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Learning to Live with Pollution: The Making of Environmental Subjects in a Chinese Industrialized Village

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ABSTRACT

It is often assumed that, when citizens do not oppose pollution, it is due to their ignorance of its effects or to structural barriers to change. This article argues that a sense that pollution is inevitable is also a major obstacle. We outline the gradual formation of environmental subjects who have learnt to value their environment in ways consonant with the seemingly inevitable presence of pollution. We argue that perceptions of inevitability were produced by: (1) the subordination of villagers to their leaders and the dependence of both on local industries; (2) experiences with protests; and (3) the framing of the exploitation of local resources as part of a broader national project of development. This study sheds light on the study of environmental protests in China by illustrating how parameters for contention come into being and how they are intertwined with the governance of the village and of the environment.

> First start growing some vegetables, and when you cannot grow them, come to me. Don't you come to me when you are not even trying! I am working to obtain more pollution compensation funds. But you also have to make an effort and rely on yourselves, stop playing cards and doing nothing, just waiting for a share of the land rental and pollution compensation at the end of the year. You have to *learn how to live in polluted conditions*.
>
> —*Baocun village head and village secretary*

Soon after we settled in Baocun village in spring 2009 to research local attitudes to industrial pollution, we found that, for half an hour every day, the sub-village of Tacun had its own TV station. Every evening, the Tacun village head

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obscured all other channels to broadcast footage that he had shot in the village, and comic sketches of his choice. He used the channel to express his views on issues of local concern, often implicitly criticizing his immediate superior, the Baocun village head, as well as the management of local industries. In one broadcast which we watched in early May, the Tacun village head debated the problem of water shortage. He stressed that the large, partly state-owned fertilizer plant (Linchang) chose this locality because of the abundance of water, yet villagers had been unable to transplant rice to the paddy fields because irrigation water, provided by Linchang, had not been released. He urged locals to blockade Linchang's premises the following day should the water not be provided, and reassured them he would lead and support them, and not just "stand at the back". These threats served their purpose, and water filled the paddy fields the following morning.

A clear disparity is visible in the pathways of action of the Tacun village head and the Baocun village head. While the Baocun village head suggested that villagers ought to work harder on their land before complaining to the leaders, the Tacun village head presented himself as a champion of the people and a supporter of collective action. Over the coming months, however, we came to realize that villagers themselves were less than convinced that his support of protests and seeming antagonism to industry were reliable or selfless. Rather, village leaders' roles in protests against and negotiations with the local industries were complex and shifting. Similarly, villagers' responses to pollution have changed over time, with regard to both their aims and their modes of action. This article examines why such changes have taken place, and highlights key issues for the study of citizens' and local state agents' roles in environmental protection. It questions the common assumption that citizens are ignorant of the risks posed by pollution, and clarifies why awareness of risk fails to transform into demands that such risk be eliminated.[1] Local communities have often been romantically portrayed as inherently "green". This portrayal hinders a more balanced understanding of how they perceive development. This article looks at the circumstances in which local people's interests have become aligned with those of polluting industries, even when they fear pollution's effects on their livelihood and health.

The field of political ecology at large is currently concerned with how unequal power relations produce particular discourses on the environment and subjects endowed with the power and responsibility to safeguard what is deemed worthy of protection.[2] Concepts such as ecogovernmentality, green governmental-

1. On the complex connection between awareness and action, see Yanqi Tong, "Bureaucracy Meets the Environment: Elite Perceptions in Six Chinese Cities", *The China Quarterly*, No. 189 (2007), pp. 100–21.

2. A critical review of the wide literature on political ecology is beyond the scope of this article. Some important works in this area include Tim Forsyth, *Critical Political Ecology: The Politics of Environmental Science* (London: Routledge, 2003); Bruno Latour (trans. Catherine Porter), *Politics of Nature: How to Bring the Social Sciences into Democracy* (Cambridge MA: Harvard University Press, 2004); Richart Peet

ity and environmentality highlight ways in which governments' representations of "the environment" are internalized by self-regulating subjects.[3] Agrawal defines environmentality as "a framework of understanding in which technologies of self and power are involved in the creation of new subjects concerned about the environment".[4] His research outlines the historical and contingent character of environmentality. He shows how Kumaon citizens (North India) who were not originally committed to forest conservation came to care for the forest and to participate actively in its conservation by becoming involved in institutional regimes of environmental regulation such as the forest council. He describes this shift as the emergence of "environmental subjects" who care for the environment and see themselves as the guardians of local forests.

Inspired by Agrawal's study, this article examines how and why particular environmental subjects have come into being in Baocun, and with what consequences. In Kumaon's case, local subjects learned progressively to care about the environment in ways consonant with colonial and post-colonial rule, and to participate in its governance. However, environmentality in Baocun hails a rather different type of subject. The local social and political economic context in Baocun requires, not that villagers protect the environment and take part in its regulation, but rather that they become complicit in circumventing regulation and accepting pollution. Baocun is affected by pollution from a major fertilizer plant as well as a number of mines and smaller plants in its vicinity. In this context, local environmentality views the value of the environment as a source of profit and a resource to be exploited, rather than as a communal good to be protected. These attitudes are largely shared by industry bosses, village officials and the local population. To understand how this came about, we twist Agrawal's work, his examination of "when and for what reason do socially situated actors come to care for, act, and think of their actions in relation to something they define as the environment",[5] to ask how Baocun villagers come to view pollution as inevitable.

