Zhengzhong shuju, 1947.)

[193] See Mark Elvin, "Who was Responsible for the Weather? Moral Meteorology in Late Imperial China" in *Osiris* 2nd Series, Vol. 13. 1998, 213-237.

hundreds of years of metaphysical beliefs about the natural world had to be dismissed as cultural inertia and uprooted. Without cultural transformation, the party risked de-legitimization of party rule from the perspective of the populace, since natural disasters had been interpreted to imply the immoral behavior of the emperor until the late Qing. Unlike the Soviet Union, the cultural backdrop of science under socialism in China existed in competition with a cosmological tradition that inscribed political implications upon natural phenomena. If the CCP were to be successful, these notions would have to be eradicated, lest an earthquake, hurricane, or drought come to threaten popular support of the ruling regime. The third principle of dialectics, according to Stalin's "Historical and Dialectic Materialism," reinvents the human-environment relationship, insisting that humans were not subject to the variables of the natural environment, but that they could, in fact, transform it according to human will.

Second, the state and the people of China needed a counter-narrative to combat other "scientific" narratives that denied any hope of national prosperity. Various Western scholars like Cressey cited China's barriers to modernization and proposed, on scientific grounds, that China could not modernize. For China's modernizers, China needed a narrative that viewed China's natural environment as a facilitator rather than a barrier to China's global success.

Equipped with Marxist scientific discourse, contributors, particularly Shi Yafeng, aimed to provide a conclusive answer to the human-environment question in the pages of *Geographic Knowledge*. Shi first approached the idea in his piece entitled "Grasping Dialectical Materialism in the Realm of Geographic Study," the cover article of the first issue of *Geographic Knowledge*. Shi educated the non-Marxist reader by introducing and

clarifying what he called the "four defining features of Marxist dialectics"[194] as quoted from Stalin's "Dialectical and Historical Materialism."[195] Broadly speaking, they are as follows: 1) natural phenomena do not exist independently of one another, but are interrelated; 2) the natural world is ever in motion and ever revolving; 3) In the process of historical development, essential changes occur that alter the fundamental essence of an object; 4) natural phenomena have innate conflict.[196]

Shi makes a case for applying each of the principles to geographic study on the grounds that they serve the project of modern state-building. For example, overlooking the ever-changing state of the natural world and the possibilities of the forces of production results in a "pessimistic" (*beiguan,* 悲观) view of China's development. The often-quoted saying of the Republican period, "the land is vast, but resources are scarce" (*di da er wu bu bo* 地大而物不博) then becomes a "discouraging argument" consigning China to a fate of "backwardness."[197] However, Shi contends that once China is free from the bonds of "feudalism, imperialism, and bureaucratism (*guanliaozhuyi,* 官僚主义)," China's forces of production will launch the country into industrialism.[198]

Shi points out that Jean Brunhes' ideas are in accord with Stalin's first two principles of Marxist dialectics. He even calls upon Brunhes' *Human Geography* to

[194] Shi Yafeng, "Zai dilixue lingyu nei zhangwo bianzheng weiwu zhuyi" [Grasping dialectic materialism in the area of Geography] *Dili zhishi* [*Geographic Knowledge*] vol. 1 no. 1. (1950), 1.

[195] Shi Yafeng, "Zai dilixue lingyu nei," 1.

[196] Ibid.

[197] Ibid, 2.

[198] Ibid.

affirm Stalin's points. Brunhes believed in the mutual relationships between phenomena in the natural world, as well as between humans and nature. *Human Geography* emphasizes precisely that principle. However, in regard to the fourth principle that natural phenomena have innate contradictions, Shi cites Brunhes to illustrate his erroneous thinking. Shi laments that Brunhes "doesn't understand that man's triumph over nature in the endless struggle produces all substance of civilization."[199]

It appears that Shi's' initial article on dialectical materialism caused some confusion about Jean Brunhes and his position in the new geographical cannon. Until 1949, Chinese intellectuals appreciated Brunhes' work as a sensible alternative to the environmental determinist theories that harmed China's state-building project. Was Shi suggesting Brunhes had no place in the new China? Shi clarified his views in the third issue of *Geographic Knowledge.* The article, "Discussion on Jean Brunhes' ideology on the Human-Environment Relationship" co-authored with Gao Yongyuan, sought to set the record straight on Brunhes' legacy.[200] They applauded his "possiblist" views in contrast to environmental determinism and his success in raising the issue of the human-environment relationship. However, although Brunhes explicitly claimed to engage in scientific geography, Shi and Gao argued that his work focused on regions that were too small. Instead, he should have looked for broad patterns. Most importantly, he didn't understand the scientific fact that contradiction exists everywhere in nature and that progress lies in conflict. That is to say, he did not understand the scientific idea that man

[199] Ibid, 2.

