Special Section on Dying for Development

Introduction
Dying for Development: Pollution, Illness and the Limits of Citizens' Agency in China*

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China's rapid emergence as an economic power over the past quarter of a century has been accompanied by a growing understanding of its environmental impacts, particularly in terms of pollution.[1] In recognition of the saliency of this field of inquiry, in 1998 *The China Quarterly* published a special issue on "China's Environment."[2] At the time of its writing, sustaining economic growth was largely regarded as more important than sustaining the environment. Yet, in the following decade, the policy sphere changed substantially. The view that it is acceptable to "pollute first and clean-up later" has come under sustained scrutiny and is particularly problematic in the field of environmental health. Environmental impacts on health directly affect individuals' and families' most basic livelihood needs, placing the costs and benefits of China's economic development in stark relief. Consequently, environmental health concerns ranging from contaminated food to occupational health, waste and industrial pollution frequently become the focus of citizens' complaints and conflicts.

It is only recently that China scholars have turned to study the health impacts of environmental degradation. A special issue of the *Journal of Contemporary China*, published in 2010, was the first to outline an emerging body of scholarship on environment and health in China.[3] As an initial effort to map this broad territory, it exemplified what was at the time a very limited body of research, much of which linked environment and health only inferentially. Until then, little was known about how Chinese citizens understand pollution and its effects on health, and what types of responses this motivates among them, both individually and collectively. Three of the contributions focused on public perceptions and

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1 Edmonds 1994; Carter and Mol 2007; Economy 2004; World Bank and SEPA 2007.

2 Edmonds 1998.

3 Holdaway 2010.

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responses to pollution's impact on health, but they did so by extrapolating relevant findings from research projects which originally had rather different aims.[4] While analysis of this new policy field remains relatively undeveloped and segregated within two separate sectors of environment and health, the study of public responses to such problems has made significant advances and has started to investigate the intersections between the two.[5] This collection of articles is intended to showcase the development of this sub-field.

It is widely agreed that citizens may play an important role in pollution regulation, but less is known about the intricate processes through which citizens themselves understand environmental health threats.[6] If we are truly to understand citizens' potential for aiding environmental protection and sustainable development, it is necessary to pay more attention to the ways in which they approach these problems and whether they regard them as problems at all. How do they establish a link between a given threat (for instance, contaminated food or air pollution) and experiences of illness? Who is involved in these contestations and what are their consequences? Empirically rich accounts of how citizens understand these risks show that the fear of repression, opportunity structures and dependence on polluting industries shape not only action but also the very ways in which risks are conceptualized. They also indicate the lack of any inevitable connection between awareness of pollution and action to stop it.

China's particular development path has given rise to a complex and intersecting set of environmental health problems. Polluting enterprises have had severe effects on health: cancer has become the leading cause of death in both rural and urban areas, and disease clusters and "cancer villages" are increasingly sites of lawsuits and mass protests.[7] Modernization has also produced vast amounts of waste and its disposal presents ongoing challenges. Finally, exposure to pollutants in food – whether they be heavy metals from nearby industries, chemicals used excessively in farming, or noxious substances wilfully added during food production – poses additional risks to human health. This set of risks linked to industrialization and urbanization may be described as "diseases of transition" – diseases which are caused by China's rapid and uneven transition from poverty to affluence (see Holdaway's contribution in this issue). As a consequence, the ways in which citizens respond to them is also telling of broader attitudes towards this transition.

Articles in this collection show that pollution's impacts on health are raising new questions about the meaning of development and modernization in China. They illuminate both people's deep ambivalence about these processes and some of the new fault lines of inequality and social conflict that they generate. The collection's title is intended to point to this ambivalence: the Chinese state

4 Lora-Wainwright 2010; van Rooij 2010; Yang 2010.
5 For an exception, see Su and Duan 2010.
6 Weller 2006; Tilt 2006.
7 van Rooij 2010; Liu 2010.

