



**A
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**Mechanization and Social Change
in a Late Imperial Chinese
Coalmining Community**

JEFF HORNIBROOK

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SUNY
P R E S S

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Acknowledgments

While sitting in my office tracking down Chinese characters for the glossary and figuring out rent calculations in piculs of rice, it is easy to think that this book was done by my own hand with little outside assistance. In reality, this project has taken a very long time and relied on the kindness of many friends, colleagues, family members—and some strangers—along the way.

First, I would like to thank my professors at the University of Minnesota who helped me through the initial stages of this project. Because they were often skeptical that a study of modern coalmining was a suitable topic for a dissertation, I was doubly aware that my work had to pass the smell test on a number of occasions. Even more, for more than two years Drs. Romeyn Taylor and Ann Waltner took time out of their days to help me with my translations and think through the implications of the data I collected. Along with Ted Farmer, they also guided me through the initial process of learning to do research using Chinese sources, a skill that does not simply translate from American library systems.

Once I completed my dissertation, I found new data that dramatically altered my understanding of the history of Pingxiang County. I honestly didn't know what to do with the increasingly apparent notion that Confucian scholars were also running firms as big as Guangtaifu. Fortunately, I could turn to an old friend, David Wakefield, whose understanding of Chinese history was unique and insightful. He set me straight and cleared up many misperceptions I had about my own data. Sadly, with his death, I lost a sounding board who listened to me and talked me through problems big and small. More importantly, I lost a true friend.

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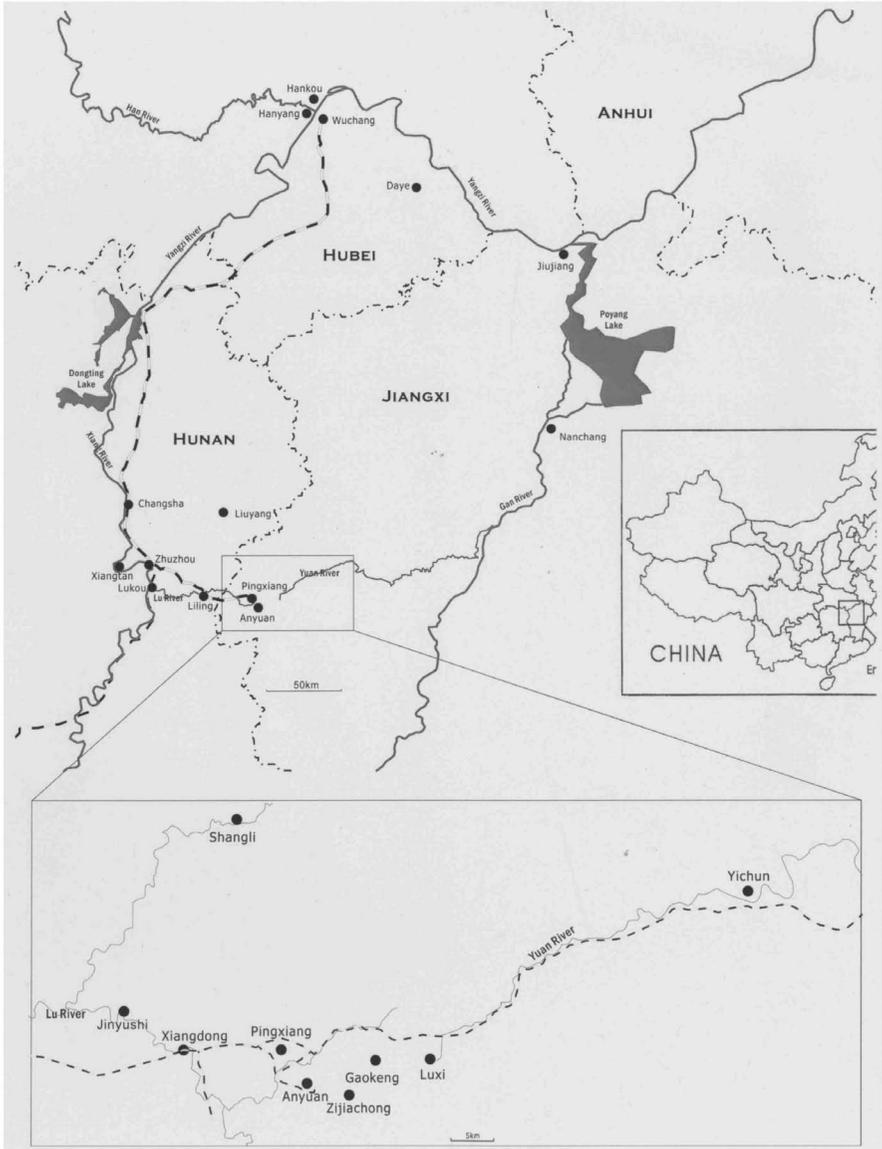
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them there would be no reason to strive to succeed, or at least success would have no payoff. It is to those two wonderful women in my life that this book is dedicated.



