Layer upon Layer:
Experience, Ecology, Engineering, Heritage, and (most of all) History
in the Making of China's Agricultural Terraces

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The hills of Wangjinzhuang in She County, Hebei Province are carved into level strips of land, each wide enough for several passes by a donkey-pulled plow and held in place by hand-built rock walls (Fig. 1). Here on the eastern edge of the Taihang Mountains, farmers plant terraces with corn and millet in rotation; they also tend fruit, nut, and Sichuan peppercorn trees and grow medicinal herbs as cash crops. The donkeys (Fig. 2) are honored as members of the family, and they eat a bowl of noodles on their "birthdays," celebrated collectively on winter solstice. This spectacular and idyllic agricultural landscape has already won recognition as a "Nationally Important Agricultural Heritage System"; the county government has further applied to the UN's Food and Agriculture Organization for consideration as a Globally Important Agricultural Heritage System. Both programs aim to preserve sustainable traditional agriculture: their stamps of approval promise economic benefits to localities through state subsidies and tourism revenue (Scott 2014).

But wait: Does it matter that many of Wangjinzhuang's terraces were built during the Mao-era mass mobilization to Study Dazhai in Agriculture? At that time, terracing represented neither tradition nor the potential for tourism, but rather a grand socialist vision of agricultural modernization. Such landscaping was the first of eight elements (also including seeds, fertilizer, and plant protection) in the Maoist version of agricultural modernization that in other places is called the "Green Revolution" (Schmalzer 2016; Eisenman 2018). The Mao-era campaigns have, moreover, been lambasted by critics who

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highlight devastating cases where terracing was imposed in ecologically and culturally inappropriate ways (Smil 1984; Wang 1999; Shapiro 2001; Khétsun 2008). Today, this socialist history is memorialized in numerous fashions by state officials, but it is notably absent in the works of agricultural heritage scholars, who typically confine their attentions to the more remote past known as “tradition.”

This paper presents a historical investigation of agricultural terracing in the context of efforts to document, preserve, and mobilize traditional agricultural knowledge in the People's Republic of China. In particular, I seek to establish the contributions of Mao-era history to the production of knowledge characterized as “agricultural heritage,” as well as its role in shaping the agricultural heritage paradigm itself. I am by no means arguing that the Mao era is more important than other eras in these historical processes; however, it is the period most at risk of being forgotten by the transnational agricultural heritage movement and simultaneously at special risk of being coopted by state forces, and for those reasons it is deserving of critical scholarly attention.

Of central importance in this study are the epistemological moorings of “agricultural heritage.” Similar to the concepts of “mass science” and “indigenous” / “traditional” knowledge, the agricultural heritage paradigm restructures understandings of science to facilitate engagement with forms of knowledge perceived not only as outside of professional science but also as capable of making up for its deficiencies. Indeed, during the Mao era, the study of China’s agricultural heritage followed the broader principles associated with “mass science” (群众性科学), while in more recent decades it has emphasized “traditional knowledge.”

Fa-ti Fan (2012) has highlighted the significance of “everyday experience” in Maoist conceptualizations of lay knowledge: people were knowledgeable because they had “accumulated sufficient experience, knowledge, and practice” in their locales (145). Moreover, Fan cites the gathering of folk knowledge on weather, earthquakes, and other

natural phenomena as evidence of this official recognition of the social character of experiential knowledge. I have elsewhere (2016) similarly highlighted the Mao-era state's interest in folk knowledge, but I build on Jacob Eyferth's study of papermaking in rural Sichuan (2009) to argue that Maoist epistemology precluded an appreciation of the ways that technical knowledge is embedded in culture. The first part of this paper extends this line of analysis to argue that the Mao-era agricultural heritage paradigm provided a helpfully class-conscious understanding of the contribution of laboring people to knowledge production, but that the focus on "experience" limited its ability to do justice to the rich cultural contexts in which local knowledge has been produced and transmitted.

The second part of my argument relates to the current agricultural heritage movement in China, which draws on the legacy of "mass science" but also on a number of newly significant intellectual and political currents that have emerged within an academic context in which the United Nations and Western social sciences have played important roles. As a result of these currents, today's agricultural heritage experts have replaced the early emphasis on "experience" with a focus on "culture," and especially cultural "systems." In this respect, the current agricultural heritage movement in China more closely matches the contemporary transnational movement for "indigenous knowledge," though for political reasons the term "traditional" is typically used in place of "indigenous."[1] The categories of "indigenous" and "traditional" knowledge can help expose the colonialist roots of science; they can also assist scientists seeking solutions to pressing problems like agricultural sustainability and climate change (Alexander et al 2011). However, they often present a harmfully misleading dichotomy between knowledge produced by a purportedly dynamic, modern science on the one hand, and that preserved by an essentialized "indigenous" culture rooted in an unchanging "tradition" on the other.

STS scholars have worked in various ways to challenge the colonialist universalism of

1 The term "indigenous" is problematic in China because of the state's reluctance to acknowledge the existence of indigenous people protected by U.N. declaration on indigenous people's rights (Sturgeon 2007).

modern Western science without further marginalizing and essentializing its "others." In her influential 1998 book *Is Science Multicultural*, Sandra Harding treated "scientists in the modern West, like other indigenous knowers" (176) within a single analytical framework in an effort to erase not only the hierarchy but also the dichotomy itself (see also Hess 1995; Turnbull 2000). More recently, Robin Wall Kimmerer (2013) and Banu Subramaniam (2014) have broken academic conventions, integrating STS analysis with their own experiences as an indigenous woman scientist and a Third World woman scientist, respectively, to demonstrate the dynamically interwoven, contested, and transformative relationships at the heart of knowledge-making across borders. Closer to "home" for *EASTS*, Mei Zhan (2009) and Sean Lei (2014) have shown the entanglement of Chinese medicine and Western biomedicine to be especially fertile ground for challenging essentialist understandings of knowledge.

Although most of these scholars are not historians, their commitment to recognizing the local and contingent character of all forms of knowledge-making resonates strongly with the kinds of insights historians are well positioned to offer. This paper argues that the current agricultural heritage movement offers unprecedented opportunities for an integrated analysis of agricultural ecology, economics, and culture, but that it lacks a sufficiently nuanced appreciation of modern history. Like the concept of "indigenous knowledge," the agricultural heritage paradigm thus threatens to essentialize culture and flatten the "storeyed" history of terracing and of agricultural knowledge and practice more generally.

