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# **Environmental Injustice in China's Industrialized Rural Areas: Observations from Juancheng County and Their National Context**

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**Abstract**

China's rural areas are increasingly becoming the operating sites of factories and small-scale industry, which employ parts of the population, give rise to a new social class of "rural-industrialists" and contaminate the environmental and agricultural systems in all-pervasive ways. The rise of the rural industrialists has meant that a handful of factory owners in a given township become wealthy by exploiting the cheap labor and minimal environmental restrictions of the countryside, and live luxurious modern lifestyles in the midst of rural poverty. These factory or business owners are often the newly rich, who have only gained their status in the recent decades and still have family and friendships ties in the townships, meaning that they are responsible for the heavy polluting of the environment that their own family members live in. This paper is a gathering of observations from my visit to *Juancheng* county, located in *Shandong* province in northeastern China. Past studies on rural industrialization in China are used to put my observations in historical and national context. Suggestions from other scholars and journalists on how to deal with the environmental and health impacts of rural industrialization are discussed. However, most of these suggestions deal primarily with economic incentive targeted at polluters for the sake of environmental protection. More emphasis should be placed on the health of the rural people who often work in both factories and farms, and these people's rights to organize against government corruption. Furthermore, increasing factory owner and rural people's access to education on ecological relationships, environmental well-being and public health, would be a meaningful step toward combating the government's sole emphasis on economic growth, and shifting focus toward creating a more sustainable rural society.

## Introduction: Juancheng's "In-Between" Phase of Rural Industrialization

In recent decades, the northern Chinese county of *Juancheng* has entered a process of transformation from a rural market-city to an industrialized rural town, mainly due to the small factories that have invested in the area and employed a significant labor force. By highlighting the complex ecological damage caused by unrestrained economic growth as well as the wide gap between the rich and the poor in rural-industrial China, the small-scale rural factories showcase the consequences of rapid urbanization of rural areas. This urbanization has led areas that were only a few decades ago completely rural into an "in-between phase" marked by constant demolition, construction, and higher living standards for the part of the population that can afford the newly constructed apartments, and unhealthy air and water pollution that result.

Another characteristic of this "in-between phase" of urbanizing rural areas is that although infrastructure for a modern, industrial city is present (wide, multiple lane roads, high performance cars and people who have enough money to buy them, factories, residential and commercial building construction, etc.), this infrastructure is so new to the society that it is not often used optimally by its people. For example, traffic lanes on streets are rarely adhered to, as cars, bikes, tractors, and pedestrians drive freely on either side of the road—and all must swerve to avoid head-on or side collision at almost every moment. Old houses may be equipped with flushable toilets and washing machines, but no working plumbing system is provided by the city to these houses—this was the case of the house my grandmother lives in, as well as the other 40 or so houses within her housing complex.

On the other hand, there are some aspects of modern city infrastructure that are still completely absent or so lacking in nature as to not be mentionable. For example, trash pick up is so poor in Juancheng that it might as well not even exist at all. Small residential communities adhere to the rule of piling their trash on the right hand side of their community gates. There are no dumpsters, bags or boxes for the trash, so by the end of the day the entire community's trash is usually scattered onto the surrounding roads, fields and irrigation ditches, resulting in *chou shui gou* or "smelly water ditches," as they are referred to by locals. The trash pick-up is supposed to come once a week, which is far too infrequent to have any affect because of the constant scattering of trash.