We map three phases in the transformation of environmental subjects since the early 1980s, according to locals' attitudes to the environment, their demands to the industry, their strategies for negotiation and the role of village officials. Environmental subjects in Baocun shifted from (1) caring for the environment as a communal good and protesting about it with the support of village officials; to (2) conflicts with village cadres which resulted in protests that were contained

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and Michael Watts, *Liberation Ecologies: Environment, Development, Social Movements* (2nd ed.) (London: Routledge, 2004); and Paul Robbins, *Political Ecology: A Critical Introduction* (Oxford: Blackwell, 2004).

3. See Arun Agrawal, *Environmentality: Technologies of Government and the Making of Subjects* (Durham: Duke University Press, 2005); and Stephanie Rutherford, "Green Governmentality: Insights and Opportunities in the Study of Nature's Rule", *Progress in Human Geography*, Vol. 31, No. 3 (2007), pp. 291–307.

4. Arun Agrawal, "Environmentality: Community, Intimate Government and the Making of Environmental Subjects in Kumaon, India", *Current Anthropology*, Vol. 46, No. 2 (2005), p. 166.

5. Arun Agrawal, *Environmentality*, p. 164.

within the village; and finally (3) protests focusing on compensation rather than a clean environment, with village cadres acting as negotiators with the industry. These shifts occurred in relation both to experiences with protests, a number of critical pollution incidents, the changing institutional context of the village, and to villagers' evolving relationship with village cadres, their understanding of the local state's relationship with industry and its role in national development. As a result of this process, Baocun residents have come to resent environmental degradation and to recall a cleaner past, but they have also learned to focus their efforts on obtaining financial gain from the presence of mining and industry. An economistic way of valuing the environment has emerged, and local contention has been co-opted to become a part of village governance, rather than a threat to it.

METHODOLOGY

Baocun is a fairly large administrative village in a heavily industrialized part of Yunnan Province. Tacun is a sub-village within Baocun.[6] Between April and August 2009, a team of researchers (including the first three authors) lived in Baocun with a local family and carried out participant observation and in-depth interviews. We strove to interview migrant workers and registered local residents, men and women, and older and younger people. We conducted roughly 100 interviews in total, though they varied in length, dynamics and level of informality. Living in the field site also gave us a rare opportunity to witness firsthand the effects of industry and pollution on the locality and the day-to-day management of it by both the local population and the local government.

To avoid biasing our interviewees, we did not present our project as concerned with pollution. Instead, we told interviewees that we were interested in local living conditions and in their health. Our line of questioning was open: we started interviews by asking about families, their incomes and any challenge they were willing to highlight. Only when interviewees themselves complained of pollution did we ask, "What should be done?" (*zenme ban* 怎么办). This allowed us to assess the extent to which locals were concerned with pollution, and the contexts and discursive frameworks in which their concern surfaced. We took great care not to suggest any pathway of action (for instance, resorting to the Environmental Protection Bureau or to the legal system), to ensure that we would gather the full spectrum of reactions to pollution.

In this article we focus only on those whose household registration (*hukou* 户口) is in Baocun. Migrant workers have, predictably, very different stakes and interests in industry, and therefore require separate analysis. We also limit our analysis of perceptions of industry and reactions to it to the particular case of Linchang. Being

6. Tacun was itself an administrative village until 2000.

large and partly state-owned, Linchang produces attitudes to pollution and raises challenges to protests which may not be applicable to smaller private enterprises.

CHINA'S ENVIRONMENTAL HURDLES

Following the death of Mao in 1976, China embarked on a massive program of social and economic reforms. This new model of development has had a severe environmental impact.[7] Abundant reports have emerged of both pollution accidents and of routine, widespread pollution, including municipal waste, industrial waste and non-point pollution in water, and air pollution caused by industry, by reliance on coal and by transport.[8] Since the late 1970s, China's government has developed an impressive body of environmental protection policies and legislation and has recently professed a commitment to "sustainable, scientific development", harbored within a "harmonious society". Yet it is widely agreed that there is a serious implementation gap, so that central government policies and national laws are often not well enforced. The existing scholarship attributes this challenge to a variety of factors: the decentralization of environmental enforcement to local officials with conflicting interests, in particular a tension between environmental protection and economic targets; an ambiguous structure of responsibility divided across a number of ministries and other agents; poorly designed policy instruments; and general, vague and aspirational legislation which often falls short of being locally feasible.[9]

A wide and growing literature has highlighted the role of citizens and NGOs in overcoming this enforcement challenge. Peter Ho calls such efforts "embedded activism": civil society agents are allowed to be active, provided that they do not

7. Environmental degradation, however, is not only characteristic of the post-Mao period. See Mark Elvin, *The Retreat of the Elephants: An Environmental History of China* (New Haven: Yale University Press, 2004) for a broad historical perspective, and Judith Shapiro, *Mao's War against Nature: Politics and the Environment in Revolutionary China* (Cambridge: Cambridge University Press, 2001) on environmental degradation under Mao.

8. World Bank and State Environmental Protection Administration (SEPA), *Cost of Pollution in China: Economic Estimates of Physical Damages* (Washington and Beijing: The World Bank and SEPA, 2007), available online at www.worldbank.org/eapenvironment (last accessed 25 January 2010).