Introduction

In the spring of 1896, the people of Pingxiang County pursued their lives as they had for generations, indeed for centuries. In this isolated community located in Jiangxi Province just along the provincial border with Hunan to the west, peasants began the backbreaking work of planting their landlords' rice fields and then continued throughout the summer with weeding and maintaining the crop. When the summer crop was harvested, they put in a fall crop of wheat or sweet potatoes, and then, when the winter months made farming no longer possible, the men and boys went off to the mountains to mine for coal. Using essentially the same tools they employed for farming—as these were the only ones they owned—they headed off to the landlords' coalfields in hopes that they could extract pieces of coal for heating their homes, fueling their ovens, and perhaps selling in the market for a few extra coins. They dug holes in the mountains marked by small flags and extracted the minerals until the vein was depleted or the water table flooded the shaft. Then the work teams moved to the next spot, often a few yards away; planted another flag; and began the process again.

That fall, however, a German miner went into the mountains and began examining the quality of the minerals. The man's name was Gustav Leinung, and he was sent by the imperial court to examine the coal deposits to determine if they could be used to fuel an ironworks in the Wuhan Cities to the north. This new factory was to be the focal point of a modernization scheme beyond the wildest dreams or understanding of most of the people of the county. And indeed, twenty years later, Pingxiang County's mountains around the mining town of Anyuan were covered not with small mine shafts and flags but with railroads and factories, European compounds and workers' dormitories, Christian churches and hospitals, gambling houses and opium dens. The changes were not only architectural, however. Local elites and lineage leaders that had overseen the politics and economy of Pingxiang County for centuries were pushed

aside and replaced by a new sociopolitical blueprint. Mining was not only done seasonally but was year-round, and local peasants were increasingly working side-by-side with men recruited both regionally and even throughout the greater Chinese empire. Perhaps most importantly, the extracted coal came out of the mines in quantities one hundred times the amount it had in the past. And when it was taken from the mountains, it was placed on a modern train and sent far away from the county's markets and the inhabitants that had relied on it for generations. The coal shipments traveled several hundred miles to factories that were forged to modernize the economy of cities and markets most people in Pingxiang County would never see.

This book is a micro history of the social and political effects of industrialization in Pingxiang County, a Chinese coalmining community. Instead of focusing on entrepreneurs and managers interacting within a bureaucratic hierarchy or looking at workers inside union halls, this study examines the greater community in which the mine was nestled and shows that the mechanization process of Pingxiang County came about through negotiation and struggle that altered the land and society in unforeseen and disruptive ways. Ultimately, as they negotiated the terms of mineral extraction, these people simultaneously struggled over new designations of each other's class and status in the county and the empire. They not only had to redefine their friends and enemies, superiors and subordinates, but they began to see themselves in a new light, altering their class identifications and even, perhaps, consciousness. Thus, when the dust finally settled, not only was the coalmining scheme reorganized, but nearly everyone who touched this project, from top to bottom, had been reclassified as well. Specifically, the county magistrate became a purchase agent of paddy fields in the interests of the imperial state and to the detriment of the needs of the county's landholders and gentry families. The local gentry that owned many of the county's mines were marginalized by a newly emerging managerial class whose personal connections more closely linked them to Chinese compradors and even foreign merchants. Local students became more political and nationalistic as foreigners arrived to reorganize production and transportation systems that had been in place in the county for centuries. Commoners, including miners and boat haulers, saw their family members' occupations subsumed within the larger scheme, while new technologies dramatically changed their daily activities and social status from petty service industry workers to laborers. This study of a coalmine in a county in south central China is not simply an examination of an isolated mining town. Rather, it

is a case study of the dramatic global forces that reordered societies and governments, families and communities, all over the globe as they were experienced in a remote part of the world.

