

Famine Relief to Prevention

Science, Missionaries, and the Origins of Development, 1920–1948

We Chinese are a nation of farmers. . . . Under the cultural conditions in China, men of intellect and learning have not thought it worthwhile to pay any attention to practical matters. It was beneath the dignity of an educated person to soil his hands in labor . . . Confucian culture is rich in the understanding of human nature and social relationships, but it is at the same time woefully deficient in understanding and mastery of material and animal nature.

—JIANG TINGFU

INTRODUCTION

In popular and literary portrayals at the turn of the twentieth century, famine was a topic of global discussion. From Pearl Buck's novel *The Good Earth* to newspaper reports on the north China famine of the early 1920s, hunger and death became associated with agrarian societies like China.¹ The Qing government (1644–1911) had developed extensive economic management systems, utilizing state-managed grain storage that would flood the market with state-owned surplus during times of shortage.² The Qing state also practiced modern agricultural sciences and engineering that sought to transform the environment to the will of the state.³ The Guomindang regime (1912–49 on the mainland, thereafter on Taiwan) continued and intensified these practices. By the early twentieth century, increasing numbers of policymakers and scientists viewed famine as a preventable, technical phenomenon as opposed to just an act of nature. This transformation, from famine relief to famine prevention, marked the emergence of rural and agrarian developmentalist thought in China. This intellectual origin story bears consequences for Taiwan's later agrarian development model.

Agrarian development became a deliberate project, often led by the state but also engaging non-state actors, to improve rural social conditions. Historians have usually portrayed international development as a predominantly American state project, one prompted by the belief that the rural and agrarian populations of the world needed help in order not to fall to the rising forces of Communism in the postwar era.⁴ These histories are narrowly focused on postwar institutions and extend their teleologies backward in time. This chapter, instead, examines conditions on the ground in China. There, social and state actors and intellectual movements were already thinking developmentally, seeking to improve economic and social conditions, well before the Cold War and World War II. Ideas that later became prominent in postwar development, such as community development and increased agricultural yields through plant breeding science, had already been deployed battling famine during the Republican period (1912–49) and earlier.

In China, religious missionaries, universities, and philanthropic organizations carried out this work. In contrast to narratives of development that began their arcs with high-yielding wheat in Mexico or eastern Washington in the 1940s, the visions for a postwar order among Bretton Woods planners, or with the Tennessee Valley Authority and the New Deal in the United States, development in the case of China began with religious, scientific, and philanthropic efforts to battle hunger and famine.⁵ Protestant missionaries, Cornell-trained Chinese scientists, the Rockefeller Foundation, and the Guomindang state worked in mitigating the effects of droughts, floods, and other sources of famine.⁶ By the 1930s, these efforts had begun to shift their focus from reactive famine *relief* to proactive famine *prevention*. Through preemptive investment in hydraulic infrastructure, basic and applied research in crops, insects, and soils, and dissemination of practices and social reform through village education, famine prevention formed the basis of development.

The Republican period in China witnessed substantial diversity in social movements and intellectuals writing on societal improvement.⁷ This chapter focuses on a few select development practitioners and their intellectual and institutional milieu. These practitioners were natural scientists, social scientists, and engineers, both Chinese trained in pioneering centers of agricultural and social sciences in the United States and Americans who resided in China. This is not to overemphasize the role of Americans or foreigners in general in famine relief in China, nor, for that matter, the role of missionaries and scientists. Foreigners represented a small fraction of famine relief efforts in manpower and in intellectual production. However, all three groups made important contributions to development practices, not just in Republican period China but also in Taiwan after 1949. Their shared experiences, beginning with the formative years at American research universities such as Cornell and Columbia, through Chinese institutions such

as Yenching University (Yanjing Daxue 燕京大學), Nanking University (Jinling Daxue 金陵大學), and social and rural reform movements such as the Mass Education movement and the North China Council for Rural Reconstruction demonstrated remarkable exchange and debate over how to fight famine and improve rural livelihood.

From these debates emerged different approaches to development. One approach emphasized the importance of social change, and this was taken up by missionaries and Chinese intellectuals and reformists who focused on rural China and believed in dissemination of knowledge for the good of the average village and villager. Out of these beliefs came an emphasis on public health, mass literacy, and agricultural extension—the dissemination, through demonstrations in farms and villages, of agricultural technology and applied science ranging from selected seeds and newly designed agricultural implements to pesticide application practices. Another approach emerged from scientists and engineers, who believed in the transformative power of science, engineering, and technology, and the need to follow their modern logics.⁸ These ranged from plant breeders to entomologists to civil engineers. There was significant overlap in the two approaches. They often were implemented side by side, and both approaches converged into a later model of agrarian development.

MISSIONARIES AND FAMINE

By the turn of the century, American missionaries were dispersed throughout the world. In China, over a dozen Western missionary groups had been operating in China by the Republican period, both in the port treaties of China's eastern coast as well as inland provinces like Shaanxi and Sichuan.⁹ Historian David Hollinger has estimated four thousand American missionaries were present in China in 1925.¹⁰ Evangelism, converting the Chinese to Christianity, was naturally the primary goal of the missions, but like North American Protestant missionaries elsewhere in the world, they were also contributing to education, public health, and social improvement. A growing number became concerned with famine relief. In the early twentieth century, movements like the Social Gospel in the United States had begun thinking of social uplift as a basic moral imperative of Christianity, and alleviating hunger also was considered another means of saving souls. In India, as historian Prakash Kumar has shown, American Presbyterian missionaries established agricultural research institutes and influenced agricultural modernization projects in furtherance of religious ideals.¹¹ As historian Ian Tyrrell has argued, the force of American missionaries abroad constituted a "moral empire."¹² At times, bringing Christianity also implied bringing Western values, Western culture, and in the case of agricultural missionaries, Western science. By 1921, according to a report by the United International Famine Relief Committee (國際統一救災總會,

guoji tongyi jiuzai zonghui), the number of foreign workers engaging in famine relief numbered at 385, with missionaries from Presbyterian, Anglican, Roman Catholic, Methodist, Lutheran, and Baptist denominations representing the United States, Canada, Britain, Ireland, Denmark, Sweden, and Norway.¹³

As Christian missions sought to help local peoples, philanthropic organizations in the United States also began to look outward. The Rockefeller Foundation, then run by Rockefeller family scion John D. Rockefeller Jr. and endowed with family wealth, began to fund projects abroad with American expertise. Early foundation work in China began with medicine. For example, the Peking Union Medical College (PUMC) was a foundation-funded medical college that sought to improve public health in China by training Chinese doctors under the supervision of American faculty. Along with nearly a dozen medical colleges, mostly associated with the missionary universities such as St. John's, Nanking, Lingnan, and others, these cooperative training projects in medicine sought to bring Western medical practices to China.¹⁴

By 1920, the Rockefeller Foundation began to look beyond PUMC, which by then had become a fairly successful organization at demonstrating tangible results through the number of Chinese doctors trained and graduated from PUMC. Part of the Rockefeller Foundation's *modus operandi* included working with and funding new and existing organizations, like the China Medical Board, that would fundraise from specific donors interested in specific causes, such as medical relief in China, and appoint capable experts to carry out those missions. The year 1920 provided a new window of opportunity for the foundation to expand in China, albeit in response to a national tragedy.