At the same time, the case explored here underscores the need for a consciously critical approach to the reconstruction of these historical layers if we are to avoid unwittingly becoming tools in state projects. In *Anyuan* (2012), Elizabeth Perry illuminated the myriad ways that state agents in the PRC have selectively "mined" the revolutionary past to buttress state power and construct desired political futures. Meanwhile, as Francesca Bray has persuasively argued, agricultural science and technology serve the state as particularly

“powerful instruments for maintaining… social order and for inculcating the subjectivities associated with that order” (Bray 2008, 327). Thus, I argue here not just for the inclusion of recent historical layers in the concept of “agricultural heritage,” but specifically for a critical analysis that exposes state power and resists state co-option, while still recognizing the ways in which state officials, science workers, and local people have often collaborated in producing, simultaneously, agricultural knowledge and political culture.

The paper begins by charting Mao-era research on “agricultural heritage” based on the mass science paradigm and its relationship to terracing campaigns. I then trace the emergence in the 1980s of “ecoagricultural engineering,” which combined “traditional” Chinese concepts of ecology with a strong emphasis on systems theory, and which drew great strength from the growth of the field of ecology transnationally. When ecoagriculture joined forces with the rise of the tourism industry in the 1990s, terracing took on a new significance; this was heightened still further as China adopted a leading position internationally in promoting a new vision of agricultural heritage. The paper concludes by returning to the terraces of Wangjinzhuang, where I examine the implications of the new agricultural heritage paradigm for local history, and the implications of local history for the agricultural heritage paradigm.

Heritage Studies and Mass Science in Mao-Era Terracing Campaigns

Though it is seldom noticed, the current field of agricultural heritage studies in China has strong roots in the Mao era. In 1954, a joint project between the Chinese Agricultural Academy of Sciences and the Nanjing Agronomy Institute established the Chinese Agricultural Heritage Research Office (农业遗产研究室, Wang and Lu 2010). Building on precedents in the late Qing and early Republican periods, these scholars produced a sizable literature on what they now called China's “agricultural heritage” (农业遗产), which received positive attention from top scientific leaders like Zhu Kezhen, Zhou Peiyuan, and Nie Rongzhen (Zhu v16p456, v20p479, v21p155-56, v21p318). The bulk of this work consisted

of “organizing” (整理) the agricultural knowledge preserved in imperial-era Chinese texts. Under the “mass science” paradigm, such wisdom was first and foremost characterized as “experiential knowledge” (经验知识) accumulated through the production practice of China’s laboring people. However, the principles of mass science further prescribed “taking that valuable experiential knowledge and enhancing it to create scientific knowledge” (Wang 1957; Lavelle 2010, 9, 5). Thus would scholars avoid becoming mired in the “ideology of returning to the ancients” (Zhang 1955, 3).

Beyond the recovery of specific technologies, the organizing of imperial-era agricultural texts produced an over-arching principle, “suitability” (宜), that found very broad application during the Mao era. As Peter Lavelle has shown, the notion of suitability was among the “long-standing and familiar vocabularies of Chinese agricultural thought” that Chinese agricultural reformers in the late Qing and early Republican period continued to employ even as they sought to import and apply agricultural scientific knowledge from abroad in newly established experiment stations (Lavelle 2015, 334). In the Mao era, “suitability” typically appeared within the four-character phrase “suit local conditions” (因地制宜), and was often invoked as a check on the tendency to let theory overtake practice in the imposition of uniform models without regard for local variability (Schmalzer 2016).

Mao-era efforts to promote agricultural terracing resonated with the values emphasized in Mao-era agricultural heritage studies and mass science more broadly—especially in the characterization of farmers' knowledge as “experience,” in the perceived need to modernize traditional forms of knowledge so that they would accord with science, and in the insistence on developing technologies that suited local conditions. At the same time, the terracing campaigns also emerged out of, and were profoundly shaped by, the political, economic, and environmental struggles of that dynamic historical period, and they served as highly visible and impressive state achievements accomplished through the mobilization of the masses.

Agricultural terracing has been practiced in many parts of the world for millennia—modern Chinese scholarly treatments of terracing sometimes refer to archaeological finds from the Han dynasty and sometimes to texts from the Song dynasty for early evidence of terracing (Wang 1957; Shexian nongye zhi 2011, 118). The history of agricultural terracing during the Mao era is typically associated with Dazhai, but when Dazhai came into the national spotlight, communities in several regions of the country—especially but not exclusively in the Loess Plateau—were already engaged in transforming the land through terracing, and this was sometimes even described as "a terracing movement" (开梯田的运动) (Luo 1958, 24-25). Indeed, prior to 1949 the communists had promoted terracing in their base areas, including in She County, where Wangjinzhuang is sited (Shexian nongye zhi 2011, 118).

In early 1964, more than a year before Mao's official call to "Study Dazhai in Agriculture," the terracing achievements of Dazhai gained public recognition through the publication of "The Dazhai Road" (大寨之路) as a lengthy article in *People's Daily* and as a fifty-page illustrated book by the Village Reading Materials Press (农村读物出版社). With this, localities already participating in terracing began framing those efforts in terms of constructing "Dazhai-style fields" and learning from the revolutionary spirit of Dazhai. For example, in a 1965 article in the journal *Chinese Waterworks*, Meng County in Shanxi Province boasted that since 1963 they had constructed 197,000 mu of "Dazhai-style fields," of which more than 40,000 were terraced fields (Shanxi sheng Mengxian weiyuanhui 1965, 7-10, 26). The same year, officials in Long County in Shaanxi Province reported that they had countered resistance to terracing by organizing reading groups to study Mao's articles "The Foolish Old Man Who Moved the Mountain" and "Remembering Norman Bethune," along with "The Dazhai Road" (Zhonggong Shaanxi sheng Longxian xianweiyhui 1965). The first of these texts was of special significance: it related a parable about a man who diligently set about the task of moving an entire mountain one bucket-load at a time; he succeeded in the

end through divine intervention, which was reinterpreted in Mao's version as the intervention of the Chinese masses.

Since their inception, the CCP's terracing campaigns aimed at expanding arable land to increase grain production: hilly areas not serving some obvious purpose were (and often still are) described as "barren mountains" (荒山). A still more prominent goal of terracing, however, was that of protecting water and soil resources from the damaging effects of erosion. Sources often shared specific conservation strategies, for example preserving topsoil integrity by removing the layer of "cooked" (organic) soil from the top, and then using "raw" (inorganic) soil from beneath to build ridges and fill ditches, before capping it off again with the cooked soil (Shanxi sheng Meng xian 1965). With the Study Dazhai campaign, terracing became commonly celebrated as a means to transform "three-runoff fields" (三跑田) into "three-preservation fields (三保田): that is, to prevent the loss of soil, water, and fertilizer to erosion, an expression that has continued in more recent years (Li and Hou 1966; Zhu 1993; Qin 1995, 84; Cui and Ma 2016).