9. No attempt is made to review this extensive literature in this article. Important contributions include: Stefanie Beyer, "Environmental Law and Policy in the People's Republic of China", *Chinese Journal of International Law*, Vol. 5, No. 1 (2006), pp. 185–211; Neil Carter and Arthur P. J. Mol, *Environmental Governance in China* (London: Routledge, 2007); Elizabeth Economy, *The River Runs Black: The Environmental Challenge to China's Future* (London: Cornell University Press, 2004); Richard Louis Edmonds, *Managing the Chinese Environment* (Oxford: Oxford University Press 1998); Thomas R. Johnson, "New Opportunities, Same Constraints: Environmental Protection and China's New Development Path", *Politics*, Vol. 28, No. 2 (2008), pp. 93–102; Congjie Liang and Dongping Yang, *The China Environment Yearbook: Crisis and Breakthrough of China's Environment* (Leiden: Brill, 2007); Bryan Tilt, *The Struggle for Sustainability in Rural China* (New York: Columbia University Press, 2010); Dongping Yang, *The China Environment Yearbook:* Vol. 2: *Changes and Struggles* (Leiden: Brill, 2008). For a critical analysis of discursive practices of ecological modernization in China, see Emily Yeh, "Greening Western China: A Critical View", *Geoforum*, Vol. 40, No. 5 (2009), pp. 884–94.

undermine or directly confront the central government.[10] By adopting a non-oppositional stance, environmental NGOs (ENGOs) have played an important role in voicing concerns over environmental degradation, as the case of the movement against dams on the Angry River has shown.[11] Yet their strategic choice of issues has meant that ENGOs have sometimes been out of touch with local communities and have been more concerned with framing issues in a way consonant with central state rhetoric and with international discourses of environmental protection.[12] Citizens have, of course, also taken action independently of ENGOs. Their concerns, however, have been predictably different, as have the outcomes of their actions.[13] A recent study of industrial pollution in 64 Chinese villages documents how some local communities have resisted pollution through petitions and have occasionally received compensation, but few efforts have been made to put an end to environmental damage, and there have been no attempts to prevent pollution.[14] For Tao, "the impetus to take up public action has been damage to material interests, such as crops and cropland", because villagers lack a full understanding of how industry affects the environment.[15]

Tao argues that poor awareness of pollution has caused a focus on economic gain, but we show that the local community has a keen sense of environmental losses caused by industry. We suggest that current patterns of protests and demands for compensation are influenced by: (1) the subordination of villagers to their leaders, and the dependence of both on local industries; (2) experiences with protests (and particularly the shifting role of officials); and (3) perceptions of the locality's welfare as subordinate to the wider national project of development. While Tao claims that local communities could play a strong role in protecting the environment, if only they were better educated about the effects of pollution, we argue that, by their very involvement, as well as their aims, they have become complicit with the polluters. Environmental subjects in Baocun

10. Peter Ho, "Introduction: Embedded Activism and Political Change in a Semi-authoritarian Context", in Peter Ho and Richard Louis Edmonds (eds), *China's Embedded Activism: Opportunities and Constraints of a Social Movement* (London: Routledge, 2008).

11. Ralph A. Litzinger, "In Search of the Grassroots: Hydroelectric Politics in Northwest Yunnan", in Elizabeth J. Perry and Merle Goldman (eds), *Grassroots Political Reform in Contemporary China* (Cambridge MA: Harvard University Press, 2007), pp. 282–300; Yanfei Sun and Dingxin Zhao, "Explaining Dynamics and Outcomes of Environmental Campaigns in China: Multi-actor State and Diverse Civil Society", in Kevin J. O'Brien (ed.), *Popular Protest in China* (Cambridge MA: Harvard University Press, 2008), pp. 144–63; Guobin Yang, "Environmental NGOs and Institutional Dynamics in China", *The China Quarterly*, No. 181 (2005), pp. 46–66; Guobin Yang and Craig Calhoun, "Media, Civil Society, and the Rise of a Green Public Sphere in China", *China Information*, Vol. 21 (2007), pp. 211–34.

12. Ralph A. Litzinger, "In Search of the Grassroots".

13. For a comparison between ENGOs and NIMBYs, see Thomas Johnson, "Environmentalism and NIMBYism in China: Promoting a Rules-based Approach to Public Participation", *Environmental Politics*, Vol. 19, No. 3 (2010), pp. 430–48.

14. Chuanjin Tao, "Rural Society Coping with Pollution", in Dongping Yang (ed.), *The China Environment Yearbook*, Vol. 2, pp. 121–32.

15. Chuanjin Tao, "Rural Society Coping with Pollution", p. 129.

value their environment in a largely economistic fashion, in tune with the priorities and values of the industry and local government.

DEPENDENCE ON INDUSTRY, THE VALUE OF THE ENVIRONMENT AND THE EFFECTS OF POLLUTION

Baocun's local economy is overwhelmingly reliant on mining and processing phosphorous, with this area providing the richest reserves in the province. The oldest and largest chemical plant in Baocun is Linchang, opened in the early 1980s and built on land belonging to Tacun and nearby Sancun village, less than a kilometer from Tacun's main living area. In 2001, Linchang was transformed from a state-owned enterprise into a joint-stock company, still partly owned and administered by the provincial government but also, from 2005, forming part of a multinational corporation. Linchang earns 200–300 million yuan net income yearly, and employed over 2000 workers in 2007. The financial benefits of Baocun's industries to both the central and the local state are evident. Linchang factory provides one of the largest tax revenues in this peri-urban region, paying more than 80 million yuan annually before 2009. Alongside Linchang, there are over a dozen smaller chemical industries and mines within Baocun, serving as a broader support infrastructure to supply and process raw material. These industries contribute 7 million yuan in taxes per year to the state, and one per cent of this, 70 thousand yuan, is given to Baocun village. Village leaders have also derived much power from their control over new sources of income, through deals with industry bosses and through managing the Labor Company, which arranges all contractual work at Linchang. These local industries not only contribute significantly to the village government revenue through taxes but also pay land rental fees and pollution fees, and provide employment opportunities for both local residents and migrant workers.