FROM RELIEF TO PREVENTION

In 1920, a severe drought in north China led to a subsequent famine that received considerable attention in the United States. Historian Lillian Li estimated 30.3 million affected by the drought across five provinces, with around half a million dead as a result of the subsequent famine.¹⁵ Newspapers in the United States covered the consequences of the famine with headlines such as "Starving Children Eat Baked Weeds," placing the death count at thousands a day and relaying a figure of \$100 million needed for relief efforts.¹⁶ Reports appeared so dire that American presidents Woodrow Wilson and Warren Harding appointed an American Advisory Committee for Famine Relief (AACFR), headed by prominent Americans, in an effort to organize relief in north China.

AACFR, with a goal of raising \$5 million in gold, effectively organized both religious and non-religious fundraising pathways, and by 1922, it considered its efforts a success. Starting in 1921, as rainfall began to increase, conditions in north China improved and no longer necessitated the continuation of food

distribution. But with significant funds still remaining after relief efforts, AACFR came to a crossroads. A memorandum, drafted by a specially convened subcommittee of AACFR, was circulated by AACFR to the counterpart board in China, the American Advisory Committee in Beijing (AACB), and the major donors, including John Rockefeller Jr. and leading officials within the Rockefeller Foundation. The contents of the memo outlined an emerging debate over the future of humanitarian aid.

The obvious option that presented itself would have been a continuation of the AACFR mission. 1921 had seen flooding along the banks of the Yellow River, and leftover funds could easily have been applied to help mitigate that natural disaster. However, a rising opinion was expressed against such a course of action. Instead, the memo pointed to the existence of discouraging factors. For one, AACFR believed that the Chinese government possessed the funds and capability to attend to the affected flooded population but chose to reserve that funding for “other uses” knowing that foreign aid would flow in. Second, continual foreign aid could potentially “pauperize” the Chinese by making them dependent on foreign aid for future relief (as historian Pierre Fuller argues, an argument with little basis in reality). Third, natural disasters occurred with such certainty that continual fundraising of American sources would see no end and funds should be spent immediately in order to ask for less in the future.¹⁷ In concluding the memo, the AACFR suggested three possible courses of action: continue business as usual; as a middle course, use the experience of the 1920 drought relief efforts as a lesson for future events by continually keeping track of crop conditions so that surplus reallocation could be done in a more timely manner; and at the opposite end, use funds for “specific preventative lines.”¹⁸

The memo triggered an extended and lengthy debate among the policymakers within the Rockefeller and in the humanitarian aid community regarding what “preventative lines” could entail. George Vincent, a doctor serving on the China Medical Board and adviser to the Rockefeller Foundation, remarked that AACFR should follow the precedents set by missionary organizations and Rockefeller and establish an “American Anti-Famine Foundation.” Missionary organizations did not attempt to “make a large number of converts,” it argued, but rather “to train its converts to the task of spreading the gospel to the masses of their countrymen.” Likewise the Rockefeller accomplished the same in setting “standards of medical education so that hundreds and eventually thousands of Chinese physicians shall heal millions of sick.” Thus, “no better purpose could be served” than to “put these famine funds to the education of the Chinese people in the prevention of future famine.” Vincent’s letter closed with a prediction that “there will come a time when the friendship of the common people of China will be worth more to America than the favor of the Mandarins,” one that foreshadowed events to follow.¹⁹

The AACB, the counterpart board based in China, likewise weighed in with their thoughts. Consisting largely of American missionaries in Beijing, AACB

leaned heavily toward the latter options. In fact, AACB recommended that no funds be allocated for the alleviation of the 1921 Yellow River floods, firmly believing that local “Chinese officials were in possession of necessary funds, derived from special super-taxes, ample to accomplish the necessary relief” but were withholding the funds “for other purposes and [to] seek American relief.”²⁰ Like Vincent, it believed the most important goal would be to “*prevent future famine*” (emphasis original).

In the full six page letter, AACB laid out a plan of action. AACFR, it asserted, should endow the remaining funds such that the interest from the principal could be administered by a new organization dedicated to finding worthy causes of investment. Next, ventures in two areas should be funded: reforestation and agricultural education. In the former, AACB specifically mentioned the University of Nanking, “an institution of fine character,” notable because it was “largely conducted by Americans,” and Peking University (Yenching University) in the latter, also notable for the presence of Americans and its already extant extension system on two hundred acres in north China. Most importantly, however, was that Nanking University had the only established and dedicated College of Agriculture and Forestry among universities surveyed, coincidentally at the time also being temporarily administered by agricultural economist, Cornell graduate, and husband of Pearl Buck, John Lossing Buck. That is not to diminish the strength of agricultural sciences in other Chinese universities outside of these two, which dated well prior to the arrival of the Bucks in China, but the presence of Americans undoubtedly swayed AACB in favor of these two.

AACB saw value in reforestation and agricultural education, and in explaining the latter, the board specifically referenced American agricultural experiences: “In America the vast improvements in agriculture in recent years have come as a result of careful experimentation and demonstration and that such work, though not expensive, would constitute a most suitable and certain of famine prevention and that it could easily be made to affect a large part of China’s population.”²¹ The authors saw parallels between American success in agricultural education and its potential applicability to this new shift in discourse from relief to prevention. For a foreign aid situation where resources were limited, population scaled nearly infinitely, and success was rarely guaranteed, agricultural education appeared to be the best investment.

AACB’s recommendation was not without its critics, however. Roger S. Greene, director of the China Medical Board and member of the AACB, elaborated his own experience in dealing with other missionary groups. He noted that various missions have been communicating a serious need for relief funds, including from the Presbyterian Board of Foreign Missions, and that diverting surplus from “actual relief” could be “rather embarrassing” given the public facing nature of mission work. Nonetheless, he believed that the plan of the AACB was still the right path in terms of a long term resolution. In his additional comments, he also suggested

that one or two Chinese individuals “of high standing” be asked to join in creating an organization in charge of the surplus endowment, in order to give the organization some legitimacy with the Chinese without necessarily displacing the role of the Chinese government.²²

The greatest concern came not from those who believed that famine relief should remain dedicated to relief but rather from those who thought that prevention was a problem that required alternate technical approaches—namely, infrastructure development instead of agricultural science or forestry. John K. Davis, the American consul in Nanjing in 1922, sent a letter to Roger Greene, throwing his support behind a plan drafted by American Society of Civil Engineers president John Freeman to drain the Huai River basin and thus remove a cause of perennial flooding in northern Jiangsu and Anhui provinces.²³ This was a version of man-versus-nature engineering that sought to remake the natural environment.

Debates over technical strategies would recur throughout foreign assistance efforts in China and later in Taiwan, as each technical group, whether soil scientists, entomologists, educators, or civil engineers, espoused their own profession as the panacea for famine prevention and agrarian modernization. Hydrological engineering especially became a prominent modernizing agenda, particularly given the symbolic nature of massive, man-made concrete structures in the “conquest” of nature.²⁴ In this instance, however, the agricultural missionaries had sufficient support among AACFR and its supporting missionary boards and philanthropic organizations. Civil engineering and infrastructure development were sidelined in favor of reforestation and agricultural education.