These are the living conditions everyone in the surrounding area deals with and in some way contributes to, whether they want to or not—due merely to trash and human waste problems. However, yet another characteristic of the "in-between" phase is that a wide variety of "layers," both economic and cultural, exist in the society. Those who are extremely wealthy, living a more or less urban lifestyle in high-rise apartments with Audi cars, Italian leather wallets and Rolex watches obtained from their periods of globe-trotting, live just down the street, a short bike ride away from poor farmers who plant crops in the backyards of their *si he yuans* (courtyard style homes) or *ping fangs* (one-story, usually one-building houses), and line the streets in the day with vegetable and fruit carts selling their produce for a few *mao* per ounce, equivalent to less than one US cent (one *mao* is one-tenth of a  *yuan*, which is approximately one-eighth of a US dollar). These farmers have no plumbing or heating and very little furniture

in their homes. In this society, there are a wide variety of services to meet the needs of people of various income levels—from five star restaurants and brand name shopping malls to street food vendors and county granaries. There are also layers of cultural practice. Some of the wealthy take on new modern values such as individual travel, women being more relaxed about bodily exposure and not being restricted to the home, and people marrying late or not marrying at all. On the other hand, much of the poorer population still adheres to traditional values of raising large families with many children, most of whom do not leave the hometown and who marry early only with the consent of the parents.

Given all of these layers of society and the new ways people in these urbanizing rural areas are interacting with each other and the environment, what I'm most concerned with in this paper is the awareness of environmental injustice in these areas—especially among the people who are causing much of the injustice: the newly rich entrepreneurs and factory owners. I had the opportunity to meet one of these factory owners myself and tour his factory. To me, the most interesting aspect of environmental injustice today in this part of China is that unlike the environmental justice conflicts in the US, these conflicts do not exist between the wealthy and the poor, special interests and common workers, or the white and the colored. Rather, injustice occurs between the very newly rich and the poor families that they grew up in and are still a part of. Many of their family members are still living a rural life as the newly rich build for themselves a new urban one alongside them.

## History of Rural Industrialization in China

While some historians assert that small-scale industrialization in rural areas began with the Great Leap Forward and the Maoist policies of the 1950s and 60s [2], others attribute the real investment in rural industries to changes in the landscape of rural areas to policies of the 1980s. From the 1980s until 2000, Chinese government was less wary of “Western influence” in large city metropolises than it had been in the 1950s, and so policies promoted urban development of small urban areas and rural areas. These places, dubbed “Township Village Enterprises” (TVEs), had surpluses of cheap peasant labor, and became the sites of a huge boost in national economic development through investment in small-factory growth. Behind this urbanization policy was the concept of *li tu bu li xiang*—meaning, “leave the soil but not the village” [1]. The process of rural urbanization has been referred to as “in situ urbanization” and is often seen as a contrasting form of urbanization to migration of rural peoples to established urban areas.

The promotion of in situ urbanization was also part of the Chinese government's land-use policy, aimed at the reduction of low efficiency land-use patterns by concentrating dispersed residential clusters into one town or small city. Thus, the urbanization in China almost doubled during this period, reaching 36 percent by 2000, and the number of cities grew from about 200 to 660 [1]. By 1986 the total output value for TVEs was already 17 percent of the gross national output and 44 percent of gross agricultural output. Rural enterprises absorbed a large portion of the surplus agricultural labor displaced by the agricultural responsibility system and the breakdown of the commune system after the 1960s. This absorption helped the state greatly by eliminating state support of mil-

lions of displaced workers. In 1986, rural enterprises employed approximately 76 million people, or 20 percent of China's total workforce [3].

Today, government policies are shifting increasingly toward accepting and promoting large-scale urbanization in megacities such as Beijing and Shanghai. The reason for the shift of emphasis from TVEs to metropolises is that while local small cities and TVE developments were effective in absorbing local surplus labor, they lacked agglomeration and economies of scale, adequate infrastructure, proper financial management and market analysis, and access to domestic and international markets; they also negatively impacted the environment [1, 3]. Thus, the household registration system was relaxed in order to allow more rural people to migrate to cities and become residents [1]. However, some policies aimed at industrialization of rural areas are still intact, and this combined with the inherent economic opportunities of small industrialized rural areas has meant that the rural-industrial is increasingly the landscape that a majority of rural peoples live in today.