Understanding the impact of modernization on a rural Chinese community is significant in part because most historians who examine modernization do not focus on the community but rather on one of two other broad methodologies. First, some business historians interested in international business or foreign trade place the foundations of various mining enterprises within the context of entrepreneurial or governmental development. This research often utilizes memos between managers, corporate ledgers, or bank contracts to see the inner workings of the corporation. Scholars of this type of study, especially those interested in the “Why the West succeeded and China failed” question, focus on the ability or failure of Western capital to create modern firms, or they examine the political and economic struggles that went into modernizing non-Western corporations.¹ In Chinese history, Albert Feuerwerker, Wellington Chan, and Elisabeth Köll examine industrialization projects of various types and essentially argue that the conflict between Confucian ideology and Chinese values and Western technology led to a series of failed attempts at modernization.² While these studies have provided reams of data on the industrial schemes and placed some of that data into the context of modern capitalist industrialization, they fail to see the outcomes of their actions on the lives of workers, consumers, or the general population. Managers are viewed making decisions that either work or fail but not as considering the impact those outcomes had on the people who were ordered to implement them. Authors seemingly place the corporations within an isotropic plain devoid of a local society, economy, or history.

More recently, labor histories interested in nineteenth-century industrialization discuss the creation of a nascent proletariat in factories or cities. These studies, often based on the Marxist theories of E. P. Thompson and others, focus on the daily material lives of workers and on the role of class and the rise of unions or other labor activities.³ In all, they point to a significant break with the past as mechanization brought capital and labor into the process of production. For mining specifically, technical advancement changed the daily lives of people as seasonal laborers became year-round workers and migrant workers became organized laborers. In the case of Pingxiang County coalmining, monographs by Lynda Shaffer and Elizabeth Perry examine the history of the labor movement in the mining town of Anyuan during the Republican era. They both point out that the coalminers were initially organized under the clientage

system of contract labor bosses that was gradually replaced in the early 1920s by a modern labor union organized by the Chinese Communist Party.⁴ While these studies bring the reader into the mining town, they ignore the gentry and peasants who also lived in the surrounding community as it was incorporated into a modern world few had previously imagined. In so doing, they failed to see the relationships that were altered and fostered as mechanization transformed the economy of the county as a whole almost as much as it affected the mining town.

If Western scholarship on modernization is incomplete and at least partially based on political interests of labor and capital, Chinese scholarship on the history of Pingxiang County and even mining in general is even more fragmented and is almost always oriented toward proving the current ideology of the Communist Party leadership. No monographs have been written by Chinese scholars on the mines in Pingxiang County. However, the available literature indicates that since the Communist government took power in the late 1940s, the Chinese have moved in the opposite direction from Western scholarship beginning with revolutionary tracts and moving eventually to studies of markets and technological development. Early sources focus primarily on the Communist Party's activities and the swelling support of the workers in the mines. Most of this material can be classified as little more than propaganda published to exalt the leadership of Mao Zedong and, to a lesser extent, his subordinate and future heir apparent, Liu Shaoqi.⁵ However, with the deaths of both of these men and the rise of the pro-West, pro-modernization themes of the current era, new studies have been published that examine China's past economic successes and point to possible avenues of development for the future. Scholars from the Chinese Academy of Social Sciences examine the history of China as it moved from a "natural economy" to a more modern system that signified the "sprouts of capitalism." They attempted to show that some Chinese merchants improved the forces of production through factories that were larger than previous endeavors in China and incorporated Western technology. Other merchants, they showed, apparently integrated modern managerial practices into their firms, thus altering the social relations of production from feudal clientage systems to manager-worker schemes.⁶ These approaches are evidence of a natural indigenous growth of capitalism in China that suggests further success in the years to come. While these studies indicate that future research in China may be very productive, the openly political questions being addressed may continue to hinder the subjective answers they find. More importantly, like the Western studies, Chinese scholars ignore the local concerns of

modernization and fail to see the roles of local elites, county magistrates, peasants, and coolie laborers in the negotiations that helped define the nature of the production process.

My book is designed to address these problems and provide a new strategy for understanding industrialization in China. I begin not with a focus on the managers who founded the mines or the unions that organized the workers but with the people who lived in the villages and towns, who worked the rice fields and coal fields, who sold and purchased coal and other products in the local markets for centuries before the industrial firm was established. I examine the county gazetteer, the local document that provides descriptions of local lineage leaders and county officials throughout the Ming and Qing dynasties, and includes entries on cropping patterns and farming strategies, stories of commoners making cloth and marketing their wares, and vignettes on early mining as well as the coming of the German engineer. I supplement this with other documents written by the county magistrate and the Chinese and German mine managers as well as biographies and memoirs of elites and commoners alike. While these documents provide me with the broad brush needed to cover the canvas, the day-to-day decisions and activities were mostly explained in excruciating detail by the hundreds of letters and telegraphs collected in the Sheng Xuanhuai Archives. These letters, which include correspondence to and from Sheng and his associates, were published as raw data in several large volumes that are essential to understanding this history.⁷ The correspondence includes vivid descriptions of people on the ground in Pingxiang County complaining of excessively rainy weather that hindered efforts on the ground, tales of corrupt officials who were fired due to insubordination, and depictions of the political friction between managers and local government officials, gentry, and workers alike. Collectively, these documents portray the ongoing struggle and negotiation that created, hindered, and altered the industrialization scheme in the county.