By the end of 1922, the debate had been settled. AACFR, in agreement with AACB, decided to endow US\$1 million in surplus funding and provide three-quarters of the funds to Nanking University and one-quarter to Peking University. The funds would be managed by the newly formed China International Famine Relief Commission, consisting of representatives from eight famine relief organizations operating in China at the time.²⁵ Significant leeway in the terms of the funding allowed the universities to exercise their best judgement to accomplish the stated goals: “the study and investigation of famine causes, prevention or relief, and as a means thereto for the education of the Chinese in agriculture, forestry, and other such activities as may relate to famine.”²⁶

John Reisner, a missionary, former Cornell professor of agricultural science, and at the time dean of the College of Agriculture and Forestry at University of Nanking, drafted a proposal for utilizing the funds in conjunction with Peking University. The resulting proposal laid out two goals: “development of agricultural education by training teachers of improved agriculture for mission middle school and teacher training centers” and “preparation of courses in general agriculture for higher primary schools, and aid in training of teachers to give such courses.”²⁷ This emphasis on agricultural education, and specifically on training teachers who would be able to teach farmers, would later become crucial in the

dissemination of agricultural practice and knowledge that undergirded the Nanking development model.

INSTITUTIONS

Two years after the agreement by AACFR to fund the College of Agriculture and Forestry at Nanking, a subsequent plan was underway from familiar names but under a different social impetus. In the United States, increased institutional support and discussion of missionary activities prompted new discussions over the best ways for missionaries to accomplish their goal of helping the Chinese populace. The discussion in missionary circles began to shift away from a focus on pure education to the environmental and social conditions—flooding, drought, and poverty—that caused recurring famine in China. The reported success of agricultural education in helping agrarian villages from Christian periodicals began to spur the interest of academically trained scientists. Many professors of agricultural science during this time were also religious, often coming from Protestant backgrounds, and deeply believed in the work of missionaries abroad. Some were even returned agricultural missionaries like John Reisner. From the agricultural science centers of the United States, these scientists believed that the panacea for the social obstacles that missionaries faced could best be addressed through agricultural expertise.

Former colleagues John Reisner and Cornell professor of plant breeding Harry Love began to discuss their ideas for institutionalizing agricultural knowledge and bringing the benefits of university research to missionaries working abroad. They started with their home institutions and founded the Nanking-Cornell Crop Improvement Program, which Love would later claim to be the earliest instance of international technical cooperation between two universities in agricultural development. Supported by the International Education Board, which was also funded by the Rockefeller Foundation, the Nanking-Cornell venture aspired to two goals: to select and breed varieties of staple food crops of the famine-prone areas in China that would produce increased yields, demonstrate higher resistance to disease, and be more easily planted and farmed; and to train men in the “principles, methods, application and organization of crop improvement.”²⁸ The cooperative program sent Cornell faculty to Nanking University over a course of seven years, with three Cornell professors making trips to China.

The Nanking-Cornell program set its sights high. It implicitly addressed a social goal in outlining their scientific undertaking. In writing to Love requesting that Cornell dispatch one of its plant breeding scientists, Reisner was clear in the type of personnel he needed: “a man not only of ability, but of experience and one who is able to see the larger implications.”²⁹ In other words, Reisner hoped Cornell would send someone who was not just interested in breeding a better plant, but also the mission of helping others.

The Nanking-Cornell program began field tests of popular local crops—wheat, rice, soybean, millet, barley—that formed the staple of Chinese diets. Reisner realized quickly, however, that plant breeding alone did little to ameliorate the social conditions in China. Brayton C. Case, an agricultural missionary in Burma who visited Reisner in China, relayed Reisner's observations in 1929 after five years of helping to train and direct the Nanking University plant breeding department. One was an anecdote of a village pastor who had come to the College of Agriculture at Nanking University seeking help for his rice-growing village that suffered from regular famine. After one of the College of Agriculture instructors examined the pastor's home village, the instructor advised the pastor to switch his village to sericulture production. Though new to sericulture, the villagers, after training at Nanking, were able to properly grow mulberry, rear silkworms, and most impressively, form credit cooperatives to fund their enterprise.

It is unclear whether this anecdote was apocryphal. Neither a village name nor other details were provided. The anecdote is relayed by Case, who heard it from Reisner, who in turn heard it from an extension instructor.³⁰ The story oversimplified the circumstances and complexities of village level production; switching a village from one economic commodity to another likely entailed significant risk and encountered problems and very possibly produced negative unforeseen consequences (environmental, social, economic). Credit cooperatives are even more complicated, involving financial commitments and trust. Still, it was nonetheless illustrative of how experts and scientists like Reisner perceived of change in a social context stemming from a matter of the technical, in this case, knowledge dissemination. Reisner believed firmly in the power of agricultural extension. "In China," Case paraphrases Reisner, "there is great need of further research to gain knowledge for solving her agricultural difficulties, as well as the need of developing extension work to have this knowledge applied by the people to their agricultural practices."³¹ Dissemination of knowledge was placed on the same level of importance as research.

The final Cornell faculty member left Nanking in 1931. After that, the Nanking-Cornell story was co-opted by the Cornellians in Ithaca and celebrated as a success for agricultural development. Decades later, agricultural economist and the dean of Cornell's College of Agriculture, William I. Meyers, stated he had been told by a State Department official that President Truman's Point Four Program, the first US-led international development program, was influenced by the success of the Nanking-Cornell program. No evidence was provided to back this statement, though it is possible. Regardless, the crop varieties out of the Nanking-Cornell program did not lift China out of famine, in an unsurprising foreshadowing of development to come, given the looming Second Sino-Japanese War.

In the United States, the Nanking-Cornell program also led to changes at Cornell. Seeing the success of the joint venture at increasing international intellectual dialogue and at attracting bright Chinese students and faculty, the faculty of the

plant breeding department saw that agricultural science had great potential in the world beyond the United States and began to expand their horizons beyond China. Ralph Felton, another professor of agricultural science at Cornell University, started a foundation dedicated to training missionaries going abroad in agricultural methods—the Agriculture Education Foundation. In 1929, after discussion with “agricultural missionaries” with formal training in agricultural sciences and returning from places like Burma, Brazil, and Africa, Felton and a group of likeminded colleagues from well-established missionary organizations—the International YMCA and the Stokes Fund—began “a united effort to strengthen the work of Agricultural Missions.” The theory behind the foundation reflected a belief, expressed by the former commissioner of education for Alabama and later director of the Stokes Fund, that “mission work needed more than anything else an increased emphasis on Agricultural Education.”³² Felton took this belief to heart and recruited fellow colleagues at Cornell, including fellow faculty member and Nanking-Cornell founder, Harry Love.