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and many of its citizens are "dying for development" in the sense that they yearn for it, but also in the sense that they suffer from its side effects. For instance, rural industrial pollution and resource extraction and processing (which are the focus of three of the contributions) are often highly polluting. However, they are also vital to poverty alleviation and provide a large proportion of the local government revenues needed to fund public services.[8] Relatively poor localities find themselves in difficult positions and face challenging trade-offs. Officials try to strike a balance between sustainability and development. Citizens resent pollution but rely on industries for employment and compensation. As different modes of livelihood coexist, residents of rural areas often suffer the effects of industrialization while they still try to draw a living from farming. The phrase "dying for development" highlights this tension between desiring development and yet suffering its negative impact on the environment and health.

It is not only physical health that is affected but also the texture of communities and relations between individuals, communities and the state. As these articles show, pollution-related health impacts often entail conflicts of interest and contestations over whom or what is responsible for ensuring welfare. This is not solely an economic question over where resources to mitigate these risks should be drawn from, but also a deeply moral question. If state agents are perceived to be responsible for reducing pollution and yet are unresponsive or ineffective at doing so, citizens' trust in the state and its legitimacy may be severely threatened. Conversely, citizens may cease to place expectations on the local (or central) state's ability or willingness to tackle pollution, as communities grow divided as a consequence of industrialization. This results in collective action being fragmented into more sporadic, localized and individualized reactions.

As variables which affect how citizens understand and respond to environmental health risks play out differently in varying contexts, in-depth place-based case studies are an appropriate way to examine these interactions as well as the resulting outcomes and implications. Qualitative sociology and medical, environmental and social anthropology are particularly well suited to examining citizens' perspectives as their methodologies are designed to understand empirically the complexities of lay experiences and responses. Work on citizens' perceptions and actions has understandably made particular progress within these disciplinary perspectives which form the backdrop of several contributions to this collection. The case studies are set in the varied contexts of rural, urban and virtual spheres, and in relation to different types of threat (waste disposal, rural industry, food contamination, air, soil and water pollution). Types of pollution examined also occupy different temporalities, ranging from (1) anticipated pollution, (2) watershed moments when pollution was clearly identified through the senses, through the engagement of the media and blogging, through to (3) "slow disasters," whereby the effects of pollution only manifest themselves

8 Tilt 2010.

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very gradually. Likewise, types of action portrayed range from diffused, ad hoc and individualized or localized, to more organized and confrontational collective action.

Environmental health risks serve as a springboard to examine some of the key themes in the study of contemporary China – such as citizens' agency, individualization, state–society relations, attribution of responsibility, the effects of modernization, ambivalence towards development, and contention about social justice – which are of interest well beyond this subfield itself. As contributions reach different conclusions on the role of citizens, they do not produce an overarching theory of collective action. Rather, they highlight the spectrum of possibilities (and impossibilities) of how environmental health threats are understood and tackled.

Special Section Contents

Jennifer Holdaway's article opens the collection with a review of current environmental health problems in China, the evolving policy sphere, and recent trends in academic research. She describes environment and health as a new "problem field" which requires the development and implementation of a new policy agenda and better integration between governmental agencies. Based on her work in this area as director of the Social Science Research Council's "China environment and health initiative," she argues that this research arena presents challenges that are generic to the issue domain of environment and health as well as some that are specific to China which, as the result of its rapid and uneven development, faces a complex and overlapping set of environmental health risks. She discusses where pollution-related health risks fit into this landscape and the new difficulties for research and policy presented by the fact that these "diseases of transition" span multiple policy streams and disciplinary boundaries. Her review of social science research on policy and public responses provides an excellent backdrop to the roots of the difficulties in implementing environmental regulations and safeguarding health, which are apparent in many of the contributions.