Consistent with the broader Mao-era literature on agricultural science and technology, materials on terracing frequently returned to the fundamental principle of working in accordance with local conditions. For example, a 1958 book surveyed two types of terracing that the author argued "closely related to each district's natural conditions and socio-economic conditions, such that in researching terracing we also need to pursue a systematic understanding and investigation of relevant natural and socio-economic conditions" (Shuilibu Huanghe shuili weiyuanhui 1958, 7). A 1964 article on terracing in the ethnic-minority areas of Guangdong and Guangxi explicitly argued against adopting monolithic approaches and promoted balanced development of forestry, agricultural, and animal husbandry tailored to local conditions in each place (Yi zili gengsheng 1964).

Further emblematic of Mao-era approaches to science was the emphasis on mass science. However, here research on terracing practices departed significantly from the work

of the agricultural heritage scholars, since the latter was text-based, whereas the former involved on-site investigations based on a process of "synthesizing" (综合) the masses' knowledge, "elevating" (提高) it through science, and "extending" (推广) it back to the masses (e.g., Fang 1960, preface 1).

The concept of "experience" (*jingyan*, 经验) was important to this process in at least two ways: the experience of the masses that formed the basis of their knowledge, and the experience of the person conducting the on-site investigations (Ghosh 2014, 53-54). As an epistemological category, *jingyan* has a complex history in modern China. In the early twentieth century, practitioners in the fields of medicine and forensics argued that China's contributions lay in *jingyan* rather than "theory"—a claim that carved out a realm of prowess for Chinese tradition but also risked ceding the privileged category of "theory" to the West (Asen 2015; Lei 2002). In Maoist epistemology, experience was closely linked with practice in the binary "theory and practice." Mao accorded practice priority over theory in a conscious, consistent reversal of privileged and subaltern categories that we see also in the prioritizing of red over expert, native over foreign, and peasant over elite (Schmalzer 2016, 37). Judith Farquhar has argued that "*jingyan* is a good deal more historical, collective, and discursive than the individualistic life narratives that the word experience connotes"—and indeed, her study of Traditional Chinese Medicine practitioners in 1980s China demonstrates that their "emphasis on the linked themes of practice and experience was far more than (or other than) an instrumental deployment of terms made fashionable by Mao Zedong's essays" (1994, 2-3). However, I find it harder to conclude that *jingyan* served in such epistemologically rich ways when it came to investigators collecting the experiences of "the masses."

The precise processes through which the masses' knowledge was collected and then transformed remain obscure—or at least coarsely described—in the materials on terracing I have found to date. To be sure, researchers clearly did engage regularly with local knowledge,

as evidenced not only in their detailed descriptions of practices but also in their references to local terms and expressions to describe terracing (Fang 1958, 37-50; Shanxi sheng Mengxian 1965; Ping 2016, 108), and at times we see reports of local innovations (Jieshao jizhong 1954). Moreover, the diaries of Chinese Academy of Sciences vice president Zhu Kezhen contain substantive discussions of the need to collect the masses' terracing experience—and of the difficulties posed by scarce opportunities for interaction and language barriers between scientists and peasants (Zhu v3188-93, v3p235-39, v13p88-89).

Although the respect for peasants and their wisdom appears genuine in these materials, the "experience" paradigm undoubtedly limited the way that local knowledge could be understood. I have not yet found any meaningful bridge between the surveying investigations of terracing researchers and the efforts of scholars "organizing" China's agricultural heritage as it had been passed down in texts. Nor were there discussions of the more recent, local histories of terracing that could help explain the social and cultural contexts in which certain techniques had emerged. Reports of local innovations did not appear "historical, collective, and discursive" (as in Farquhar's study), but instead represented heroic narratives of experienced individuals succeeding in the face of natural and social obstacles, and usually this involved doing something new to their communities rather than tapping existing knowledge (Luo 1958).

The "experience" paradigm thus precluded recognition of the ways in which technologies are embedded in culture. And this was true even when discussing the terracing practices of minority ethnic groups. Mao-era materials on minority regions presented terracing as an advanced technology: where minority nationalities traditionally practiced terracing, this was admired, but at least as often the focus was on Han people helping to enhance, modernize, or even introduce terracing to these "backward" regions (Gong and Zhang 1958; Luo 1958; Shi 1960; Fang and Miao 1976, 71). For example, a 1974 article on the Du'an Yao Autonomous County boasted that over the past four years, under the

inspiration of Dazhai, they had blown up 1,800,000 square meters of rocky earth and constructed 6,100 mu of terraced land, 100+ reservoirs, and 4 tunnels, among other construction accomplishments (Du’an Yaozu zhizhixian 1974). And as late as 1985, it was still possible to publish a book on the Longsheng (龙胜) area of Guangxi Province that did not present the vast terraces as representative of any special traditions of the people who live there: traditions were still cast as impediments to development—for example, avoidance of certain types of labor on specific days within the sexagenary cycle and slash-and-burn farming—while agricultural extension efforts in the Mao era were credited for improvements, including the development of more than 6,000 mu of new terraces (Guangxi Zhuangzu zhizhiqu 1985, 86-92).

The dramatic remaking of the landscape was throughout the Mao era and into the Reform period presented as a testament to the bold vision of Chinese socialism to transform heaven and earth through the application of the masses' wisdom and labor in combination with modern science. Beyond terracing's significant contributions to soil and water conservation and increased production, it is easy to understand the impact that the spectacle of the terraced land had on the belief that under socialism the people, symbolized by the “foolish old man” of Mao's famous article and made real by labor models around the country, could literally move mountains (Fig. 3). Materials on terracing, including those from Wangjinzhuang, are replete with exaltations on the “transformation of the face,” sometimes specifically the “backward face,” of local landscapes (Yi zili gengsheng 1964; Dazhai dadui dang zhibu 1978, 314). Appreciation for such transfigurations was not limited to those writing for official publications. As an American antiwar activist and graduate student in biology recorded in his journal when he visited Xigou Commune on the Loess Plateau in 1973, "We... couldn't help but feel we had some kind of gut understanding for why the peasants love Chairman Mao. Ravine after ravine terraced to the brim. Hopeless land brought into production" (Schmalzer 2009, 328).