Love, Felton, and two other colleagues started the Agriculture Education Foundation. Harry Love was chosen by the group as its president; Felton became its first secretary. They set a goal to endow one million dollars, of which interest would be spent annually to support missionary activities in agricultural teaching. More importantly, the goals of their enterprise had to be specific—the institution had to help the farmer out “in a practical way,” which meant demonstration farming and tailoring the methods in each country to their specific needs, whether that entailed an emphasis on research, resident teaching, or agricultural extension.³³ Practically speaking, the organization sought to work within the confines of existing missionary groups. It would seek to extend its help where it was wanted by local agricultural missionaries, cooperate with missions abroad, and rely on the expertise of Felton’s friend Warren Bristol at the International YMCA to begin fundraising.

As part of its efforts at practical dissemination, the foundation, which later became the Agricultural Missions Foundation and Agricultural Missions Incorporated, organized annual workshops for missionaries going abroad. For over two decades until the late 1940s, Cornell became the host to the Cornell Annual School for Missionaries. As the introductory paragraph of the brochure for the twelfth iteration of the school explained, “Now more than ever before, the problems of missionaries during the next few years are likely to be bound up with the everyday living of the men, women, and children of the communities where they work. Problems of nutrition, food supply and sanitation, and of family life and community-social relationships will be paramount in most parts of the world.”³⁴ As the paragraph hinted, course curricula and faculty specialties included a spectrum of academic disciplines that would later inform the various “schools” of development, from the high sciences of plant pathology and soil conservation to the sociologically oriented family life, rural community organization, and rural

education that would form the backbone of community development. Among the list of participants included Presbyterian, Congregationalist, Lutheran, Episcopal, and Methodist denominations, and its missions from Tianjin to Santiago to Uttar Pradesh.³⁵ As the academic ground for such missionary training, Cornell became an important center of knowledge dissemination abroad. The practices carried on by the earliest agricultural missionaries were crucial in creating a model of agricultural development based on education, extension, and research. These models set important precedents, which in the case of China persisted by means of institutionalization and the seniority of practitioners who later became the technocrats in charge of American and Chinese led efforts.

RURAL SOCIAL MOVEMENTS

Although American missionary and philanthropic organizations were key predecessors for development in China, there were more projects aimed at development initiated and led by Chinese intellectuals and reformers. Chinese groups independent of the state had worked in famine relief during the Qing and earlier.³⁶ Intellectuals at Chinese universities had also written on and worked within the Nationalist government to enact social reform aimed at rural improvement. Two organizations would later prove particularly important in their roles as models and intellectual schools for later development—the Chinese National Association of the Mass Education movement (中華平民教育促進會, Zhonghua Pingmin Jiaoyu Cujinhui) (MEM) and the National Agricultural Research Bureau (中央農業實驗所, Zhongyang Nongye Shiyansuo) (NARB). Both institutions represented a continuity in religion and science, the former out of Christian education missions, including the YMCA, and the latter out of the Nanking University College of Agriculture and Forestry and its cooperative program with Cornell.

The Mass Education movement began under the leadership of Yan Yangchu (晏陽初, James Y. C. Yen), a social reformer who believed that literacy should be the basis for rural development. Yan hailed from rural Sichuan, and as a young man, he learned English at a Christian missionary school in Sichuan.³⁷ He went abroad for his university education, studying history and politics first at Yale and then at Princeton. After graduation, he served as a volunteer with the YMCA in France, serving the Chinese laborers who were dispatched to the front to help support the war effort. There, helping the illiterate Chinese laborers pen letters home, Yan became convinced that literacy would lift the rural masses of China out of poverty, and, as the MEM would later adopt as its slogan, “eliminate illiteracy and make new citizens for China” (除文盲作新民 *chu wenmang zuo xinmin*).³⁸ After WWI, Yan returned to China and started the Mass Education movement, creating first a “model” village to demonstrate the practices of literacy, public health, and farming education at Ding County (定縣) in north China and later, after the outbreak of the Sino-Japanese War, in Hunan and Sichuan. MEM included among its board some of the most well-known Chinese intellectuals and government officials,

including minister of education and Peking University president Jiang Menglin (蔣夢麟, Chiang Mon-lin), later crucial in development on Taiwan, as well as the minister of labor and commerce and the minister of health, who all three had corresponded with Yan regarding the possible contribution of a MEM model to improving national education, public health, and labor value.

The MEM model relied upon villages as units of cohesion and instruction. Ding County the first experimental village of MEM, had around two hundred inhabitants in 1930. MEM workers would teach the principles that Yan had prioritized, which in 1930 began with literacy and education, then agriculture and economic reconstruction, and finally village self-government and “citizenship training.”³⁹ In many reports and published materials, these would be boiled down to four principles that were used to sell the idea of the MEM to donors and potential donors: “Cultural Education, Economic Improvement, Public Health and Citizenship Training.”⁴⁰ In literacy education, Yan relied on what was called the “1,000 Character Primer,” a set of four books consisting of one thousand Chinese characters each, starting with the most commonly used. Unlike other literacy textbooks at the time, which were geared to a classical or literary usage of Chinese, Yan specifically designed his textbooks to provide practical literacy, meaning beginning with vernacular vocabulary that would be common in a rural population.

Yan also believed in the importance of public health, and the MEM had recruited figures like PUMC graduate Chen Zhiqian (陳志潛, C. C. Chen) to help draw up the public health program. As concepts of hygiene and preventative medical practices to halt the spread of sanitation-triggered contagions began to circulate among health officials in China, including those trained from PUMC, MEM incorporated these concepts into its village education. In one example of how public health was taught, Yan outlines in a letter to funders that Ding County seized on “market days” when villagers from ten or twenty *li* away would come to a MEM demonstration village. On market day, MEM organizers would seek help from the local army, students and teachers, the district magistrate, and village elders in order to prepare “the usual campaign posters, very pointed illustrations of common sources of infection; there were parades headed by the military band, there were speeches and little dramas, lantern slides, health motion pictures, and even radio!”⁴¹ In explaining the reason for choosing a community-based path of public health, Chen Zhiqian incorporated a critique of Western methods. In a 1933 report, he quoted a National Health Administration report that outlined the lack of medical professionals outside of large urban centers and the predominance of private or missionary hospitals. Chen lamented the “imposition of the Western practice of private practice” in China, using almost socialist tones to describe the “wasteful line of individual competition” that system had engendered. Instead, Chen pushed for the MEM system as an alternative that still utilized “scientific medicine” but brought it to what he estimated to be 85 percent of the Chinese population, which were farmers in the rural hinterland.⁴²

MEM joined forces with five local universities in north China to form the North China Council of Rural Reconstruction (華北鄉村建設協進會, Huabei Xiangcun Jianshe Xiejinhui), which would eventually be renamed the National Council for Rural Reconstruction (全國鄉村建設委員會, Quanguo Xiangcun Jianshe Weiyuanhui) (NCRR).⁴³ By 1936, the operation at Ding County had attracted the displeasure of local officials who clashed with Yan. Yan departed Ding County to set up in Sichuan and Hunan, but he left some operations to NCRR, which continued to operate in north China even after the outbreak of the Sino-Japanese War and under occupation by the Japanese administration. NCRR operated model villages like Ding County in other areas throughout north China. Eventually, the idea of “rural reconstruction” would become commonplace. As historian Kate Merkel-Hess has demonstrated, rural reconstruction became adopted during the Republican era by nearly every provincial governor (or “warlord,” as they were more commonly known), in addition to the Nationalist government. Yan’s MEM operations in Sichuan would also grow throughout the 1930s, though after war broke out with Japan, Yan spent most of his time in the United States to lobby the US government. Out of those efforts arose the US-China Aid Act of 1948, to be discussed below.