## Juancheng and the Surrounding Villages: A Closer Look at Daily Life

In the past decade, Juancheng has undergone significant development, as the coastal area of *Shandong* including *Qingdao* and *Weihai*, which developed into a modern industrial area in the 1980s, has started to invest and grow inland. The landscape of Juancheng is less than appealing. On my visit, residents of the area often jokingly referred to the area as “*po lan de Juancheng*” or “shabby old Juancheng.” The area consists of about 10 main streets in a grid formation, which house the downtown area restaurants, shops, schools, and new multi-level apartment buildings. There is also a street called “brand-name street” that is populated by dilapidated storefronts, ironically none of which carry clothing brands recognizable internationally. The heart of the city is the *guangchang* or square, which is about the size of one football field and is decorated with gardens of bushes and grass on the surroundings, tall light-up structures, carved stone pillars, a fountain, and a large outdoor TV at the end of the square. At night, the square becomes the liveliest place in the city as residents of all ages flock in groups to practice martial arts, ballroom dance, do cardio routines, talk and play games, or just take a stroll. Chinese-style ballroom music blares in the background as kids yelling and tossing light-up toys into the air, young people laughing, the stomping of martial artists, and the conversation among family members all rise to a hum of harmonious chaos in this urban-industrial square that carries with it a distinctly rural sense of tightly-woven community.

Surrounding the central industrialized area are miles of wheat field. This area of Shandong is far inland, and is actually closer to the landlocked *Hebei* province than it is to the coast of Shandong. The general landscape is fields dotted by dozens of small rural cities like Juancheng, or the larger nearby municipality of *Heze*. Older villages are also still in existence, and are usually located about 15 minutes to half an hour away from the small cities. During my stay, I visited *Zhoulou* village, where my father grew up. The only people living there permanently were the very old grand and great-grandparents, babies, and their mothers. Young men and many young women, as well as all the middle-aged

people, had gone to Juancheng to work. Zhoulou consists mostly of about 30 or 40 houses constructed with brick and mud, many of which have disintegrated into walls of dust that are full of holes. The houses where young mothers lived are fixed up with tiled floors, painted walls that display wedding photos of the girls in white dresses with a computerized scene of stars or the beach in the background and an English slogan running along the side. Wild goats, chickens and dogs amble around the village, which is shaded by naturally-growing willows and yang trees. A village hospital and ancestral shrine are at the heart of the village, and slogans reading *sheng nan sheng nv dou yi yang* or “to have a boy is the same as having a girl” were painted on the brick walls. Outside the village is a small graveyard, and then miles of wheat fields stretching to Juancheng. The parts of families living in Juancheng still refer to Zhoulou as their *lao jia* or “old/native home,” but only visit occasionally for New Year’s, funerals, and to help with the summer and fall harvests.

## Visit to a Factory

Closer to the Juancheng area than the villages are the small factories that originally spurred the industrialization of Juancheng. I visited a chemical factory on the outskirts of the town that specialized in manufacturing chlorine and related cleaning products. The factory’s owner and boss was trying to solicit my father’s help in opening up markets in the US. The factory was about a 15 minute drive from the center of the city. Surrounding the factory were wheat fields and irrigation ditches, which contained only a little still water that was smelly and contaminated by trash and plastic bags. Later on, I learned that a number of chemical factories had been built in this part of Juancheng, and the area had become notorious among Juancheng people for the smell of chemicals and trash. The people who used to live in the area had moved away, knowing that there was no hope for them to battle with the companies. When my father had told his family that he was going to the area, they told him not to go to avoid the smell. However, due to the fields still surrounding the factory area, farmers still must work there for long hours during harvest and planting seasons, constantly exposed to the smells.