The dependence of pollution victims and the local state on polluters is clearly visible in the very geography of the village. The main industry's physical location at the centre of Baocun and adjacent to the village government offices stands as a clear marker of its inextricable relationship to the locality. Much of the local infrastructure was provided by Linchang, partly in response to claims for compensation for pollution damage. This includes the construction of local roads and a railway, the provision of free irrigation water, a good middle school (equipped with a gym) which locals can attend for a reduced school fee, and the best medical care in the area, located at Linchang premises (though this is not offered with a discount). When it first opened in the early 1980s, Linchang employed Tacun and Sancun villagers as formal workers (*gongren* 工人), in exchange for occupying their land.[16] However, as this generation of workers retired, they have been

16. We use the term "formal worker" to translate *gongren* and to distinguish such workers from informal, unskilled workers (*lingong*, *nongmingong*) on shorter contracts and typically without any welfare provision.

replaced by well-educated outsiders, many of whom return to their homes in the nearby city on weekends. Local residents then increasingly became (less well-paid) informal workers, and were joined by a large number of migrants attracted to Baocun by employment prospects.[17] Indeed, while Baocun's total registered population is over 2,000, the village accommodates 10,000 migrant workers from other parts of Yunnan and to a limited extent other Chinese provinces, and even from Burma. In 2009, the sub-village of Tacun had a total registered population of 630, with an additional 800 migrant workers.

These multiple forms of dependence have affected local economy, society and politics and produced particular practices and discourses on the environment. In interviews, experiences of industrialization were often presented in the same breath as positive thoughts on the development which it made possible. Villagers repeatedly told us that Baocun was a rich village only because of industrialization. They reflected that many villagers had enough income to afford a new concrete house furnished with tiles, only because of the revenue brought by industry. Village leaders often reiterated the importance of industrial development in Baocun, and argued that pollution was a side-effect that ought to be accepted, in view of the financial advantages brought by industry. The Tacun village head, for instance, told us that pollution is a necessary part of development. His superior, the Baocun village head, similarly stated: "If there is no pollution, where will development come from?"

Villagers' accounts can be ambivalent about the presence of industry. For example, a 54-year-old woman who is a formal resident of Tacun told us: "The environment is better now but it will get worse again; the hills have all been sold, the water is polluted, the air cannot get better unless Linchang factory closes. But then there will be no work, no chance to earn money." A sense of loss pervades memories of the local environment before it was exploited for industrialization. Water quality was a common point of this focus. Tacun villagers often recalled that their water was known to be the best in the area, both plentiful and clean. Adults pointed to a shallow stream contaminated with waste water from the local mines, and remembered swimming in it as children, when the water was deep and crystal clear. They also used to wash vegetables in the ditch which crosses through the centre of Tacun, but the water is now smelly, dark grey and scarce. Water pollution has caused cows and water buffaloes to lose weight, to develop swollen legs and even to die, so that since the end of the 1990s Tacun villagers have been unable to breed them. Industry also caused a shortage of water for farming. The vignette described in the introduction, where the Tacun village head demanded irrigation water, is a case in point. He argued that Tacun used to have plenty of water, and Linchang chose this locality because of the amount of water, but that now there is not even enough to cultivate the paddies. This

17. C. Cindy Fan, "The Elite, the Natives and the Outsiders: Migration and Labor Market Segmentation in Urban China", *Annals of the American Association of Geographers*, Vol. 92, No. 1 (2002), pp. 103–24.

expresses a clear sense that industry has capitalized on the local environment, but has not ensured that the environment can still support agriculture.

Declining air quality was equally lamented. Increased wealth has made it possible for Tacun villagers to organize trips to tourist destinations in China, and in 2008 some visited Xishuangbanna, a tourist area in the south of Yunnan, famous for its natural beauty and ethnic minority culture. This visit made one Tacun accountant, a local university graduate in her thirties, all the more aware of poor air quality: "The air was so fresh, so clean [in Xishuangbanna]. I think if I lived there I could live to be one hundred. But in this village, it's impossible." She also explained that, because of air pollution, her skin had developed many more disorders than when she lived in the provincial capital, Kunming. Thirty-one-year-old Zhangjie, who married into Tacun from a more rural and less developed village, claimed that she had lost her sense of smell since moving to Tacun, but that she regained it when she returned home or visited other towns. She explained that "this is because air pollution in Baocun is very serious. That is why it is common to have a nose infection here." Migrant workers articulated similar comparisons between their native villages and life in the shadow of Baocun's industry. Dust created by the steady flow of traffic transporting raw material from the mines to the fertilizer plants was so thick that the Tacun village head explained that his office windows were caked with dirt that would not wash off.

Last but not least, the environment was discussed in terms of damage to crops and property, and life-threatening accidents. Ever since the factory opened, locals have experienced a variety of crop failures: rice becoming black, maize turning red, cabbage growing very long roots but little above ground (earning it the name of "cabbage-turned-turnip"), or crops being completely burnt by acid leaks. There have been so many of these incidents over the years that it proved difficult to gather clear accounts of each one, as recollections often merged into each other. The three most serious instances, however, remained distinct. The first was an accident in 2000, when the dam on a storage lake containing fluid phosphogypsum (a byproduct of processing phosphate ore into fertilizer with sulfuric acid) collapsed and the fluid phosphogypsum flowed into the main crossroad at the centre of Baocun and nearby fields, damaging all the crops. The second was the release of excessive smoke one afternoon in 2004. The emission was reported by Tacun village head on Tacun's TV station, and played a key role in the development of an environmental consciousness. Finally, the explosion of a sulfuric acid depot in 2008, which killed seven people and injured 32 migrant workers, and which shook and shattered some windows in Tacun, served as a vivid reminder of the dangers of living in such close proximity to a chemical plant.