But the moving of heaven and earth required human sacrifice, and this comes through in materials produced during both the Mao and post-Mao eras. Above all what these sources emphasize is the tremendous amount of labor required in terrace construction and the harsh conditions under which peasants worked. People who contributed to the building of Wangjinzhuang's terraces in the 1960s recall exactly how many (or rather, how few) buns they received for each grueling day of labor and how they wiped their sweat with their own shirts unless they were rewarded for special achievements with a towel (interviews in Wangjinzhuang, Shexian, Hebei, 11-13 July 2017).

No matter how beautifully this labor is described or how noble the laborers are said to be, nothing can disguise the physical toll on the people who produced the terraces. This raises important questions about the relationship among labor, experience, and knowledge. Even if labor is valorized for the role it plays in the production of knowledge, once that knowledge has become stabilized and put into practice, if it still requires vast numbers of people engaged in back-breaking efforts day after day, the degree to which any person's labor can really be said to be generating knowledge, as opposed to merely constituting drudgery, is called into question. A generous reading might suggest that the experience of labor produced knowledge (for example, knowledge about oneself and one’s relationship to the land and the community) that was meaningful to the laborers.[2] As we will see below, some commune members also had the undoubtedly exciting opportunity to travel to other sites to “exchange experiences.” Moreover, the prominence of labor in the Mao-era materials provides a precedent for the interdisciplinarity we see in more recent years in Chinese agricultural heritage studies: the technical knowledge that researchers needed to develop in the 1950s through 1970s involved not just the mathematics of constructing terraces on hills with various slopes or the chemical composition of soils, but also tricky questions of how to organize labor resources for projects of truly daunting scope. All of this notwithstanding, I do not want to let go of the more

2 I thank an anonymous reviewer for pointing this out.

epistemologically radical roads not taken by Maoist mass science. In many cases, the evocation of “labor” and “experience” served to close the discussion rather than open it: checking these political boxes seemed to allow investigators to move along rather than pushing them to think more deeply about the complex interplays among labor, lived experience, cultural systems, and knowledge production.

Systems Theory and the Rise of Ecoagricultural Engineering

Mao-era precedents exist for another prominent trend in current agricultural heritage discourse: the application of systems theory to agriculture, which went on to gain much traction from the growing emphasis on engineering during Deng Xiaoping’s technocratic transformation of China (Greenhalgh 2008; Andreas 2009). In 1959, Mao himself had cited a Soviet expert as saying, “Agriculture, forestry, and animal husbandry are mutually dependent. We must not lack in any of them, but rather give all three the same status.” He then went on to explain those interdependencies, highlighting especially the need for pig manure to fertilize the fields (Mao 1959). This was also the year that the slogan “take grain as the key link” (以粮为纲) came into wide circulation, which though often repeated on its own was from the start typically expressed as one piece of a complete and integrated development strategy—as in the phrase “the plan of full development of agriculture, forestry, animal husbandry, sidelines, and fisheries, with grain as the key link” (以粮为纲的农、林、牧、副、渔全面发展) (“Yimian guanghui” 1959).

The notion that these areas should be understood as linked within production “systems” was the central theme in the work of geographer Zhong Gongfu, whose decades-long research on the agricultural geography of the Pearl River Delta had by early 1958 identified the systemic principles underlying what would become one of China's most noted examples of “agro-ecological engineering.” He wrote: “A very long time ago, the peasants of the Pearl River Delta had already created, in accordance with local natural conditions, a

complete cultivation system for production in which planting mulberry trees, rearing silkworms, and rearing fish were all linked together very closely" (Zhong 1958, 247). Zhong's terminology was somewhat different from what Reform-era researchers would adopt —for example, he used 制度 rather than 系统 for "system"—but the overall sense is much the same. As with later scholars, Zhong emphasized the "integration" (综合) of component parts, and he used diagrams to show the "links" among them (Fig. 4). His text is but one manifestation of the fascinating, and as yet insufficiently elaborated, history of systems theory, ecology, and agricultural science as they intervolved over the course of the twentieth century in many parts of the world—including in North America, Western Europe, the Soviet Union, and China (Levins 2007; Weiner 1988; Kwa 1987; Hagen 1992).

A 1975 article presaged China's more explicit engagement with the transnational agroecological movement that would emerge in the 1980s. The author connected the concept of "agroecological systems" (农业生态系统) with the more familiar concept of "using the land while caring for the land" (用地养地), a way of thinking about organic fertilizers understood to be rooted in ancient Chinese texts and celebrated also in early texts from the Study Dazhai movement (Liu 1961; Feng and Li 1965, 18). He emphasized that in capitalist countries, because land was controlled by landlords and capitalists, agroecological systems research was scarce (Shen 1975, 66-67)—what STS scholars today would call "undone science" (Frickel et al 2010). Beginning in the 1980s, Chinese scientists began talking first about "integrated farming systems" (综合农业) and "agroecological engineering" (农业生态工程) and then increasingly about "ecoagricultural engineering" (生态农业工程). Articles published in Chinese academic journals testify to the importance of transnational Marxism in this process, for example in references to the radical U.S. organization New World Agriculture Group (Zhang 1983; Deng 1987; Sun, Hang, and Zhang 1990).

Scholars in China almost invariably credit the entomologist Ma Shijun as the father of Chinese ecoagricultural engineering. At a conference in 1979, Ma put forward four founding

principles for the new field—integration, coordination, circulation and regeneration (整体、协调、循环、再生)—which remain touchstones for those who have developed the field since (Sun and Qi 2017, 9). Ma's 1987 book *Chinese Agroecological Engineering* (中国的农业生态工程) is undoubtedly the most regularly cited Chinese-language book on the subject (Li, Liu, and Min 2010; Li and Sun 2015).

The book's editors framed the treatise in ways that echoed Mao-era discourse on mass science: “This book's aspiration is to use science to synthesize the good experiences and good methods created by the masses, and then propagandize and disseminate them to allow the broad masses to more consciously use ecological principles and implement ecological engineering, so as to take a step forward in elevating the productive power of agroecological systems and accelerate the development of the national economy” (Ma and Li 1987, pref. 1). However, Ma and his coauthor were more concerned to relate the fundamental principles of agroecology to yin/yang, the Five Phases, and other elements of ancient Chinese philosophy. They also joined the chorus of other voices taking aim at the environmentally destructive aspects of Mao-era policy, saying that over a long period of time “we did not pay attention to complying with natural laws; we one-sidedly emphasized 'taking grain as the key link'; we inappropriately promoted 'farming right up to the mountain tops,' 'planting rice to the heart of the lakes,' and other slogans; we blindly destroyed forests to open up land for farming; we abandoned livestock to grow grains; we created serious water and soil erosion; and we destroyed the agroecological balance” (Ma and Li 1987, 24).