In all, I show that mechanization of the coalmines necessitated the separation from their poorer brethren of the lineage leaders who had secured incomes and safety nets for both strata of the community throughout the last dynastic era. Patron-client relations that allowed landholders to receive rents from farming and mining also assured some fellow lineage members access to subsistence through toiling on gentry properties. Industrial mining, on the other hand, required the break-up of this pattern and the concentration of property in the hands of the modernizers whose capital was far greater than that held by the local lineages.

Furthermore, I argue that within the county the role of the state changed as regional officials and their coterie received the imprimatur of the court to attempt this industrial project. Chinese government evolved from an essentially paternal institution with policies based primarily on hands-off designs into an active managerial administration that sought to transform the local economy. Almost without warning, court leaders ordered the county magistrate and his subordinates to force abrupt and substantial changes in landholding patterns and economic strategies on their districts, even when the inhabitants opposed it citing the Confucian principles that had legitimized the state for centuries. The county magistrate, whose job had usually been to maintain the peace and security of the district, was now called upon to purchase lands from elites and nonelites against their wishes. A mine bureau was founded to reorganize mines and transportation systems and support the implementation of a new economy that was supervised by a foreigner with no background in the values and ideals of the population.

In fact, the foreign technology that was installed in Pingxiang County was itself designed in Western Europe to solve the problems of increasing production with smaller populations and higher paid and skilled workers, a set of issues that were not remotely similar to those being experienced in the densely populated, unskilled, and undeveloped reaches of China. Moreover, German engineers transformed the local working population by forcing them to utilize the technology as it was designed. They brought Western machinery into the mine in the hopes that Chinese workers could be trained to use it properly and efficiently. When workers failed to achieve the level of output the engineers required, the foreigners beat and scolded them for their incompetence. Their methods of brutality and ambivalence incited acts of sabotage and violent resistance by people of the community, forcing the Germans to flee in fear for their lives on several occasions. Events such as these indicate that the problems of modernization in China were not simply due to the inability of the court to properly utilize capital, nor were they due to the relative success or failure of the working classes to create unions and develop into a proletariat. Rather, this study shows that the failure of foreign engineers and others to assimilate all of the county's inhabitants into a united community dedicated to the modernization process hindered the transformation of the economy and society and sparked not an industrial revolution in Pingxiang County but the Communist Revolution.

Because this book examines the actions of several actors or sectors who worked in tandem, in opposition, as well as parallel to one another, the

narratives do not always flow in a strict chronological order. Thus, while miners are extracting coal under the leadership of one foreign engineer, land is being purchased for the construction of the railroad by another. Given the conflicting and overlapping timelines, this book works on a loosely defined chronological outline while breaking up essential actions into chapters.

In the first chapter, I examine in essentially classless terms the development and strategies of peasants for subsistence and the role local coalmining played during the late Ming and most of the Qing eras. Using the arguments of Chayanov and others, I show that peasants sought out whatever strategies suited them for the subsistence of their families. In the case of Pingxiang County, easy access to bituminous coal supplemented rice and wheat harvests. Men and boys brought whatever tools they owned and dug shafts up to 100 feet below the mountain surface. I go on to show that, unlike the arguments put forth by Pomeranz, Chinese markets were likely available for coal production that might have sent the mineral throughout the region, including along the Yangzi River. However, the transportation costs and lack of demand for new forms of economic growth hindered regional demand and encouraged local consumption.

In the second chapter, I emphasize the period from the late seventeenth to the late nineteenth century as lineage leaders increasingly saw avenues of financial advancement through the local marketing of coal. Using their patronage powers, lineage leaders took direct control of the coal deposits and rented them out to the peasantry in deals similar to the rental agreements for their rice paddies. While no doubt many of the mines in the county continued to be used as common lands during the late Qing era, the best fields were gradually taken over and brought under lineage control. Among the most, if not the most, important of these lineage leaders were the gentry of the Guangtaifu Lineage Trust headed by the powerful Wen lineage, whose members included not only highly successful literati but also rich men whose control over the mines led to their being termed “mountain lords.” The lineage trusts relied upon their control of the mines for continued status and wealth, and in return their rental agreements provided a type of safety net to the men who worked the mines.