Zhangjie, who played a prominent role in local protests, recalled her feelings after the 2008 explosion: "There are so many ammonia depots, if one blows up it will wipe out the village—it's less than a kilometer away". Locals clearly do not

lack awareness of pollution and its negative impact, but rather they have gradually learned to perceive it as inevitable.

LEARNING FROM EXPERIENCE: ADAPTING PROTESTS TO SHIFTING LOCAL POLITICS

In response to the threats posed by pollution, locals have taken action on a number of occasions, starting in the 1980s.[18] Accounts of instances of collective action often overlapped with each other, as one case was used to illustrate another better, or some of the older informants were unclear about exact dates.[19] The earliest protest mentioned dates back to the 1980s. Sixty-six-year-old Aunt Li recalled that many Tacun villagers complained that Linchang dumped its waste water in the local irrigation system, killing crops and causing several villagers to develop gallstones, as well as giving them pain and swelling in their hands and feet. In this instance, village officials led villagers in complaining that the industry failed to care about local community members (*sheyuan* 社员). This framing of complaints reflects a way of valuing the environment for both its quantifiable outputs (crops) and the less easily quantifiable wellbeing of the local population.

The environmental subjects who emerged at this time valued the environment as a source of communal welfare, and one that therefore the community as a whole would act to protect. They positioned themselves largely in opposition to the industry, and enjoyed the support of village officials. They reached outwards and upwards through non-violent, legally recognized means by presenting a petition to the township government, accusing Linchang of pollution. Their chosen pathway of action was premised on the assumption that they could rely on the local government to safeguard their environment and their health. Their petition, however, was rejected. Their demand for "caring for the community" by reducing pollution and limiting harm to bodies and crops clashed with the view of the industry and the township that the environment was a natural resource to be exploited for development. The township's rejection was the first step on the path to molding environmental subjects conformable to the townships' values.

The industry's response to this first protest had a powerful effect on the future role of village officials in protests. According to Aunt Li, Linchang "drove a car to the village government, distributed some 'things', and after this, officials did not raise the problem again". It is possible that Linchang had previously bribed

18. On rural protests in general, see Yongshun Cai, *Collective Resistance in China: Why Popular Protests Succeed or Fail* (Stanford: Stanford University Press, 2010); Lianjiang Li and Kevin J. O'Brien, *The China Quarterly Special Section on Rural Protests*, No. 193 (2008); Kevin J. O'Brien and Lianjiang Li, *Rightful Resistance in Rural China* (Cambridge: Cambridge University Press, 2006).

19. An additional challenge was posed by the sensitivity of these topics, making further probing too risky for both interviewees and interviewers.

township officials as well, which would explain their rejection of the villagers' petition. Alternatively, the income which the township government derived from the industry may have been reason enough to turn petitioners away. Local officials—township and village alike—were persuaded by the opportunities for income to adopt a definition of welfare focused on the economic benefits of development, of which the local environment, with its resources, became an instrument.

Looking at how villagers remembered this event and at how instances of protest changed in its aftermath, we infer that three important lessons were learned from this initial experience. First, villagers gathered that the township government was not responsive to petitioning, and alternative avenues of action should be sought. Second, they realized that the factory could succeed in winning the support of village (and township) officials by offering financial rewards, and that the factory prefers to deal directly with officials, rather than with citizens. Third, since the factory met the villagers' demand that it provide clean irrigation water but did not meet their request for a free yearly health check, villagers deduced that it was more productive to focus on damage to crops than on damage to health. In this context, locals gradually began to change their minds about what to value in the environment, what to demand of the industry and local government, and how to make their demands.

These lessons were reinforced in the following decade. During the 1990s, emissions from Linchang again affected crops and villagers' health. On one occasion, locals visited Linchang's offices to seek redress, but the factory leaders told them they would only talk to officials. The Tacun village head supported the factory's position and advised villagers that officials would resolve this problem, urging people to leave the factory offices and desist from forming a blockade. The discussion between village officials and Linchang brought significant results. At some point during the 1990s, Tacun began to receive 66,000 yuan yearly from the factory, as a form of compensation.

Gradually, locals further revised their perception of what they might be able to demand of Linchang. Redress offered following the phosphogypsum leak in 2000 reinforced the strategy: abandoning a language of "caring about the community" (*baohu sheyuan* 保护社员) in favor of more tangible, material goals. This event was never officially reported and again was resolved directly by village officials liaising with Linchang. Compensation for Tacun village increased significantly, from 66,000 to 100,000 yuan per year. Village leaders also negotiated a further increase every three years.

The lack of official reporting suggests yet another lesson: it is in the interest of the village government, Linchang managers and Baocun's formal residents to keep problems local. By avoiding a scandal and solving matters directly with the factory, compensation rates increased dramatically. Whereas a decade earlier environmental subjects focused on community and a more holistic definition of welfare, they now centered their concerns on measurable losses and tangible

gains. They no longer sought support upwards or outwards, but contained complaints within the village boundaries. Though they initially attempted contentious action in the form of a blockade, they were persuaded to disperse and allow village officials to liaise with the industry on their behalf.

Despite the gains secured by officials, as villagers felt increasingly left out of negotiations they also became alienated from both the officials and the factory. Village officials serving until 2003 were remembered as corrupt, as using collective revenues for private profit, and as liaising with the factory only because they would stand to benefit personally. Villagers inferred that little of the compensation gained was distributed to them and that many more bribes were taken secretly by village officials at this time. Officials were despised for restricting villagers from building extra housing, through which they could have earned additional income.[20] Trust in both the factory and village officials became very low. As a consequence, some Tacun villagers paid out of their own pockets to test the water in a local well, because they did not trust the result provided by the factory or the local government. Similarly, villagers became disillusioned regarding their own previous demands for a free health check. Lijie, a female protest leader in her thirties, argued that "there's no point having one anyway: they won't really tell you what is wrong and you still have to pay for treatment if you are ill".