[200] Shi Yafeng and Gao Yongyuan, "Lun Bai Luna de rendixue sixiang" [Discussion on Jean Brunhes' ideology on the human-environment relationship], in *Dili zhishi* [*Geographic Knowledge*], vol. 1 no. 3 (1950), 1-3.

can conquer nature. Thus his work was not scientific, according to the new understanding of dialectical science.

Despite Shi Yafeng and Gao Yongyuan's improvisational efforts to put the human-land relationship to rest with their gentle dismissal of Brunhes, along with their scientifically founded assertion that humans can conquer nature, the issue continued to incite confusion and debate. For example, a secondary school teacher made a contribution to *Geographic Knowledge* in which he bemoaned the state of geographic education and student lack of interest. In his broad discussion on how to deal with the problem, he suggested emphasizing the importance of the study to understand the geographical reasons why other nations had better political, economic, and cultural circumstances than China[201] In 1952, the magazine's editors announced that in accordance with readers' requests, they would begin to publish a question and answer section. Here an inquirer recalled an earlier issue of *Geographic Knowledge* that read "the influence of nature on human society, cannot directly manifest in humans." The reader skeptically asked if the statement is absolute. (*zhe shi juedui de ma?*) Shi Yafeng replied that the article was correct and confirmed absolutely that the natural environment did not affect the appearance or nature of human beings.[202] Environmental determinist notions seem to have persisted.

[201] Zou Baijiu, "Xuesheng dili chengdu diluo de yuanyin he tigao de banfa,"[The reason for students' low geography level and how to raise it] *Dili zhishi* [*Geographic Knowledge*], vol.1, no. 5 (1950), 4.

][202] Shi Yafeng, "wenti jieda" [question and answer] *Dili zhishi* [*Geographic Knowledge*], vol. 3 No. 2 (1952), 50.

Some questioned Shi's marginalization of Brunhes and his approach to new geographic science. One of these was Qian Jinxi (钱今昔 1918-2012), a graduate of Jinan University's history and geography department. Prudently expressing his concerns, couched in the language of the state, Qian asks, "...do we totally abandon all of the achievements of past geography? Do we think the wisdom of past geographic science is all erroneous and because of this deny all of the past and start from the beginning and unrealistically establish *our own* correct geographic science? No, we can't do that! (Italics added)."[203]

Conclusion

The warehouse of modern geographical knowledge that Chinese intellectuals constructed at the beginning of the twentieth century in their effort to adapt to modern epistemologies and save the country became a localized body of Marxist knowledge by mid-century. In the transitional New Democracy Period (1949-53), as geography adapted to the requirements of the new state, the newly established *Geographic Knowledge* became an important conduit for a new scientific modernity. [204] Geographers did not reject modern Western science, but rejected but some of the conclusions Western science drew about China's environmental realities. Subsequent scholarship on the disastrous effects of Mao's policies on nature tend to highlight the state's determination to

[203] Qian Jinxi, "*guanyu bianzheng weiwulun diliguan de yixie yijian*" [Some suggestions concerning geographic perspective on dialectic materialist theory], *Dili zhishi* [*Geographic Knowledge*] vol. 1, no. 10, (1950), 14.

[204] Other important venues include *dili xuebao*, *kexue tongbao*, *kexue dazhong*, and numerous text books and teaching materials which circulated widely after the establishment of the PRC.

transform nature.[205] However, they do not illuminate the reasoning or the complicated history behind the efforts which involved territorial and resource anxieties and critical sciences that denied China a hope for a prosperous future. Mao's framework for knowledge justified hope by emphasizing the immutable truth of a new science. *Geographic Knowledge* shows how Marxist-Leninist science informed the new state-building project and constructed a framework that enabled Chinese to envision a modern China. The early years of geography in the PRC were marked by efforts to collaborate and collectively explore the options of moving forward productively under the new governing system.

[205] Judith Shapiro, *Mao's War with Nature* (Cambridge, Cambridge University Press, 2001.)