NATIONAL AGRICULTURAL RESEARCH BUREAU

Though the Nanking-Cornell program was able to send only three Cornell faculty members to Nanking, its impact on development outlasted the tenure of its exchange program, in both intended and unseen ways. As Rockefeller Foundation official George Vincent earlier pointed out with the PUMC model and as Reisner and Love had hoped to establish a similar institution, the men who emerged from the Nanking-Cornell program would later prove to be crucial to directing development in late Republican China and Taiwan. Chinese students had boarded ships for Europe, Japan, and the United States in search of higher education abroad since the late Qing and earlier, but those students were largely the products of upper-class, elite, and literati families who had the financial means to support studies abroad. Many of the students already had spent years in missionary run schools in the United States, giving them an advantage through familiarity with Western languages and cultural exposure through religious study. Contrary to these existing pathways, the Nanking-Cornell program institutionalized a level of exchange that helped attract donor funding for graduate studies in the United States, especially from organizations like the Rockefeller Foundation, and made short-term and longer term studies at Cornell a recurring and even expected pathway for promising Nanking graduate students. Though also often hailing from wealthier families, few Nanking students had the luxury of missionary school training, and even fewer had the financial means to study at an institution like Cornell.

One prominent exception to this pathway was nonetheless still a product of the Nanking-Cornell program and later would become a fervent supporter of this pipeline. Shen Zonghan (沈宗瀚, Shen Tsung-han or T. H. Shen), a Zhejiang native

born in 1895, had, as a fresh college graduate, borrowed money from a friend to pursue graduate studies in agriculture in the United States, first at the University of Georgia and then for his PhD at Cornell University. After obtaining his PhD, for which he studied wheat breeding, he decided to return as a faculty member at Nanking University, working with his former teachers in the Nanking-Cornell program. By 1930, Shen had become the head of the Agronomy Department in the College of Agriculture and Forestry at Nanking University.⁴⁴

In the mid 1930s, many of the faculty members at Nanking, including Shen, continued on to work in the National Agricultural Research Bureau that proved a spiritual successor to the Nanking-Cornell program. The NARB was a central Nationalist government-funded bureau founded in 1933 in Nanjing.⁴⁵ By 1938, ten agricultural institutions throughout China had become subsumed under the NARB umbrella, with Nanjing serving as the central office overseeing provincial agricultural institutes and stations.⁴⁶ Its directors included Xie Jiasheng (謝家聲, K. S. Sie), like Shen a Cornell graduate and a former Nanking faculty member, and eventually Shen himself, who would take over for Xie as director in the last years of NARB. Like Nanking University, the NARB included divisions that specialized in field surveys to collect crop species and experiment stations throughout the provinces of China to select and breed crops best suited for local conditions. But while Nanking University placed great emphasis on training future agricultural scientists and extension workers in addition to its basic and applied research, the NARB focused less on the educational mission and more on basic and applied research, as well as the social mission of a government bureau tasked with agricultural development. For Shen and others who had left Nanking to join the NARB, they felt “a certain responsibility toward the bureau,” in part because they were involved with its creation and because they believed in the value of science toward helping society improve as a whole.⁴⁷

The NARB reflected a social mission from its roots with Nanking-Cornell through its increased emphasis on extension work. In one proposal seeking funding from the Rockefeller Foundation for insect control work at NARB, basic and applied research was combined with extension in pursuit of the goal of increasing industrial and food crop production in inland provinces.⁴⁸ The proposal outlined typical basic science goals; item five, for example, was for “continued research on the cottonseed-oil emulsion and the testing of other plant oils for the preparation of emulsions.” But applied research—“continued research on the construction of other types of sprayer” used to apply pesticides—took equal footing. This was in conjunction with an increase in the size of the machine shop currently producing two types of sprayers. And at the extension end, it was complemented with control campaigns across five provinces to demonstrate use of sprayers, pesticides, and dusters, all under the umbrella of insect control methods.⁴⁹

The pesticide extension system became a point of pride later for the NARB. In a report describing the network of research institutions affiliated with the NARB in 1946, Shen, who by then was NARB director, took special care to highlight the

achievements of extension in rural China. The National Pesticides and Experimental Equipment Plant in Sichuan, for example, whose founding Shen attributed to work on pesticide and extension research conducted at NARB as early as 1935, was a crucial apparatus, Shen explained, at the head of the system for distributing pesticides and sprayers. Below the plant was one major provincial station with substations serving important counties. At the local level, “the rural agencies which are the distributing centers for the pesticides and sprayers are taken over by the farmers themselves, primary school teachers, drug-store keepers, or post office men” paid on a commission basis and under supervision from extension workers, a system Shen pointed out is similar to the “key farmers” (farmers who served as contacts for extension workers) in the US agricultural extension system.⁵⁰

Equally important to the NARB mission was the legacy of Nanking in applied and basic research. One report from the Rockefeller officers in Shanghai called the NARB “without doubt one of the outstanding technical bureaus of the Chinese Government” with “well trained, competent, and industrious” personnel and in addition noted its progress in insect control research over a relatively short period.⁵¹ In later years, Shen reminisced upon the ability of the NARB to both innovate new technologies and push those new technologies out. In a 1952 letter to UN Food and Agriculture Organization official H. L. Richardson four years after his departure from NARB, Shen lamented the lack of “college training and fundamental research” done by NARB successor organization, the Joint Commission on Rural Reconstruction (JCRR), which as a result made the JCRR “not so creative” in comparison to the NARB.⁵²

POSTWAR REIMAGININGS: THE CHINESE NATIONAL RELIEF AND REHABILITATION ADMINISTRATION

The outbreak of the Second Sino-Japanese War and later World War II hindered the work of famine relief. It also prompted new models and approaches to agrarian development. As World War II reached a high point, both China and the United States began to consider the issue of postwar recovery. By 1943, intellectuals and bureaucrats throughout China had begun to discuss the need to begin tackling postwar issues. The American embassy in Chongqing followed these discussions, forwarding conversation summaries, editorial translations, and relevant commentary to the State Department. Food and relief was a common subject though varied in terms of its relative importance depending on the background of the commentator. International relations scholar Zhang Zhongfu (張忠紘, Chang Chung-fu) penned an editorial in the *China Times* in 1943 that was then translated and forwarded to Secretary of State Cordell Hull. The editorial discussed the importance of tackling potential postwar issues through the establishment of the United Nations. While issues such as international economics and territorial adjustments were complicated matters, he argued issues like food and relief

could “easily be agreed upon in separate conferences” since they were “simpler.”⁵³ Zhang’s envisioning of food and relief indeed came to fruition in the short lived United Nations Relief and Rehabilitation Administration (UNRRA) and later the UN Food Agriculture Organization (FAO), which for its first few years of existence largely consisted of the “separate conferences” that Zhang had described. But the lessons of UNRRA would provide an impetus not only for the growth of FAO but more importantly for US planners as they realized the importance of food and relief to international relations.