Efforts to establish independently whether the local water was safe to drink show that villagers continued to value the environment not only as a source of income but also as a basic requisite to ensure health. They did not feel, however, that the local government could secure a clean environment. Test results (which found mercury and fluorine in excess of the standards set by China's Centre for Disease Control) were not used to demand redress; residents trusted only themselves and their families to protect their health. This they did by drinking from an alternative well or, for those who could afford it, by buying purified water. Overall, at this time villagers maintained their concerns with a clean environment, but did not believe that the industry could stop polluting, nor that village officials could demand that it should. Accordingly, they relied on local officials to secure compensation for the damage incurred, and on themselves to minimize the damage to their health.

The election of a new generation of leaders in the 2004 village elections marked a major watershed in the Baocun political arena.[21] These new officials

20. In doing so, they were actually implementing national law and policy, see Benjamin Van Rooij, *Regulating Land and Pollution in China, Lawmaking, Compliance, and Enforcement: Theory and Cases* (Leiden: Leiden University Press, 2006).

21. Their election success is said to have come from strategic alliances through which they secured the support of important clans in the sub-villages, as well as from offering financial rewards. Rumors suggest that Baocun's village head bought many votes, paying up to 300 yuan per vote. On village elections and the management of collective property, see Yao Yusheng, "Village Elections and Redistribution of Political Power and Collective Property", *The China Quarterly*, No. 197 (2009), pp. 126–44.

were young, but had experience in dealing with industrial enterprises. They positioned themselves carefully and strategically between the villagers and the industrial complex, with crucial effects on protest and their own role in it. Most importantly, they instituted a system for sharing a set annual percentage of the revenues derived from renting collective land to industries and mines (*fenhong* 分红). In 2008, Tacun's income from land rented to mines amounted to 15,000 yuan per person, which is more than many make working full-time on the land or even in the factory. New officials have also removed building restrictions, allowing villagers to build housing on their allotted fields to rent to migrants for 60 to 80 yuan per room per month.[22] These two changes have endowed the current leaders with a certain degree of legitimacy amongst the local population, especially compared to the previous generation of leaders. By distributing more of the benefits to local residents, village officials also enlisted locals more fully in valuing the environment as a source of income in ways consonant with industrial development. This has produced more easily governable environmental subjects, who at least partly share the interests and values of officials and industry.

The new leaders' role in collective action is complex, however, and villagers have provided us with seemingly conflicting views. Some detailed how the Tacun village head consistently supported collective action. Thirty-one-year-old Zhangjie is one of the main players in Tacun's protests. She explained that protests are led by village leaders, because they have connections with industry leaders. Officials sometimes take a direct part in the protests. The Tacun village head, for instance, actively urged villagers to take action in 2004, when he reported on his TV program about Linchang's release of high amounts of smoke, and when he incited villagers to demand irrigation water in May 2009. Zhangjie believed that officials' support was fundamental to achieving any results. She told us: "You cannot rely on 'common people' (*laobaixing* 老百姓) to stop this; you have to have support".[23] This reflects the lessons learned from past protests: the factory is more responsive to local officials. Officials, however, are not always forthcoming in their support. Asked whether officials lead the way for blockades, 31-year-old male protester Guo Lin replied, "How could that be? Either you are unable to get through to them on the phone, or they are simply not there!" In other cases, they can be openly repressive. Zhangjie's account of the 2008 explosion serves as a powerful testimony: "We protested at the factory gate, but the Baocun village head swore at us scarily. In the end people got frightened, went home and slowly

22. See George C. S. Lin and Samuel P. S. Ho, "The State, Land System and Land Development Processes in Contemporary China", *Annals of the American Association of Geographers*, Vol. 95, No. 2 (2005), pp. 411–36.

23. On the role of village leaders in seeking redress for grievances, see Ethan Michelson, "Justice from Above or Below? Popular Strategies for Resolving Grievances in Rural China", *The China Quarterly*, No. 193 (2008), pp. 43–64. On protest leadership, see Lianjiang Li and Kevin J. O'Brien, "Protest Leadership in Rural China", *The China Quarterly*, No. 193 (2008), pp. 1–23.

dispersed." Others similarly stated that current officials sometimes used strong language to scare blockading villagers into retreat.[24]

These inconsistent accounts reflect the shifting position of local officials. The current leadership has learned to play an ambivalent role, as mediators who exploit protests carefully to put pressure on the factory, while ensuring that they do not escalate things too far. They rarely support and lead collective action, as officials did initially, but are careful not to exclude locals completely from liaising with the factory, as did previous generations of officials. The Tacun village head's use of television is a prime example of this: by threatening action he both showed support for the villagers' discontent and managed to contain such discontent by communicating it directly to the industry. The threat of a blockade issued on a channel that all in the village with a TV set could not but watch served the same purpose as a blockade itself. As previous village officials had curbed attempts to seek support upward or outwards, carefully orchestrated small local protests focused on concrete compensation again became possible.

This shift reinforced villagers' dependence on cadres to negotiate with the industry on their behalf. At the same time, Baocun villagers have learned that, though village officials play a crucial part in securing compensation, they do not act without popular pressure. A comment by Aunt Li, a 66-year-old woman who has taken part in many protests over the years, serves as evidence. Reflecting on her experiences of protest, she concluded: "You have to block the road to make officials solve the problem; if you just go to talk to them 'they won't pay any attention' (*li dou bu li ni* 理都不理你)".