Terracing did not appear in Ma Shijun's 1987 treatise; nor did it play a prominent role in other ecoagricultural engineering literature prior to the emergence of the agricultural heritage movement. The absence may in part be explained by the already mounting critiques of the excesses of Dazhai-inspired terracing campaigns, evoked in the phrase “farming right up to the mountain tops.” However, the more important reason is probably that the kind of engineering involved in terracing did not fit the emphasis on bio-energy that characterized the

work of Ma Shijun and other early proponents of ecological engineering (and the ecosystem concept more generally). The “systems” that they sought to promote involved the transfer of energy from one agricultural component to another: for example, a system might be named “Pigs ~ Biogas ~ Fruit Trees.” And so, even where terracing was a necessary part of the infrastructure undergirding the system in question, it might not appear in either the name or the flowchart accompanying the description of that system (Fig. 5).

Beginning in the early 1990s, the state began strongly promoting agricultural terracing again, especially in the north where the loss of water and soil resources to erosion continued to present serious problems. In these new campaigns, the old Dazhai-era language of conservation—including that of replacing “three-runoff fields” with “three-retaining fields”—continued to resonate (Zhu 1993). At the same time, “ecoagricultural engineering” became a new way to frame the work (Zhu 1993; Yu et al 1997; Shi and Zhao 1998; Li 1999). As we will see below, ecoagricultural engineering not only added new layers to the meaning of conservation, but also created a bridge between Mao-era discourse on agricultural systems and a newer approach to modeling that would incorporate culture—or even characterize systems as fundamentally cultural.

The Market Economy and the Rise of Agricultural Heritage

In 2010, three researchers at the Geological Sciences and Natural Resources Research Institute—Li Wenhua, Liu Moucheng, and Min Qingwen—authored an article titled “The Development and Prospects of Ecoagriculture in China.” In it, they argued that China had made substantial progress in the field of ecoagriculture. However, they criticized the failure of ecoagriculture to engage with market economics, and they suggested that the field of agricultural heritage was filling that gap by promoting eco-tourism and the “branding” of local ecoagricultural products as “scientific,” “historical,” “humanistic,” “regional,” and “cultural” (Li, Liu, and Min 2010). If this sounds crass or materialistic to some readers, we

should note that the explicit motivation for such marketing is survival, specifically “the conservation of heritage traditions, rather than abandoning the systems under the pressure of globalizing forces” (Sun et al 2011). It is not marketing for its own sake, but rather because that is the only possibility imaginable to these scholars in the current context of market economics and globalization. It is by no means obvious how to devise better strategies in an era Alexander Day and Mindi Schneider have recently characterized as "the end of alternatives" (2018).

If marketing is the key to advancing ecological agriculture, then the agricultural heritage movement is ideally suited for the job. Agricultural heritage has grown not only out of the field of ecoagricultural engineering but also out of the burgeoning tourism industry, especially its eco- and heritage tourism branches. And this shift has incidentally opened center stage to terracing, since landscape—and preferably spectacular, panoramic landscape—is among the major criteria both for tourists and for agricultural heritage organizations.[3] Terrace tourism in China has been especially focused in the southwest, with the Longji Rice Terraces of Guangxi and the Hani Rice Terraces of Yunnan as the premier sites—so much so that the mention of Chinese terraces today instantly calls to mind the southern rice terraces, whereas during the Mao era the dryland terraces of the north dominated academic studies and propaganda materials. Tourism began at the Longji site in 1992 and accelerated rapidly after 1999, with the spectacular views of the terraces recognized as the primary tourism draw (Wu and Zhang 2008). The marriage between terrace tourism and agricultural heritage studies has even produced a series of “International Terraced Landscape Conferences,” the first of which was held in Yunnan in 2010. There, government officials, scholars (including Ming Qingwen and colleagues), and farmers from around the world gathered to discuss traditional farming systems and conservation, agreeing that “terraced landscape... [is] a special study area in its own right, for which further research should be developed in a transdisciplinary way” (Sun et

3 On the significance of spectacle and conceptualizations of landscape in tourism more generally, see Urry 1990.

al 2011). Also worth noting is that, unlike with ecoagricultural engineering, terraces themselves have become a defining element of some “agricultural heritage systems.”

In 2004, the UN Food and Agriculture Organization, in cooperation with numerous other international organizations, launched an initiative to preserve Globally Important Agricultural Heritage Systems. Of the five initial sites identified by GIAHS, China secured one: the paddy-fish system (稻田养鱼, that is raising fish in rice paddies) of Qingtian County in Zhejiang Province (Min 2006, 207)—a system related to that described by Zhong Gongfu back in the 1950s. Since then, China has become one of the most enthusiastic participants in GIAHS, and Min Qingwen serves as a member of its leadership committee. Of the 50 sites already approved around the world, 15 are in China (FAO 2018). In 2012 the Chinese Department of Agriculture announced its own commitment to recognizing “nationally important” agricultural heritage systems (NIAHS) and published criteria for designating sites. So far 62 have been identified, including Wangjinzhuang (Gao 2016). In 2014, the Chinese Agricultural Studies Association established an agricultural heritage systems sub-association, with annual conferences that bring together natural and social scientists from a wide range of disciplines.

The transnational concept of “agricultural heritage systems” has emerged in a specific historical moment out of a constellation of priorities articulated by international organizations, governments, activists, and academics: they include environmental sustainability, economic development, cultural heritage preservation, indigenous knowledge, and systems engineering. China’s current agricultural heritage movement draws substantially from these transnational currents, but also preserves quite a bit of what I will hazard calling its socialist heritage: the emphasis on native knowledge and the innovations of peasants with the persistent caveat that such knowledge must be carefully selected and nurtured to reach scientific standards, often characterized as bringing together traditional and scientific forms of knowledge; the priority placed on mobilizing agricultural “heritage” to benefit the present;

the enthusiasm for local self-reliance and related insistence that technologies “suit local conditions”; and the ambitious vision for handling big problems of development on a national or even global scale.