Of greater relevance were the commentators of China’s economic development. With China being predominantly an agrarian society, food and agriculture could not be ignored. Some academics and technocrats focused on larger-picture, regional solutions, though they were vague on specific technical recommendations. One, Zhang Qiyun (張其昀, Chang G. Yun), the head of the History and Geography department at Zhejiang University, perceived of China as regions—the northwest, southwest, northeast, and so on—that would specialize in its relative advantage, whether soybean production in the northeast or oil drilling in Gansu. Another, Dong Shijin (董時進, Tung Shih-tsin), an agronomist at Peking University, argued for the importance of the agricultural sector for the overall industrialization and welfare of the Chinese economy. In an article published in *Dagong Bao* (大公報, *Ta Kung Pao*), Dong pointed out that if anything, the Sino-Japanese War has shown the importance of having a “modern country.” To shed its label as “a land of famine,” China needed to raise the living standard of all Chinese, meaning providing enough food and clothing, and that necessitated an emphasis in improved agriculture. Despite all the discussion among intellectuals for industrialization, Dong reminded readers that in China, “industrialization should be built on the foundation of agriculture. It means better industrial development in addition to better agriculture. Industry cannot replace agriculture.” He illustrated his point through the example of cotton, a raw product produced by China’s agriculture that was utilized as an input into China’s industries and complete as a finished product ready for export.⁵⁴

The head of the National Resources Commission (國家資源委員會, Guojia Ziyuan Wei Yuanhui) and the minister of economic affairs at the time, Weng Wen-hao (翁文灝, Wong Wen-hao), had a more concrete plan for agriculture. Weng was concerned from an industrial point of view, and specifically with regards to resource inputs and production outputs. With regard to agriculture, Weng was a pragmatist—he believed that improvements in farm implements would be slow to take up in the Chinese context “not only because of the small size of farms but also because of the conservatism of farmers.”⁵⁵ Weng was correct to an extent. High peasant population density and, in many parts of China, the inelastic supply of arable land meant that economies of scale would not benefit as greatly from the use of labor-saving technologies as other types of agricultural economies. But his doubts over the willingness of Chinese farmers to adopt new technologies

was one of the major driving factors behind the shift to agricultural education and extension among projects like Nanking-Cornell and others to follow. At that point, however, the editorials proved to shape the discussions of American post-war reconstruction efforts in China.

In the United States, with the end of the war on the horizon, an internationalist consensus began to reemerge among policy planners. Roosevelt and Secretary of State Hull envisioned an international system with the United States taking an active role. As part of this vision, the United States would have needed to take a role in helping rebuild the war torn regions of the world.⁵⁶ One of the earliest manifestations of this idea was UNRRA, to which the United States contributed significant personnel, funding, and administrative direction. Historian Micah Muscolino has explored the role of UNRRA in reconstructing China's war-devastated landscape, in particular formerly productive arable land rendered uninhabitable when flooded by unintentional and intentional damage to China's hydraulic infrastructure, triggering a refugee crisis and lost harvests.⁵⁷ Food shortages were further exacerbated due to a shortfall in domestic fertilizer production and damaged logistical infrastructure (roads, railroads, and ports) resulting from the Sino-Japanese War that prevented imported food and agricultural supplies from reaching areas of greatest need.⁵⁸ Reflecting the ideas of both Dong and Weng, as well as requests from the Chinese government, which specifically sought American expertise, UNRRA placed a heavy emphasis on agricultural rehabilitation to repair the damage caused by the Sino-Japanese War.⁵⁹ It stepped in by sending personnel to distribute to farmers in need of fertilizer supplies and basic agricultural goods such as flour. In contrast with the religious missions and philanthropic organizations of the past, UNRRA was a direct state-to-state reconstruction project on a national scale. Its ambitions and arguably its shortcomings stem from the reconstruction approach that called for short-term relief on a national scale performed by a neutral third party that would have little ability to enact genuine structural change.

As part of its efforts, UNRRA recruited American agricultural scientists who had previously spent their careers in the United States. One such was William J. Green, representative of the American agricultural scientist of the New Deal era. Green was born and raised in the American Midwest and trained in agronomy and agricultural economics at the rising land-grant colleges throughout the Midwest: Oklahoma State University, Texas A&M, and the US Department of Agriculture Graduate School. He began his career in the Agricultural Adjustment Administration and Farm Security Administration, working in Washington, DC, and in the farming heartland of America in the Midwest.⁶⁰ With the success of New Deal programs and agricultural advances in the United States, the US Department of Agriculture had difficulty justifying the cost of its programs. In other words, American agricultural scientists were victims of their own success. Thus, when UNRRA came calling with an opportunity for agricultural experts to work abroad, scientists like Green jumped at the chance. Green would serve as the

chief of the Agricultural Rehabilitation section in UNRRA China office and dictated how UNRRA funding should be spent to help China recover its agricultural regions to prewar levels.

While agricultural advisers like Green came to China full of ideas of the potential of reconstruction for China's future, the reality was that China had problems that ran far deeper than the United States had experienced since the Civil War. China had emerged from one war, lasting over eight years in some regions, and was immediately engaged in a new one as the Nationalist state attempted to eliminate the Communist forces that were spreading from northwest China. With basic agricultural necessities such as fertilizer in short supply and infrastructure over the vast hinterland making distribution difficult even in times of peace, UNRRA struggled to meet even its first stated goal of relief, much less to speak of reconstruction during civil war and revolution. Furthermore, UNRRA's budget was meager compared to the vast needs of rehabilitation across the world.⁶¹ UNRRA's scope was global, and China, despite having suffered massive human displacement in the Second Sino-Japanese War, was deprioritized in favor of Europe.⁶² UNRRA's ostensibly nonpolitical operating mission meant that it was obliged to service both Nationalist-controlled and Communist-controlled areas equally, distributing aid only in accordance with the need of the populace.⁶³ In one instance serving on an official UNRRA mission, Green's jeep convoy was mistaken as having been a Nationalist government convoy, surrounded by the Communist Second Army, and taken into custody. When the commanding general was called to camp and realized his fortune upon having captured highly ranked American UNRRA officials, he immediately set them free, sent for Zhou Enlai, and threw an impromptu celebration complete with banners wishing President Truman well, all in the hopes of currying favor among the Americans to provide greater support for Communist-controlled areas. Though this case ended in a somewhat jovial situation, it exemplified the challenging political situation facing the UNRRA mission.⁶⁴

From the outset, the UNRRA mission appeared destined to be a classic case of development—an idealistic mission that promised miracles through Western manpower, knowledge, and funds to deliver the masses of famished and fatigued from the weariness of war, yet its one-size-fits-all solution did not fit the specific circumstances under which it would operate and, most critically, was unable to address the political realities that underlay the problems it was attempting to ameliorate. The Nationalist government, realizing the difficulty that UNRRA would face, established a sister organization, the Chinese National Relief and Rehabilitation Administration (CNRRA), designed to serve as the local agents of development. CNRRA would oversee distribution and report circumstances on the ground. Appointed to the head of CNRRA was Jiang Tingfu (蔣廷黻, Tsiang Ting-fu), a Columbia PhD graduate who had joined the history faculty of Tsinghua University and later was appointed as Chinese ambassador to the United Nations. Upon the inauguration of Herbert Lehman as the director-general of UNRRA in

1943, Jiang included in his remarks a brief but apt prescription for China's woes: "Of the relief and rehabilitation needs in China, transport comes first. Without transportation facilities, whatever supplies and services UNRRA might send to China, they will be piled up at the ports and will be of no use to the Chinese people."⁶⁵ Jiang's words were quite prescient.