Charles Tilly has defined the concept of a repertoire of collective action as "a limited set of routines that are learned, shared, and acted out through a relatively deliberate process of choice".[25] Elaborating on this concept, Sidney Tarrow states that the repertoire is "not only what people *do* when they make a claim; it is what they *know how to do* and what society has come to expect them to choose to do".[26] In Baocun, villagers have learned repertoires of acceptable actions, and have found that certain actions *become* acceptable by being repeated and by becoming a familiar means of communicating discontent. They follow a long tradition of using the authorized language of the state to articulate their grievances.[27]

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24. On village leaders supressing protests, see Yongshun Cai, "Local Governments and the Suppression of Popular Resistance in China", *The China Quarterly*, No. 193 (2008), pp. 24–42, and Liangiang Li and Kevin J. O'Brien, "Protest Leadership".

25. Charles Tilly, "Contentious Repertoires in Great Britain, 1758–1834", in Mark Traugott (ed.), *Repertoires and Cycles of Collective Action* (Durham: Duke University Press, 1995), p. 26.

26. Sidney Tarrow, "Cycles of Collective Action: Between Moments of Madness and the Repertoire of Contention", in Mark Traugott (ed.), *Repertoires and Cycles of Collective Action*, p. 91, original emphasis.

27. Elizabeth J. Perry, "Studying Chinese Politics: Farewell to Revolution?", *The China Journal*, No. 57 (2007), pp. 1–22; Elizabeth J. Perry, "A New Rights Consciousness?", *Journal of Democracy*, Vol. 20, No. 3 (2009), pp. 17–20.

Localized protests, carefully managed by officials, are premised on an economistic and individualistic redefinition of aims. The Tacun village head's attitude exemplified this redefinition. He recalled that once a reporter from the provincial capital, Kunming, called him, asking to investigate pollution in Tacun. The Tacun village head reasoned, however, that this would mean exposing pollution and involving the Environmental Protection Bureau, which could impose severe fines on the industry. It was far better, he concluded, to deal with the factory directly and ask that money be given to locals. The rationale which he put forward was based, not on protecting the locality from scandal and its officials from demotion, but on ensuring the highest gain for the local residents. Such a focus on "gain" results in neglecting the harm of pollution and thinking only in terms of financial compensation.

The presence of industry and current focus on compensation construes the environment as a resource which will inevitably be exploited. A man in his thirties who worked in one of the local mines explained: "There is phosphorous everywhere here. Maybe they will not dig it all up in our lifetime, but it is only a question of time. It will all be dug up." Awareness of the high revenues that the village derives from industrial processing has been instrumental to processes of re-valuing the environment and accepting Linchang. As Zhangjie put it, "officials get benefit from it (industry), it's their bowl of rice (*fan wan* 饭碗)—why would you break your own bowl? Of course you wouldn't."

Zhangjie's comment also highlights indirectly the fact that the distribution of gains from the industry remains uneven. This has created an increasingly divided local community. Community divisions have in turn sustained perceptions of the environment in economistic terms. In a vicious cycle, these perceptions have supported a focus on compensation and personal gain, and the individualistic quest for compensation reinforces the divisions which brought such perceptions into being. Jing Jun discusses how environmental protests against a local fertilizer plant in Dachuan (Gansu) gained strength because the community was a single-surname village, concerned with the future of its offspring.[28] By contrast, Baocun's community has become increasingly divided between industry and mine bosses, village officials who have benefitted financially from deals with industries, village entrepreneurs who have set up shops and small businesses, formal villagers who have obtained high compensation, and informal factory workers and migrants with lower incomes and dangerous jobs. Industrialization has created a divided society, and enterprises and the local government have exploited those divisions to direct local residents towards compensation and the pursuit of individual gain, rather than towards the protection of the environment as a common good. Young

28. Jun Jing, "Environmental Protests in Rural China", in Elizabeth J. Perry and Mark Selden (eds), *Chinese Society: Change, Conflict and Resistance* (London: Routledge, 2003), pp. 205–22.

local protester Lijie argued that these divisions and the increased wealth amongst local residents caused each to "protect their own welfare" (*ge gu ge de le* 个顾个的了) and to focus only on financial gain. This has also effectively prevented migrant workers, who often do the most dangerous jobs in the industry, from uniting with local residents to demand redress. As redress is reframed as compensation, migrant workers, who constitute the large majority of the population, have no vested interest in taking part in protests, and none of those interviewed did so.

The environment is no longer protected as a communal resource as it was at the outset, but regarded as a source of individual profit. As formal residents obtained unprecedented amounts of compensation for pollution and income from land rental fees, and did not believe that local officials could demand less pollution, they settled for an economically centered view of the environment. This made it possible for village officials to conflate the governance of the village with the governance of the environment. Blockades were framed as a mechanism for securing compensation, rather than as a form of subversion. Compensation in turn made villagers acquiescent. The environmental subjects who emerged from these processes gradually repackaged their concerns with the environment within a sense of the inevitability of pollution, and valued quantifiable losses (of crops and land) for which financial compensation can duly be made.