The entrance of the gate of the factory was an office building at the left and the manufacturing buildings and storage house on the right. All the buildings were low, single-story unpainted cement buildings except for the office building which had a painted outside and glass doors. The office was our first stop. The factory owner welcomed us inside to the extremely air-conditioned and well-furnished room, complete with a huge desk, leather chair and couches, phoenix statue, paintings, a glass clock and a washstand. The men talked for about an hour about the company and business opportunities: the factory owner had a particularly distinct way of talking. In a low voice, and pausing for dramatic effect, he told us about how he had been a poor student who didn’t even graduate high school, and decided to work in the chemical manufacturing business to “get out” of the countryside. Later, he and a partner—my cousin—formed their own company. The company had a rough first ten years during which the current owner took over, and the company only started to flourish in the past three years. Now, the company employs five hundred workers, who receive low wages and who also farm for their income. The factory owner had been on many

travels across the US, Asia, South America and Canada, for both business and pleasure.

The first factory he owned and built is the one still currently in use, however during our visit a much larger new factory was in construction right next to the old one, and the move to the new factory will take place sometime this year. On our tour of the first factory, my father and I were shown the manufacturing buildings and equipment. The whole place, even outdoors, smelled strongly of cleaning chemicals, and breathing was noticeably difficult due to the density of chemicals and dust in the air. However, all except for two of the workers I saw were wearing minimal cloth mouth and nose covers. The two workers who posed the exception were working on an assembly line putting chlorine tablets into bottles, and they were wearing gas masks. The assembly line began with a machine, into which chlorine powder was poured and came out compressed into tablets. On the other side of the machine, the chlorine tablets came out on a moving strip, to be picked up by the two workers and packaged in tubes with both English and Chinese labels. Inside this room were other workers sorting bottles and bags of chlorine, but they did not wear gas masks and some had no protection. Outside, there were groups of workers tending equipment or packaging products. All of the workers looked weathered and middle-aged. Their peasant clothes were dirty and they looked at us with disdain, a completely opposing picture from the factory owner, who guided us into the storage house. This was a huge room filled with bags and boxes of white chlorine powder. Twice every day, trucks would come here to pick up the powder. The whole time we were on this tour, the factory owner and his partner kept insisting that I take “candid” pictures of themselves and my father together, looking at the products and talking, so that he could make advertising materials for the “American market.” In his very own words, it was the approval of the American-Chinese that made his factory look “legitimate.”

As I exited the factory, I noticed a row of bikes and electric bikes—these probably belonged to the workers, which meant that they couldn’t afford cars with their salaries. As the factory owner drove us in his BMW to the new factory next door, I also discovered that wastewater from one of the factory buildings was pouring directly into the water ditch outside the factory. This same ditch ran for a long distance along the surrounding wheat fields, so there is a high probability that the water is used for irrigation. Before even being aware of this factory, I already had suspicions about the drinking water just because of the taste. The water had a texture—it was somewhat oily and it left a filmy layer when spilled on tables or floors. It also had a slight taste of oily chlorine. This one example of factory wastewater spilling into an irrigation ditch highlights the complexity of the ecological relationships that have resulted from the physical proximity of factories, building construction, irrigation ditches, crop fields and residences in the industrialized rural areas.

The new factory had a five or six story administrative building, which had a front side completely paneled with tinted glass. There were also dorm-style residences being built for the workers as well as larger factory buildings and storage houses. All of the factory owner’s behaviors and everything he said pointed toward his ambition to continue expanding his business indefinitely.



## Rise of the Rural Industrialist

People like the factory owner I met were able to get rich due to a number of factors. As mentioned earlier, policies from the 1980s to 2000 supported industrialization of rural areas, especially the Shandong coast. Although Juancheng itself has no natural resources, the cheap labor is enticing enough for small-scale factory owners, especially with a product as easily transportable as chlorine powder. Trade between rural industry and foreign countries was also promoted beginning in the 1980s, as China opened up to the west—hence, over 90% of the chlorine factory’s products are exported and sold abroad. Today, cheap labor is still in abundance. Cheap labor in combination with negligible environmental restrictions on industries and low-level government corruption makes the countryside an ideal place to run a small factory. Factory owners know the official inspectors in their area, and if they are breaking any environmental protection laws, they can simply bribe the inspector or cover up before his visit. As Liu Lican, coordinator of the environmental health and climate change program at the International Center for Communication Development, describes,