The obstacles facing UNRRA were not just due to the consequences of war. The Americans who manned UNRRA were often not able to overcome the problem of distributing reconstruction efforts to where they were needed in China in the short window of opportunity they had. In a report from the China UNRRA office headquartered in Shanghai in 1946, it was noted that "although agricultural rehabilitation had been given No. 1 priority during the spring months, lack of [agricultural rehabilitation] personnel and supplies made it impossible to meet all the requests from regional offices. Very few [agricultural rehabilitation] supplies other than those for the Yellow River project had arrived, and UNRRA was being criticized for not having fertilizer, vegetable seeds and hand tools for distribution."⁶⁶ The Second Sino-Japanese War had devastated the infrastructure across vast swaths of China. As Micah Muscolino has shown in his study of Henan Province during the Second Sino-Japanese War, infrastructure was not only purposely targeted to inflict military losses on the enemy by both the Japanese and the Chinese, but infrastructure maintenance and repair were entirely neglected as the Chinese state conscripted able bodied men otherwise tasked with infrastructure duties to fill the ranks of its military and directed tax revenues away from maintenance and toward military expenditures.⁶⁷ The result was disastrous for China's villages and farms, hampering their ability to move food and goods, both during war and after. To make matters worse, agricultural rehabilitation had to compete with industrial rehabilitation, which the Nationalist government prioritized after the war to replenish its finances. At Shanghai, the main port of entry for UNRRA food and fertilizers, shipping traffic was so heavy as to cause delays in just offloading and preparing foods for inland transportation. For a country the size of China, basic issues such as distribution were simply too large to overcome with the manpower assigned to UNRRA.

Jiang Tingfu had even harsher words for UNRRA. In 1947, Jiang spoke bitterly to Rockefeller Foundation's officer Roger F. Evans of the CNRRA's experiences dealing with UNRRA, with Evans relaying that "of 1,000 UNRRA technicians and administrators, [Jiang] asserts that 950 Americans were generally far below the standard we could and should have supplied—romanticists, tourists, puffed-up little pencil pushers, calory-counters [sic], and chart-drawers."⁶⁸ Jiang's frustrations with UNRRA were documented by historian Rana Mitter, who pointed to the fundamental discrepancy that while UNRRA treated China as an important recipient of aid, funds were simply insufficient to meet its needs.⁶⁹ This, combined with China's postwar inflation crisis, proved another obstacle impossible to overcome and eventually prompted Jiang's resignation in 1947. Having spent less

than five years in China, Green was officially recalled when UNRRA ended its mission in China in 1948 in accordance with UNRRA policy.⁷⁰ Though long-term projects at rehabilitating agricultural and rural industries and domestic production of fertilizer were handed off to the newly formed UN Food and Agriculture Organization, UNRRA nonetheless failed at its stated goals of relieving the war torn regions of China, setting up the discussion in the United States of “Who Lost China?” Though UNRRA would provide a lesson in the difficulties of the relief-importation-distribution model of development, its agricultural experts would carry these lessons to their next destinations. For many of the scientists, Green included, their transnational careers would bring them back to Asia in a number of years, the next time to Taiwan.

THE JOINT COMMISSION ON RURAL RECONSTRUCTION

Meanwhile, in 1948, the United States passed the China Aid Act. Three years after the end of World War II, the Economic Cooperation Act, more popularly known as the Marshall Plan, initiated American reconstruction aid to Europe and established the Economic Cooperation Administration, the predecessor to the current day US Agency for International Development. The China Aid Act of 1948 provided equivalent assistance, albeit a significantly smaller sum, for China, lobbied heavily by Yan Yangchu who had been living in Washington, DC, for much of the Chinese Civil War. The result of the China Aid Act was the Sino-American Agricultural Mission of 1948, which aimed to establish a long-term joint cooperation committee that would provide not just the short term famine relief that UNRRA attempted, but also a long-term development project.⁷¹ The Americans and Chinese who advised the mission, Shen Zonghan, Jiang Menglin, Yan Yangchu, Raymond T. Moyer, an Oberlin and Cornell agronomy graduate and Christian missionary who had spent significant time in Shanxi Province, and Owen L. Dawson, the agricultural attaché at the US Embassy in China, chose to follow the Rural Reconstruction movement and adopt the same name to encapsulate its purpose. In late 1948, the Sino-American Joint Commission on Rural Reconstruction (中國聯合農村復興委員會, Zhongguo Lianhe Nongcun Fuxing Weiyuanhui) (JCRR) was established. Its mission was to further development in China, focusing on rural development, and it was through this institution that China Aid Act was to disburse its significant funding.

From its onset, the JCRR was the subject of an ideological divide over how “rural reconstruction” could best be accomplished. At the heart of the debate were the goals of development—what were the best means to benefit the rural population? For Yan Yangchu, the founder of the Mass Education Movement in China, the priority should lay in four areas, a familiar four for those familiar with his MEM ideology: “(1) education, (2) livelihood, (3) health, and (4) self-government.”⁷² The

goals he thus outlined for the JCRR were the same ones of his Mass Education movement, which was focused on improving rural life through literacy, social education, hygienic practices, and his notions of participatory citizenship in community governance.

In the middle of the spectrum was Jiang Menglin, a graduate of University of California, Berkeley, in botany and later a PhD graduate in education from Columbia, studying under John Dewey. Jiang began his education in the United States as an agricultural scientist, continuing his studies in primary education in China on botany and zoology, stemming from an interest in “observing nature.” But his switch to pedagogy and education Jiang attributed to a classmate at Berkeley, who remarked that “though agriculture was very important, there were other studies more vital for China . . . without being able to solve our political and social problems in the light of modern developments in the West we could not very well solve the agricultural ones.”⁷³ Later, the realization came as he sought to apply what he had learned in agriculture—“how to raise animals and plants”—to the social world—“how to raise men.”⁷⁴ Studying alongside Hu Shi at Columbia under John Dewey, Jiang came to internalize a pragmatist view toward education, and that learned experience was crucial and practical goals were to be lauded. Jiang returned to China and became the president of the prominent Peking University, and just before being appointed to the JCRR, he served as the minister of education for the Nationalist government. Like Yan, Jiang thus believed in the importance of education for the rural population, but Jiang was less interested in literacy as the sole means of its delivery. Jiang placed more trust, as did some of the other agricultural scientists, in the dissemination of practical knowledge through agricultural extension and farmers’ cooperatives.

Finally, there was Shen Zonghan. Shen believed that improving crops and methods via applied agricultural research and disseminating these better practices and crops through agricultural extension would lead to rural uplift. Shen Zonghan would eventually become one of the most important commissioners in JCRR in Taiwan, which later chapters explore. Shen’s faith in science, and specifically in plant breeding, underlay most of his decision making. Shen was the high modernist of the three, the most likely to place his trust in the transformative social power of crop selection to solve the ills of famine.