An article by Min Qingwen and three colleagues, titled “Important Progress in Chinese research on Agricultural Heritage and the Protection of Practice,” captures the continuities and changes very clearly:

> Over a long period of production practice, the Chinese laboring people have accumulated a wealth of ecological wisdom and produced traditional agricultural systems with the distinct characteristic of “uniting nature and humans” [天人合一] along with traditional ecoagricultural models such as intercropping, raising fish in rice paddies, mulberry trees grown together with fish ponds, terraced cultivation, dryland agriculture, integrated agriculture and forestry, sandstone fields, horizontal wells, nomadism, and courtyard economies, all of which are filled with theoretical value and practical significance. These composite agricultural systems are a clear and special characteristic of Chinese agriculture, reflecting the harmonious relations between humans and nature of Chinese traditional culture. They emphasize the integration and mutual usefulness of the many component parts of complex biological-social-economic systems, bringing agriculture, forestry, horticulture, animal husbandry, aquaculture, and others together into a mutually linked system (Min et al 2011, 1019).

In its emphasis on practice, its evocation of the “laboring people” and what they have produced, and its call for the integration of agriculture, forestry, and aquaculture, this passage has clear ties to the Mao-era past. However, the replacement of “experience” with “tradition,” and the consequent reliance on the concept of “culture” has created something quite different and far more in line with the priorities of the transnational academic worlds that China joined in the post-Mao era.

“Culture” clearly provides a richer framework for understanding farmers' knowledge

than “experience” ever could. However, without a strong historical analysis, the concept of "culture" runs the risk of essentialism and can obscure as much as it reveals. It can serve to gloss over the complex processes through which Chinese agriculture has come to its present state. While the identification of enduring and defining features of China's "agri-culture" (as the GIAHS formulates it) serves important purposes in current efforts to preserve farming knowledge and practices in the face of overwhelming pressures of corporate-industrial agriculture, it does not do justice to the many layers of history that have contributed to the production not only of modern agriculture but also of modern understandings of what "traditional" agriculture signifies. To explore these dilemmas in more specific detail, let us return to the terraces of Wangjinzhuang.

History: Preserving the Middle Layers in Wangjinzhuang

There is little question that the agricultural heritage paradigm, with its emphasis on culture and systems, opens the discussion of Wangjinzhuang's terracing wide enough to capture an enormous amount. This was made abundantly clear at a meeting I attended of local officials and agricultural heritage experts as the county government prepared its application for recognition by the GIAHS as an agricultural heritage site. At the meeting, She County Agricultural Bureau’s associate director, He Xianlin, delivered an impressively comprehensive presentation in which he characterized the local ecological system of She County as a “quintity” (五位一体; five members, one body) of “Rocks ~ Donkeys ~ Crops ~ Terraces ~ Villagers” (He 2016).[4] He represented the system in a nested diagram that suggests a different type of dependency than that found in the system diagrams we have seen above

4 Since 2012, the phrase 五位一体 in political discourse most commonly relates to the “five-sphere general plan” for advancing “socialism with Chinese characteristics,” namely: economic construction, political construction, social construction, cultural construction, and eco-civilizational (生态文明) construction. (Notably, Xi Jinping was from the outset especially outspoken in emphasizing the significance of eco-civilization.) However, this phrase (or variants using other numbers) was already commonly used in the field of ecoagricultural engineering. We make take this as further evidence of the profound significance of systems theory throughout PRC political discourse.

(Fig. 6). The result is that in addition to highlighting aspects of environmental and agricultural significance, such as the region's biodiversity and its abundant food products and medicinal plants, the framework also brings into play a broad range of tangible and intangible culture.

Visitors to Wangjinzhuang are likely to agree with the decision to place rocks at the foundation of this "system": not only the terraces, but the roads, bridges, houses, field huts, and temples all display extraordinarily beautiful stonework. Thus it was fitting that the stonemasons and their traditional craft received significant attention in He Xianlin's slide show, with special notice taken of the "suspended arch mosaic" terracing technology (悬空拱券镶嵌, Fig. 7) that accommodates the region's difficult climate, in which every decade is said to produce nine years of drought and one of floods.

The donkeys also received their due in He's presentation, in accompanying reports by other local officials, and among local people we encountered during a tour of the terraces organized for the visiting experts. When I reached the top of a terraced hill, a villager noticed my infatuation with a nearby donkey (Fig. 2) and explained that in Wangjinzhuang donkeys are considered "members of the family." I was delighted to write this down in my notebook, only to discover later that this tidbit has been stabilized as a feature of local culture worth sharing with visitors, and was repeated in He Xianlin's slide show and an accompanying documentary film. Both these materials further highlighted that donkeys enjoy a bowl of noodles on their "birthdays," celebrated at the winter solstice. (During his presentation, one of the local officials noted that the attachment to donkeys could sometimes be a liability for the eco-tourism industry: in one case, a local person sent a visitor away, refusing to allow them to take photographs even if they paid for it, "because the *donkey* was unhappy and wanted to go home!!")

To my eye, the slide show, especially its incorporation of ecology and culture into a "system," represented an accurate reading on the part of the local officials as to what

academics in the agricultural heritage field, and their FAO collaborators, expect to see in a Globally Important Agricultural Heritage System site. It was also clear that “culture” is politically resonant for party and government officials in ways that overlap but are not identical with the agricultural heritage paradigm. Indeed, the meeting began with a presentation by the local party secretary on the “five cultures” of Wangjinzhuang: 1) red culture (the area is especially noted for the activities of Deng Xiaoping and other members of the 129th regiment of the Eighth Route Army during the anti-Japanese war); 2) ethnic culture (specifically as the home of the goddess Nüwa and so the birthplace of humanity); 3) green culture (i.e., the area's forest lands and the agricultural terracing); 4) Chinese medicine culture (with more than two hundred types of medicinal plants, animals, and minerals); and finally 5) “blessings” (福) culture (with the second highest number of temples in the country next to Wutai Shan).

Another category of tremendous shared interest, very well accommodated by the heritage paradigm, is that of effectively marketing the terraces of Wangjinzhuang and She County more generally. In their advisory reports, the line of academic experts repeatedly emphasized the need to focus more on “branding” (品牌化) so as to distinguish She County from other similar sites and secure more favorable prices for its products—from agricultural produce to handicrafts. As we might expect, this advice was welcomed by the officials in attendance.