The polluters are either aware in advance of government checks, and so able to make necessary changes in time; or major tax contributors with powerful connections; or, when faced with incontrovertible evidence of their pollution, pay compensation for damage to land but not to health. The chances of punishment are low. Usually, local governments tend towards protecting tax-paying businesses and so they are unlikely to actively pursue the villagers’ demands. [7]

The cheap labor and lack of environmental oversight has allowed factory owners to produce their goods at extremely low costs. The chlorine factory owner I met described to us the difficulties he had in getting his goods sold at such low prices in the US, as his goods had been restricted by the US Anti-Dumping policy. The factory owner claimed that when he was forced to pay 50% of his product price in taxes, he subsequently sued the US government and won the case, with the result that he now only has to pay 20% of the product price in taxes.

## Environmental Impact: What Lies Ahead

Much past scholarship surrounding Township Village Enterprises and the industrialization of rural areas has centered on the successful economic growth and positive change these areas have experienced. As one study published in the *Asian Scholar* on the different forms of TVE’s and their progress states:

China provides an excellent example of how a rural development strategy focusing on rural industrialization can bring about significant, and mostly positive, change not only in the lives of rural people but also in the structure of the rural economy. China’s rural enterprises, widely known as Township and Village Enterprises (TVEs) have remarkably contributed to economic growth, rural development and institutional transformation. [4]

However, while it is true that industrialization created jobs for many rural peoples and that a large portion of the rural population is living more prosperously today than they were half a century ago, many societal and environmental issues are masked by positive economic figures. In recent years, more researchers and journalists are realizing and investigating this reality. Juancheng is just one typical industrialized rural area among many. China's "cancer villages" have gained attention from international human and environmental rights groups. These are villages with extremely high rates of cancer, and, as Liu describes, the rural industrialization and factory waste is seen as the main cause of the cancer, although there is too little evidence to prove a direct correlation. Liu's description of his visits to cancer villages eerily resonate with my descriptions of Juancheng. He writes:

In most cases, there is no difference in appearance between a cancer village and any other Chinese village. People live as if nothing major has happened. . . But if you watch for a while, you start to notice certain characteristics. It may be that some villagers are using bottled water as they can't drink water from wells or rivers anymore; or those living closest to the source of pollution have moved; or that the area around those sources is bare and the villagers say it has been years since anything has grown there; or maybe rivers or ponds have been ruined by pollution and are just used for dumping rubbish. Villagers told me that pollution was causing crops to die off, animals to become infertile or deformed, fish and shrimp to disappear from rivers, children to suffer respiratory diseases. [7]

Liu goes on to describe the villagers' reactions to his own investigation of the pollution. He says that few believed his or anyone else's visit would do any good, and to him, "That helplessness and lack of hope was sometimes more worrying than the environmental degradation" because it signaled the local people's resignation and acceptance—a perfect social climate for pollutive factories and cancer villages to continue developing.

The reasons for environmental degradation of the countryside are linked to the factors contributing to the rise of industry, such as minimal government oversight and environmental protection. A study by Geography professor Haiqing Xu at Concordia University on environmental policy and rural development done in 1999 still has relevance to today's rural environmental situation. According to the study, China's economic policy has focused around economic incentive and punishment. Fees levied for discharges have been successful in controlling factory pollution in cities, where governmental oversight is more manageable. However, the study states, "The dispersedness of rural industries and the insufficiency of environmental monitoring" are major obstacles to the implementation of environmental legislation [6]. Similarly, Liu attributes the rise of cancer villages to "general industrialization; government failures; poor systems to protect rural people." He points out that these factors are the result of the pursuit of economic growth, measured only by GDP.