CHAPTER V

THE PERPETUITY OF "NEW" GEOGRAPHIC KNOWLEDGE

In the early twentieth century, Chinese intellectuals constructed modern Chinese geography as a scientifically-founded knowledge category. Geography thus became a powerful framework for knowing spaces that authorized China's emergence into the modern world. Chinese geographers harnessed the authority of Western knowledge classification about the spaces of the earth, sometimes ad hoc, to state accommodate imperatives both in the Republican and Mao periods. This historical process reveals Chinese geographers as agents of modern nation-building in both the Republican period and in the early years of the People's Republic of China.

In the case of modern China, the modern knowledge category of geography, nationalism, and state-building are intricately connected. The establishment of geography institutions and departments in China gave rise to a modern, science-based, and equally *Chinese* geographic discipline. With firm authority established both inside and outside of China, Chinese geographers appropriated the discipline to accommodate the imperatives of the nation. Quite simply, categories matter.

Only two of the many pre-1949 geographical publications remain in publication today in the PRC. In 2000, a new generation of editors renamed *Geographic Knowledge* to *China National Geographic* (*zhongguo guojia dili,* 中国国家地理). This journal currently enjoys wide circulation. The "new" publication now promotes and caters to the recent explosion of domestic tourism in China, presenting exoticized borderland regions as a kind of natural objective fact of geography. China's modern is characterized by

entanglements of nationalism, geographic knowledge, and an immutable "science," all of which may pertain to the resilience of the eroticized, exoticized image of the Chinese "other." The publication remains widely read even today and is published in English, Japanese, and traditional Chinese characters.[206]

While the geographical knowledge that forms the content of Chinese institutional structures for geographic study has been vastly altered to accommodate the developing needs of the state, pieces of the earlier structure remain. As far as the institutions discussed in this thesis, many are still extant today. After undergoing structural changes in the 1950s and 60s, in 2006 the Department of Geography at Nanjing University became the School of Geographic and Oceanographic Sciences (*Nanjing daxue dili yu haiyang kexue xue yuan*, 南京大学地理与海洋科学学院).[207] The school currently houses three departments: the Department of Geographic Information Sciences, the Department of National Resources and Tourism Studies, and Oceanography and Coastal Studies.[208] Doctorates are awarded in tourism and tourism planning, among others. The Tourism Research Center of Nanjing University, an institute that aims to forward tourism studies through scientific research, is also affiliated with the school.[209]

[206] In 2000 the name was changed to *National China Geography* (Zhongguo guojia dili). The publication is widely available, but has evolved into what is essentially a tourism magazine, the layout strikingly similar to the American publication, *National Geographic*.

[207] From the Nanjing University Research Center for Human Geography website: http://hugeo.nju.edu.cn/research/institution, last accessed July 12, 2014.

[208] Ibid.

[209] Ibid.

The Geographical Society of China remains the premier association for Chinese geographers. The society's goal is to "connect and unify (*tuanjie*) all of the members and many geography workers, abide by the constitution…and promote China's unity (*tongyi*)[210] The Geographic Research Institute, Shi Yafeng's professional home for ten years from 1944 to 1955 arguably still exists. In 1999, the institute merged with the Commission for the Integrated Survey of Natural Resources (*zhongguo kexueyuan ziran ziyuan zonghe kaocha weiyuanhui*, 中国科学院自然资源综合考察委员会) to form the Institute of Geographic Sciences and Natural Resources Research of the Chinese Academy of Sciences (*zhongguo kexueyuan dili kexue yu ziyuan yanjiusuo*, 中国科学院地理科学与资源研究所).[211] The institute conducts research in a number of areas and maintains affiliation with the *National Geographic of China* (formerly *Geographic Knowledge*) and the *Journal of Geographical Sciences*.[212]

At Numerous points in my exploration of geography in China, I have encountered the question of the sociology of science. I have shown that different strands of Marxism approach notions of "science" differently, but the question of what science meant to Mao and to Chinese society requires further exploration. The incorporation of the human-environment debates of the Republican period into later historical narratives may provide valuable context for understanding the Great Leap Forward (1958-1961) and the fervent espousal of Marxist science. The history of geography as a category of knowledge

[210] Geographic Society of China webpage, http://www.gsc.org.cn/xh/xhjj//xhjj.htm

[211]Institute of Geographic Sciences and Natural Resources Research website at www.igsnrr.cas.cn/gkjj/

[212] Institute of Geographic Sciences and Natural Resources Research website at english.igsnrr.cas.cn/js/

depicts the struggle with science at a time when Western scholars dismissed any possibility of Chinese modernization based on scientific "fact." Marxist science gave space to the notion that China's modernization was a possibility.

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