On the other hand, and for all its inclusivity, the heritage paradigm does not appear to accommodate recent history.[5] Indeed, it establishes a binary between “tradition” and “modernity,” a gap that scholars have critiqued in their analysis of agricultural heritage sites elsewhere, including the U.S. (Stanton 2012, 189-91). If we expect the creation of heritage sites that function like so-called “living museums” to blur the boundary between the past and

5 Wangjinzhuang has recently become the focus of a team of student-researchers under the direction of sociologist Sun Qingzhong of Chinese Agricultural University. Based on oral history interviews, they are exploring many facets of Wangjinzhuang culture—its terraces, architecture, donkeys, and beyond. My research represents an effort to add Mao-era history to this mix.

present, in fact they do precisely the reverse. They reinforce a sense that there are two modes of being—traditional and modern—and deflect attention from the many layers of historical experience and interpretation that have accumulated to produce every society on the planet. The term “agricultural heritage” prompts people to talk about ideas, skills, and objects being “handed down through time,” but this concept of time tends to be emptied of events and process, what historians and other historically minded scholars privilege. When I visited the village of Wangjinzhuang with the group of agricultural heritage experts, we stepped into a small courtyard where both new and old architecture could be seen side-by-side (Fig. 8). I heard several people pronounce authoritatively that it was a shame the newer architecture should be there to ruin the feeling of tradition. In contrast, as a historian I found the juxtaposition fascinating: it added to my understanding of historical process and change over time in Wangjinzhuang.

In fact, despite its absence from the agricultural heritage paradigm, recent history matters greatly to the government and to local people, as evidenced by diverse activities ranging from the collection of documents and publication of local histories by amateur historians, to the construction of memorial plazas and placards by state agencies. Of particular note is a volume on local history co-edited by two villagers—Wang Linding and Wang Shuliang—and published in 2013: the contributions of these village authors have earned them the respect of agricultural historians and members of the county agricultural bureau, who frequently consult them. State efforts to preserve Mao-era history are especially noticeable at the village’s central plaza. The plaza celebrates the terracing achievements of Wangjinzhuang's former party secretary Wang Quanyou (王全有), who beginning in 1965 led more than 200 people to transform the forbidding Yan'ao Gulch into terraced fields (Fig. 9), and further commemorates the filming of Cao Yu’s 1973 film *Sunny Days* (艳阳天) in Wangjinzhuang. Of course, cultural productions like the book and the plaza often represent promotional interests—whether to bolster local community identity, state political ideology,

or a marketing scheme. They thus typically lack the kind of critical perspective scholars expect.

Nonetheless, these official and popular efforts help to fill in some historical details—and to erect some historical markers—that do not seem to have a place in the agricultural heritage paradigm. In them, we can already see some of the pieces needed to render the epistemology of agricultural heritage historically deep and dynamic. By engaging local history, we may cultivate an understanding of Wangjinzhuang's agricultural heritage as not simply "traditional knowledge" embedded in cultural systems, nor merely "experience" accumulated by individualized members of the laboring masses. Instead we may conceive of it as a product of the interactions of state officials, science workers, and local people—at times developing new technologies in the pursuit of survival, growth, and scientific modernity, and at times working to sustain existing agricultural practices, variously understood as embodying "experience" or "tradition." What people in Wangjinzhuang today know about terracing and how they practice it—their "agricultural heritage system"—cannot be disentangled from the layered history of such knowledge production and circulation.

During the Mao era, political campaigns introduced new ways of organizing the labor of terracing and integrated Maoist ideology explicitly into the practice of terracing. In Wangjinzhuang, local memory of Mao-era terracing revolves around the figure of Wang Quanyou, who not only served as party secretary but also earned the status of labor model for his terracing achievements. Labor models embodied political values the state sought to promote among the people (Gao 2006, 600), and for their part villagers often endorsed these values and have sometimes continued to valorize local heroes for the qualities celebrated by the Mao-era state. Interviews today confirm the esteem in which Wang Quanyou is still held. He refused to take the smallest thing from the collective for his personal use; wherever he went he collected donkey manure along the way to add to the collective pile; he always did his share of any work he asked of his team.

Wang Quanyou had a predecessor in the role of terracing hero who also receives attention in Wang and Wang's 2013 local history. This was the blind fortune teller Su Taifu (苏泰福), who came to Wangjinzhuang in the Republican era to tell fortunes, but determined to support himself more honorably by acquiring land and building terraces. When he died in 1953 at the age of 59, villagers made a tomb and marker for him on the east slope of the village. As Wang and Wang's local history commemorates him: "Although Taifu has been gone for decades, the terraces he built are still there. His courage in eating bitterness and his spirit of steadfast endurance has been passed down among the people through the generations" (2013, 43). Widespread respect for public morality and hard work no doubt helped make the Mao-era state's practice of celebrating labor models sensible to local people; at the same time, the legacy of policies that used labor models to promote political values clearly shapes the way Su Taifu himself is now remembered.

Wang and Wang's commemoration of Su Taifu is saturated in the political rhetoric of the world in which they were raised. Speaking with me in 2017 about the material poverty of his childhood and the acute awareness of local people as to the need for conserving soil and water, co-author Wang Linding brought to mind a local Mao-era expression, "Sacrifice a communist party member before sacrificing a single sweet potato sprout." To bring home this poignant articulation of the precarious edge on which rural people stood, Wang went on to describe how his father conveyed the preciousness of soil and water: he recalled once being harshly chastised for walking all over a planted field—and he himself felt this was a terrible thing to have done. At the same time, the saying clearly expressed the state's ideology of diligence, frugality, and self-sacrifice. Here popular and state discourse—traditional and state-promoted knowledge—exist in a dynamic relationship propelled by shared priorities in the face of extreme material conditions. What conservation means today remains deeply rooted in such lived experiences and political discourses about scarcity, even as the market economy opens new opportunities for selling the brand of ecological agriculture.

Political language had an undeniable influence on the people who heard and spoke it. One villager who worked on the Yan'ao Gulch project spoke with me about the difficulty of the terracing work and the way reciting Mao quotations during the noon rest period made her feel "not tired anymore." This sentiment may seem difficult to believe today, but people in Wangjinzhuang associate it with the "spirit" of those times and the degree to which that spirit affected people's thinking and even their physical experience. Such quotations—"In our hearts there is the sun, the road in front of us has no obstacles" and "Take up the will of the Foolish Old Man who moved the mountains"—remain etched into the discourse landscape of Wangjinzhuang's terraces: they can still be found literally inscribed in the stones at the entrance to Yan'ao Gulch (Fo 2015; Fig. 10).

The political ideology that infused the terracing campaigns pushed villagers to work to their utmost endurance—often beyond what was good for their health. However, it also opened new opportunities for some villagers. Among those mobilized to terrace Yan'ao Gulch were young women, organized into their own team. I interviewed two women who participated in the project. Both remembered learning from their fathers to construct terraces; their mothers had bound feet and so were not able to do such heavy work. Working in an all-female team enhanced their sense that the labor was tied to their liberation. One woman even recalled a contest organized to challenge older men who doubted the ability of girls to construct terraces; she remembers that the girls put their backs into the competition and won.