The Institute for Public and Environmental Affairs has collected statistics and figures to show the quantitative pollution of the rural environment. Director Ma Jun stated in an interview with *China Daily* that "A total of 9 billion tons of household wastewater and 280 million tons of garbage are produced in rural areas every year, but most of the country's 600,000 villages do not have adequate

treatment facilities” [5]. Li Ganjie, vice-minister of environmental protection, further stated that between 70 to 80 percent of environmental complaints his ministry received each year come from rural areas. He attributed these complaints to “the spread of industrial pollution into the countryside—especially from small illegal factories” [5].

To deal with these rural pollution issues, and also perhaps as a response to the increasing attention paid to rural pollution, the Ministry of Environmental Protection has recently proposed a program to reduce emissions in rural areas. According to *China Daily*,

The central government planned to allocate 9.5 billion yuan (\$1.45 billion) for 2011 and 2012 to improve the rural environment. But Li estimated at least 100 billion yuan from the central budget is needed to clean up 200,000 heavily polluted villages. The money will be spent on protecting freshwater sources, constructing treatment facilities for household sewage, garbage, and human and animal waste. . . Li also vowed to strengthen numbers of environmental personnel at grassroots levels during the next five years. [5]

Liu’s suggestions for the advancement of environmental justice and protection in industrialized rural areas include NGO provision of legal help, medical aid and clean, as well as basic education about environmental and health issues to rural populations. Another study on rural industrialization, or in situ urbanization, states that many of the problems related to rural urbanization are not caused by the urbanization pattern but by the inadequacy of urban planning practices in dealing with this new form of development. The study states, “The integration of these quasi-urban areas and populations into the planning of major urban centers has been encountered almost on a daily basis by Chinese urban planners in many fast developing coastal regions, however it remains an unresolved issue. Clearly, a new planning framework going beyond the city-centered, rural-urban dichotomous approach is needed to deal with this situation” [4].

The study goes on to suggest a planning framework with two levels to incorporate different dimensions of in situ rural-urban transformation neglected by the conventional urban planning practices. The first level, or the regional level, would incorporate both rural and urban areas to accurately reflect the blurring of the urban-rural divide. Specifically, the study suggests that a new Urban-Rural Planning Act is needed, which pays attention to industrialized rural population infrastructure, public utilities, and their spatial relationships to urban cores, rather than just using the industrialized rural population as a background for core urban areas. The second level of the new planning framework would be more specific, and would include a more detailed approach for the planning of only industrialized rural areas and populations resulting from in situ rural-urban transformation [4].

Of the above suggestions for improvement, none would work on their own—they all must be incorporated in some way into the governmental and non-governmental approaches toward these areas. None of these suggestions put enough emphasis on the environmental health and rights of the rural people: because of the focus on the factory pollution and effects of industrialization, most policies have been directed at limiting pollution rather than at protecting health. While the two issues of pollution and health are directly related, it is evident that factories can avoid environmental restrictions at ease, and that not

enough voice has been given to the people to state their concerns and combat their own victimization. Therefore, a holistic approach needs to be taken to improve the societal and environmental conditions of industrializing rural areas of China.

Secondly, Chinese governmental policy and lack of oversight is only one factor contributing to environmental issues. The willingness of foreign governments and companies to invest in and buy products from factories that are causing the damage is also a problem that should be addressed. Factory owners and companies will respond most to the criticism handed down by their customers and investors. If the US and other countries had stricter policies regarding the environmental status of companies allowed to export into their borders, this would also create incentive for small-scale factories to clean up their acts.