In the third chapter, I begin to show the significant changes taking place among the empire’s most powerful leaders, focusing on the period from the late 1880s to the mid-1890s. I focus on the Huguang governor-general Zhang Zhidong and the official-merchant Sheng Xuanhuai who established coterie of Chinese merchants, engineers, and officials as well as foreign engineers and investors to create an industrial scheme designed

to manufacture railroad track, weapons, and other industrial machinery. This amalgamation of trained and semi-trained staff was sent throughout the empire in search of the best natural resources available for their endeavor. Along with the iron ore mines located in Daye County, Hubei Province, they discovered deposits of high-quality bituminous suitable for smelting iron in Pingxiang County. These men attempted several strategies for securing the mineral, including subcontracting the lineage-led Guangtaifu Lineage Trust to increase productivity to levels needed for a modern ironworks and establishing a mine bureau made up of Zhang and Sheng's appointees. When this bureau determined that the local lineage was simply too entrenched in a premodern world and could not make the needed changes, the men attempted to skirt the lineage leaders and establish a new centralized mining scheme.

Chapter 4 examines the forced purchase of the county's property deemed necessary for a modern mining system. Under the leadership of the first German engineer, Gustav Leinung, the mine bureau put forth a scheme that called for the complete takeover of the county's mining property. Chinese managers were called upon to use eminent domain to purchase by force the mines Leinung required for a fully mechanized mine. Not only were small mines that dotted the fields taken over by the new mine bureau, but the Guangtaifu Lineage Trust was purchased from the Wen lineage almost certainly against the wishes of that powerful family. Moreover, when the decision was made to lay a railroad track from the mine to the river valley in Hunan Province below, the county magistrate was ordered to purchase some of the county's finest rice fields to fulfill the needs of the proscribed route. These stories tell us that as foreign engineers platted out the territories needed for modernization, Chinese managers and government officials complied with their demands to force some of the county's most powerful men to hand over their wealth in the interests of a Westernization scheme.

Chapter 5 once again overlaps chronologically with the previous two chapters as I focus on the actual mechanization process. As soon as Leinung was sent to Pingxiang County in 1896, he and the other members of the mine bureau began to devise plans for integration of Western technology into the county's economy. In a series of letters and conversations, Leinung requested and was provided with machines and tools required for the most effective method of underground mining. To run this complex system of electric machinery and all the supplemental tools and devices required, the bureau recruited a labor force from among the peasants and miners in the region that would leave their families and farms, their

lineages and communities, to work year-round in the newly developed mines. While the Germans hoped to maintain direct control of the labor force during their working hours if not also in their social lives, in fact, they returned to patronage relationships through the use of contract labor systems. These contract labor bosses not only undercut the training and oversight of the German engineers, but they were integrated into the local secret societies, illicit communitywide organizations that called for the end of the dynasty and included managers and patrons of opium dens, prostitution halls, and gambling casinos. While the secret societies did not represent a modern form of labor union, they did act as a social group that fought for better benefits and pay, much to the consternation of the German and Chinese mine leaders. Finally, I show that the mines and factories in Pingxiang County in Jiangxi Province and the Wuhan Cities' factories and Daye County mines in Hubei Province were amalgamated together as a modern factory system collectively referred to as the Hanyeping Coal and Iron Company, Incorporated. This new corporation unfortunately failed to reap profits and instead put China into such deep debt that it helped sink the last dynasty. Sheng Xuanhuai, now manager of the entire scheme, fled for his life as the court collapsed and he was blamed for much of its problems.

Even as Sheng's industrialization project was sinking the empire as a whole, a similar, more local, version of this friction between his managers on one hand and the county's population on the other is the focus of the sixth chapter as I discuss local resistance of both elites and nonelites alike to the imposition of the mine on the county. This chapter begins once again in 1896 as the German engineer Leinung arrived to investigate the county's minerals. The German's presence quickly piqued the interest and anger of several sectors of the county. Even as petty miners planned to jump him and hit him with rocks upon his arrival, students and even local gentry viewed him as a potential threat to their way of life. Gentry leaders, in fact, turned to their officially sanctioned levers of power, writing big-character wall posters and memorials denouncing the modernization plans being contemplated. At least one powerful leader named Xiao Liyan fought tirelessly to keep the mining scheme out, and when he failed at that he taxed their revenues to pay for a school he founded. Similarly, powerful leaders of the Wen lineage, having been stung by the outsiders, sought to take over a local iron ore mine they feared would be the next target of the insatiable foreigners. However, it was the commoners who brought about the most significant resistance against the mine and its leaders. From the early twentieth century, contract labor gangs successfully fought for better