Beyond the political campaigns and slogans so familiar to historical actors and students of PRC history, the distinctive practices associated with Mao-era knowledge circulation are of special relevance to the question of what constitutes today's "agricultural heritage." In addition to the activities of technology extension stations and the dissemination of printed materials, certain exemplary sites were identified as models for others to study and emulate. Of course, Dazhai was the most important of these in the realm of agriculture, but there were many others. In 1971, Wangjinzhuang itself became a model for the rest of She

County under the slogan, “Study Dazhai, catch up with Xiyang, the whole county studies Wangjinzhuang.” An official document reported that since December 1970, 576 local leaders from 167 brigades and 16 communes had come to Wangjinzhuang to receive training. They came just like “the heroes of the Eighth Route Army” (who had in fact been stationed in She County) carrying their food, drink, and other bare necessities with them in their satchels. They spent their days building terraces and working on the reservoir, and their evenings listening to Wang Quanyou talk about his experience learning from Dazhai how to be self-reliant in his struggle to “transform the face of Wangjinzhuang” (“Xue Dazhai” 1971; Wang and Wang 2013, 83). Not recorded in the official narrative was the heavy political guidance that this labor model received: an interviewee recalled that the lectures Quanyou gave each day were memorized from a script taught to him by an official sent down from Handan City; if Quanyou ever missed a beat, that official was on hand to prompt him.

That the terracing of Yan’ao Gulch was intimately related to the Study Dazhai campaign is beyond dispute, but the precise character of that relationship is murky. Wang Quanyou led his team to Yan'ao Gulch at a time when the whole nation was being instructed to “study Dazhai in agriculture.” However, his team used the same technology, including the suspended arch mosaics, that had long existed in the Taihang mountains and that the NIAHS (and potentially GIAHS) seeks to preserve today. Interestingly, Dazhai leader Chen Yonggui and his hagiographers have claimed that *he* came up with the arch technology on his own: puzzling over how to control floodwaters in his cave home, Chen is said to have suddenly realized that his arch-shaped ceiling held back a tremendous weight of earth, and that an arch-shaped wall might similarly withstand the weight of floodwaters (Zhao and Woudstra 2007, 201n14). While such celebratory stories of individual revolutionary heroes remain a common feature of CCP propaganda, a critical perspective suggests a more likely explanation—and one that does better justice to the truly remarkable contributions of Maoist “mass science.” During the Mao era, local people were frequently sent to visit other areas to

“exchange experiences.” This often undocumented exchange of traditional technologies occurred alongside official efforts to spread "advanced" technologies developed by experts or by labor models. For example, one interviewee from Wangjinzhuang recalled someone from Tangshan visiting Wangjinzhuang and further recalled that he himself was then invited to Tangshan to provide advice on terracing. Similarly, it is very likely that someone from Dazhai visited She County or another area in the Taihang Mountains where the arch technology was common. Though the details are murky, this case further reveals the ways in which “heritage” cannot be disentangled from more recent layers of knowledge production and exchange.

Here as elsewhere, what I am arguing for is an approach to agricultural heritage that is at once more historical and more critical than what is currently employed. Without a critical analysis, incorporating China’s socialist past into its agricultural heritage would simply buttress state power, sweeping injustices under the stones and further coopting the contributions of local laborers. An example is close at hand in neighboring Houchi village, where the state has very deliberately linked current practice with the recent revolutionary past. The terraces of Houchi have been greatly eroded through neglect, as young villagers have gone to work in the factories and the older generations have been unable to climb the narrow path to tend them. In 2015, the villagers reportedly decided to widen the road. A newspaper article leaped on the story, characterizing their work as embodying the spirit of the "Foolish Old Man Who Moved the Mountains"—which, as discussed above, Mao had canonized in a widely studied essay (Wang 2016). The party secretary of Handan City began personally visiting the site and has supported the construction of the new road along with afforestation in the hills and irrigation pipes lined with red flags highly reminiscent of Mao-era projects. The work is further celebrated through prominent billboards and murals evoking the Maoist past and connecting it to the power and authority of the CCP today (Figs. 11 and 12). Recent history is thus by no means invisible in She County. But how critically is that history told? And whose interests does it serve?

Conclusion

During the Mao era, the study of agricultural heritage conformed to the principles of "mass science," and terracing was promoted through political campaigns that celebrated socialist modernization and valorized peasants' class-based labor experience. Today, agricultural heritage scholars in China share with their counterparts overseas a notion that tradition is embedded in cultural systems, and terracing is marketed through eco-tourism and the branding of produce as ecological and infused with heritage. These epistemologies, along with the local knowledge they seek to represent, are embedded in layers of political, economic, social, and cultural history that should not be eroded under the weight of an imagined unchanging tradition. However, neither should they be recuperated uncritically to glorify state power. By adopting a critical historical perspective, I seek to encourage a different approach to agricultural heritage—one that does justice to the dynamic processes through which agricultural knowledge, and knowledge *about* agriculture knowledge, have been produced.

The terraces of Wangjinzhuang have been my inspiration and offer a preliminary example as to how such an approach might work. Wangjinzhuang's storeyed past—including its imperial-era and Republican-era history—is worthy of a far more lengthy treatment than what I have presented here. However, in these few pages we can already glimpse the significance of Mao-era political campaigns and knowledge-production practices, which I have emphasized precisely because this is the history most at risk of erasure or political cooptation. The experience of labor, the meaning of conservation, the value placed on diligence and frugality, and changing understandings of how knowledge, culture, and class relate to one another: these all emerged over time through the interactions of state officials, science workers, and local people. The PRC state has often imposed its values with a heavy hand. However, to the extent that local people have shared those values or made them their

own, they belong to villagers and deserve recognition as part of Wangjinzhuang's agricultural heritage system.

The insertion of a "people's history" into the agricultural heritage paradigm is an epistemological intervention intended to avoid essentializing "traditional" knowledge and to resist the co-opting of laboring people's knowledge. For Wangjinzhuang, as for many other places, the people's history of terracing is one of hardship and sorrow, of heroism and survival, of environmental destruction and conservation, of modern and traditional architecture jostled together, of state mandates and local commitments, and of the bumpy interactions of diverse knowledge communities—local, national, and transnational; peasant, state, and intellectual. It is our job to do justice to the many layers of historical time that together construct these communities' past and their present, their tradition and their modernity, their heritage and their development.

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