Finally, China's rural industrialists are special in the sense that they have only recently risen from poverty to wealth. The factory owner I met had very little education or access to the outside world beyond his business. Therefore, he lacked basic knowledge about ecology, the environment, and issues such as "human rights" or "environmental justice." Furthermore, events in history and the government's encouragement of economic growth have created an environment in which profit takes precedent over all. There is no doubt that the factory owner I met knows that his business is causing severe damage to the environment and to the surrounding people's health, but he has little or no concern for this, and definitely no sense of guilt. At the lavish dinner he treated my father and I to, a banquet that could have fed about 30 people was served to our party of six, and of course no leftovers were taken home. He passed a \$500 Italian leather wallet around for show and tell, commenting that he had bought 4 more of them while he was in New York. Most interestingly, his displays of wealth intermingled with his stories of how he started up and "came out of the countryside" or, *cong nong cun chu lai*. Reflecting on the context of his own rise and the economic growth of the countryside, one can attempt to understand his behavior in the context of rural industrialism. Having grown up in harsh conditions of poverty and manual labor for most of his life, and having spent so much energy on escaping from that lifestyle, is it unrealistic to expect him to be concerned for something he has never been seriously educated on, or to expect him to want to give up part of his success? My final question regarding the rural industrialists at the end of this analysis is simply: who can blame them?

However, that does not mean that I don't believe their behavior should be reformed. Rather, I believe that methods outside of economic incentive should also be used to stop the damage being done by small rural factories and bring about environmental justice. Rural industrialists, particularly the ones who have only recently become wealthy and have not had access to education, should be educated on and informed of the environmental issues they are causing. A structure for facilitating dialogue between factory owners and local people needs to be created, as does an interactive education of all residents, workers, and company/factory owners on issues such as trash dumping, water pollution, and air pollution. Laws that protect the people's environmental rights should also accompany these dialogues. Once these collective bodies have made agreements on how to limit pollution in their area, the regional government should then be in charge of allocating the necessary resources. Of course, this is an extremely ideal picture of the future, which would require much more oversight, involvement in politics, and much less corruption than currently exists. However, if one

views China as a nation that is destined to develop its governmental and justice systems as its economy prospers, as many developed nations have done, then one can say that positive change toward environmental justice in industrialized rural areas is inevitable in China's future.

# References

- [1] Bai, Xue. “The Urban Transition in China: Trends, Consequences and Policy Implications”, in G. Martine, G. McGranahan, M. Montgomery and R. Castilla (eds.), *The New Global Frontier: Urbanization, Poverty and Environment in the 21st Century*, London and Sterling, VA, 2008: Earthscan, p. 335–352. Accessed at <http://xuemeibai.org/Bai-China-urban-transition.pdf>.
- [2] Bramall, Chris. “The Industrialization of Rural China” New York: Oxford University Press, 2007. p. xii, 424. Maps, tables, bibliography, notes, index. Accessed at <http://www.hbs.edu/bhr/archives/bookreviews/82/ychen.pdf>.
- [3] “China—Rural Industry.” *Country-data.com*. 1987. Web. 30 July 2011. <http://www.country-data.com/cgi-bin/query/r-2790.html>.
- [4] Kumar, Sanjeev. “Rural Development through Rural Industrialization: Exploring the Chinese Experience.” Asianscholarship.org. *The Asian Scholarship Foundation*. Web. 1 July 2011. <http://www.asianscholarship.org/asf/ejournal/articles/Sanjeev%20Kumar2.pdf>.
- [5] Li, Jing. “Time to Clean up Rural Area Pollution.” Chinadaily.com. *China Daily*, 29 Mar. 2011. Web. 2 July 2011. [http://www.chinadaily.com.cn/china/2011-03/29/content\\_12240161.htm](http://www.chinadaily.com.cn/china/2011-03/29/content_12240161.htm).
- [6] Xu, Haiqing. “Environmental Policy and Rural Industrial Development in China.” Humanecologyreview.org. *Human Ecology Review*, 1999. Web. 2 July 2011. Accessed at [www.humanecologyreview.org/pastissues/her62/62xu.pdf](http://www.humanecologyreview.org/pastissues/her62/62xu.pdf).
- [7] Zhang, YingYing. “The Shadow Over Rural China.” Chinadialogue.net. *China Dialogue*, 10 Feb. 2011. Web. 1 July 2011. <http://www.chinadialogue.net/article/show/single/en/4098>.