ENVIRONMENTALITY AND THE LOCAL SACRIFICE FOR THE NATION

Agrawal developed the concept of "environmentality" to understand how villagers in North India were steered to care for the environment in particular ways. He showed that, through participation in forest protection, the values held by local environmental subjects were shaped to converge with those of the ruling powers. In doing so, he criticized scholars of resistance for assuming that "the resisting subject is able to protect his or her consciousness from the colonizing effects of elite policies, dominant cultures, and hegemonic ideologies".[29] Baocun findings also highlight the need for a cautionary attitude to the terms "resistance" and "powerless". Can we really speak of resistance, when negotiations and interests are so layered and complex, village officials play such an ambiguous role in liaising with industry, and villagers have reconfigured both their aims and their means to attain them, in response to the social, political and economic setting? Conversely, to what extent may Baocun villagers be regarded as powerless, when they have succeeded in gaining compensation? Our data suggest that it is more useful analytically to examine how and why the focus of action has shifted from

29. Arun Agrawal, *Environmentality*, p. 169.

decreasing or ending pollution to gaining financial benefits than to assume a powerless or resisting subject with static aims and modes of action.

Baocun's current patterns of activism may be characterized as a form of environmentality, rather than of resistance, because they have become complicit in the local government's aims. According to the villagers, however, they are also compliant with and subordinate to the priority of industrial development at a broader national level. Guo Lin, an informal worker in Linchang, reasoned that Baocun was unlike pollution cases covered in the national media, where pollution has been ended after locals' protests, because Linchang was controlled by the provincial government and "is a big earner (for the government); if we demanded to close it, where would the government get so much income? It is a very simple reason. It has benefits and drawbacks. We sacrifice the 'small self' for the 'big self'. It is only the sacrifice of a small village." Through this dynamic, locals were framed as environmental subjects not only of the local but also of the central state. They regarded their submission and re-valuing of the environment as a resource to be exploited in a sacrifice to national development. Following and reinforcing this rhetoric, locals still referred to Linchang as "the large collective" (*dajiti* 大集体), and remarked that there was no way of limiting its pollution because it was a state-run enterprise. The Tacun village head iterated the same sense of the locality suffering for wider development: "Locals can only bear it; what can 'little common people' (*xiao laobaixing* 小老百姓) do against a big factory like Linchang? Now the state supports industrial development, farmers just get some compensation." When we asked him whether he thought that sustainable development was possible, he looked baffled, replying that he had never heard of the term, and that surely development can only happen with pollution.

Skeptical readers might see this selective employment of the rhetoric of economic development—which ignores the central leadership's current stress on environmental protection—not as a local sacrifice for the good of the nation but as merely an excuse to legitimize local gain for the village and its officials, in line with the paradigm of "local protectionism" (*difang baohu zhuyi* 地方保护主义). Undeniably, village officials have a vested financial interest in supporting Linchang. However, Linchang is not viewed as local, and its size is part of what legitimates it to locals. It has been instrumental in enlisting them to conceptualize the local environment as a resource to be exploited. As Guo Lin's rhetoric of local sacrifice highlights, Baocun's protests have become *strategically* crystallized because the main industry is presented as state-owned, and therefore its success cannot be obstructed.

CONCLUDING THOUGHTS

Through the example of Baocun, this article has shown that the ways in which individuals and communities value their environment are inextricable from the

local social, political and economic context. We have shown how these parameters have come into being. We have argued that, while Baocun villagers lament the loss of a clean environment and its consequences for their means of livelihood and their health, their current failure to demand less pollution may not be ascribed to a lack of awareness of its effects. Rather, villagers and local officials have gradually adapted to a naturalized industrial order. The *mode* of action has shifted from petition to blockade, from resort to township officials to direct resolution within the village, and from villagers' exclusion from demanding redress to their partial and strategic inclusion. Equally, the *aims* of action have moved from an emphasis on the care of the community and on avoiding or decreasing damage to health, to more tangible material gains in the form of financial compensation. These changes serve to make protests more effective, in the sense of having a real outcome, but also more subordinated to the local state. Collective action in Baocun is not adequately understood as resistance, because it takes on board hegemonic attitudes to industry and pollution and redefines its own parameters in response to what such hegemonic discourses configure as feasible. Villagers' dependence on the industry for employment and income and on local cadres for liaising with Linchang has given rise to environmental subjects who no longer advocate for the care of their environment.

The factors which heralded these shifts are multiple and complex. They include villagers' subordinate position in relation to local officials and the industry, the local government's dependence on industry for revenue, villagers' particular experiences with protests, growing divisions within the local community, and the perceived role of the locality in fulfilling the national project of development. These factors coalesced to naturalize the presence of industry. The genealogy of current definitions of a protest's success may only be understood in relation to these elements. Changes in the modes and aims of protests and in perceptions of the environment shape each other. Regarding the environment as a source of income supports protests which focus on quantifiable damages. Damage which is less easy to monitor and to prove, such as effects on health, receives little attention.

Linchang's genesis as a state-owned enterprise and its current set-up as partly owned and managed by the provincial government endows it with a power and legitimacy that other industries do not have. The symbiosis between Linchang, formally registered residents of Tacun and the local government have made locals dependent on it for income and complicit in its pollution. This form of environmentality, however, does not necessarily extend to all polluting industrial plants. Other local factories—which pose a threat to the environment, but offer less potential benefit to the local population and the local government—still elicit concerns to limit the harm of pollution. Villagers' reactions to smaller local enterprises reveal that counter-hegemonic voices have by no means been obliterated. Aunt Li proudly recounted how, in 2009, villagers formed a blockade and successfully stopped the establishment of a new factory near Baocun. She

explained that preventing it from starting business was the only way to avoid further pollution, because it would be very difficult to control it once it opened; villagers' awareness of the difficulties of limiting industry's effects has made them wary of further industrialization. This highlights some proverbial cracks in the current version of Baocun's environmentality. How long this way of valuing the environment will endure, however, is far from certain.