Much of the intellectual forces driving the Taiwan model derived from the thoughts and experiences of JCRR commissioners and high level technocrats. Chinese commissioners Jiang Menglin, Shen Zonghan, Yan Yangchu, and their American counterparts all hailed from similar backgrounds as trained scientists and rural reformers. Ideas of reform, education, and pragmatism defined the values of the JCRR and other agricultural and rural technocrats dating back to the turn of the twentieth century. Shen Zonghan wrote in his autobiography of the influence of John Dewey’s lectures in Peking University in the 1910s, which Shen attended. In his journal entry from February 7, 1919, Shen remarked on Dewey’s

argument that “the means by which scientific research discovers truth was nothing other than having a basis in reality, reaching truth through experimentation.”⁷⁵ For Shen, Jiang Menglin, and others, the pragmatism endorsed by Dewey was realized through working with those that agricultural development was meant to aid. As Shen wrote to his wife upon taking directorship of the NARB, “I am currently dedicating myself to Chinese agricultural improvement policies, and that is how to disseminate the benefits of scientific improvement to farmers.”⁷⁶

Other ideas were discussed by prominent agricultural and rural development figures who penned editorials in prominent newspapers or sent letters to the Sino-American Agricultural Mission. Some of these advocated “national self-defense” or “political uplifting.” One editorial from *Dagong Bao* feared that the diplomatic privileges offered to the American commissioners was “sacrificing Chinese sovereignty [損中國主權]” and “expanding the scope of extraterritoriality [擴大治外法權的範圍],” in effect raising the specter of continued colonialism in China.⁷⁷ The American embassy noted that almost all editorials referenced the need to “avoid the mistakes made by UNRRA and other organizations.”⁷⁸

The American-operated *Shanghai Evening Post & Mercury* titled its editorial about the impending creation of the JCRR “New Deal for Farmers,” a reference to President Franklin Roosevelt’s ambitious social work program in the aftermath of the Great Depression. The editorial hailed the JCRR as “the most important and magnificent event which happened to Chinese farmers during the past several hundred years.” The hyperbolic praise was from a larger perspective based on the expectation that China’s economic welfare, which according to the editorial derived approximately 70 percent of its exports from the agricultural sector, would improve as a whole so long as its agricultural economy prospered. It was also cautious in recognizing that the “Chinese agricultural problem is not only physically immense but it is complicated and confusing.” Thus, the relatively large amount of \$3.8 million USD could have been easily misspent. The editorial board thus praised the findings of the Sino-American Agricultural Mission because “instead of placing an unwarranted emphasis on any one aspect of the rural development, they sought to correlate a number of factors.” In this regard, it urged against acting on an “erroneous belief that any one program or any one man could be China’s rural saviour,” interpreted by the American embassy as an “oblique reference” to the commissioner who was the face of the Mass Education movement, Yan Yangchu.⁷⁹

The debates were resolved by the Chinese government through simple appointment. Despite Yan Yangchu’s publicly stating his belief that he would be named director-general of the commission, Jiang Menglin was named the chairman of the five-member commission. Yan Yangchu and Shen Zonghan rounded out the three initial Chinese commissioners. Later, Raymond Moyer, Shaanxi missionary and former AACFR member, and John Earl Baker, director of famine relief in China for the Red Cross, joined as the two American commissioners.⁸⁰ Yan left the JCRR shortly thereafter for the United States, where he relocated the Mass Education

Movement and founded the International Institute of Rural Reconstruction. Just a few years later, he would turn his attention to the Philippines, organizing community development projects that emphasized improving literacy through education.⁸¹ Yan found public admiration in the United States for his work in the Philippines after leaving China, and communication, to say nothing of intellectual exchange, with the JCRR after his departure was rare.⁸²

Unfortunately, despite the potential that the JCRR had with American funding and Chinese government priority, like the UNRRA, the JCRR made little inroad into China before it was forced to leave. With the Nationalist government losing control of the mainland, it moved the government administration to Taiwan. And as American support followed Chiang's Nationalist government, so too did the JCRR follow Chiang as he fled to the island of Taiwan, a "temporary" relocation until, according to the GMD, the mainland could be won back from the Communists. For the scientists of the JCRR, Taiwan became their new home and mission.

CONCLUSION

The Republican era was characterized not only by major political events such as the consolidation of the Guomindang regime, the Second Sino-Japanese War, and the Communist civil war but also by intellectual and on-the-ground debates over how to battle famine and improve the livelihoods of China's predominantly rural farmers. Foreign missionaries and philanthropic organizations like the American Advisory Committee for Famine Relief and the Rockefeller Foundation contributed funding and expertise to Chinese rural reform movements and centers of agricultural science. Nanking University and the National Agricultural Research Bureau utilized global networks of agricultural science to locate new crop cultivars, select and experiment for higher yield and disease resistance, and extend them into rural areas for planting by farmers. Rural reform movements, such as the Mass Education movement and the North China Council of Rural Reconstruction, emphasized literacy, education, public health, and other forms of social improvement at the village level. These disparate groups of intellectuals, scientists, and ideas converged over the need to not just relieve famine but to prevent it, leading to the emergence of a developmentalist approach to rural China.

The intervention of war and the establishment of UNRRA and CNRRA pushed agricultural rehabilitation to a higher profile on the national level. Funding from the United States provided an opportunity in the aftermath of war, but infrastructural damage and economic and political circumstances such as the ongoing civil war and postwar inflation hindered UNRRA-CNRRA cooperation and efforts on the ground. The Sino-American Agricultural Mission provided a new opportunity with the creation of the JCRR for long-term development. The JCRR integrated the emerging paradigms among missionary, rural reform, and scientific communities in China that had been working on famine prevention.

Ultimately, the ideas articulated by these institutions resulted in a spectrum of answers to the fundamental questions of development. How can famine and hunger be eliminated? How can farmers' livelihoods be improved? And how does one bring modernity to a rural and agricultural society? Community-based, grass-roots education and social reform, dissemination of knowledge through agricultural education, and modernization through agricultural sciences, represented the gamut of options that would eventually become paradigms in the Cold War period. Community development efforts by the Ford and Rockefeller Foundations in India, infrastructure construction by USAID in Afghanistan, and agricultural research by the International Rice Research Institute in the Philippines, just to name a few, would revisit the same discussions that had occurred decades earlier in China by actors who were faced with the very same dilemmas.⁸³

In Taiwan, the JCRR would eventually make astounding strides in agricultural productivity, led by the increase of chemical fertilizers, the breeding of high-yield crop varieties, and the ability to disseminate those varieties and fertilizer practices through agricultural extension. The success under the JCRR proved to be one of the most consequential factors for Taiwan's emergence as a global economic power in the twentieth century, as agricultural success proved to be the spur for Taiwan's industrial miracle. As the next two chapters will discuss in detail, much of the successes and failures of the JCRR resulted from the earlier experimentation in development efforts on the mainland, taking lessons learned and not learned from missionary famine relief, MEM, Nanking University, the NARB, and the UNRRA.