Two articles tackle rural industrialization and related processes of individualization of risk but come to rather different conclusions. Bryan Tilt's contribution highlights how processes of individualization of responsibility – typical of modernity and engineered and directed by the Communist Party-state – are central to villagers' experiences of industrial pollution. Similar to other articles on rural areas, he implicitly questions the typical focus on the urban middle classes as the holders of environmental consciousness and shows that villagers are also concerned about their environment. However, he also shows that the latter's ways of perceiving and dealing with risk are increasingly individualized. His case offers some grounds for optimism: villagers put pressure on environmental regulators to enforce pollution standards by exposing local polluters through the mainstream media. This resulted in the closure of one of the local industries. Tilt argues that, for factory workers who depend on the polluting industries for

their livelihood, individualization amounts to overlooking or minimizing environmental health risks. He suggests that the villagers' increased individualism in tackling risk requires that social scientists treat individuals as the analytical unit where development, environment and health intersect.

By contrast, Anna Lora-Wainwright's case highlights the negative implications of the individualization of risk. The effect is to leave the imbalances in power relations and distribution of benefits untouched at best, or to reinforce them at worst. Individualization also underpins the deep social divisions created by industrialization and upon which it relies in order to continue undisturbed. Lora-Wainwright shows that workers and villagers alike remain painfully aware of the potential dangers but feel powerless to oppose them and therefore opt for individualized strategies to protect their own bodies. Yet, individual villagers' efforts to mitigate pollution's effects on their own bodies have limited and debatable efficacy. The individualization of risk curtails the potential of collective action to demand a cleaner environment. In this context, villagers have become disempowered to the point that they have stopped regarding a decrease in pollution as possible. Their lack of confidence in their own ability to attribute illness to pollution and their weak anti-pollution activism are due not to ignorance, but to the local political economy and power relations. With this in mind, the article implies that the locus of research should not be individuals, but rather the tension between their wariness of pollution and their lack of faith in collective action to oppose it.

The importance of local social, political and economic contexts in shaping how villagers understand and respond to the effects of pollution is showcased in the article by Yanhua Deng and Guobin Yang. Citizens' success in ousting polluting factories may be taken prima facie as a sign of citizens' opposition to pollution as a whole and as a sign of their effectiveness as environmental guardians. However, Deng and Yang show that this is a misguided conclusion on two fronts. First, villagers succeeded in forcing the polluting industries out, but they did so on the basis of land-related claims rather than in opposition to pollution per se. Indeed, their previous efforts to stop anticipated pollution through anti-pollution claims failed. Second, they made no efforts to oppose the highly polluting cottage industry of plastic waste recycling because these workshops were owned and run by locals. Clearly, then, villagers did not oppose pollution as such, but rather opposed pollution from which they derived no direct benefits. Overall this article demonstrates that (1) the relationship between pollution and protest is not linear; (2) opposition may not be framed openly with relation to pollution, even when it results in its decrease; (3) the success of claims depends on such framing; and (4) the identity of the polluter is a crucial factor in determining whether pollution is opposed.

As a whole, these three articles present some food for thought about the extent to which villagers are aware of pollution, the extent to which they oppose it, and their potential capacity to demand and secure a cleaner environment. Tilt shows that villagers may be successful in halting pollution (for instance, when the media

is involved), but that they tend to minimize risk and tackle it on an individual basis. Lora-Wainwright's case offers less hope for the role of villagers in stopping pollution. It illustrates how the local social, political and economic context effectively convinced villagers that collective action against pollution was fruitless, and relegated action to individual strategies for decreasing exposure. Finally, Deng and Yang prove that villagers may be able to stop pollution, but they do not always want to do so. According to the post-materialist thesis, citizens care for the environment when their subsistence needs have been met. By contrast, these articles display the reverse process: as some residents gain (financially) from polluting practices, they do not oppose them. The overarching conclusion is that villagers have some agency in stopping pollution but that they may not always feel that they are adequately placed to do so; they do so strategically (by piggybacking on other grievances or protecting themselves individually), at potentially great cost, and not always successfully. Ultimately, even when citizens succeed in forcing polluters to close down, the polluters may simply move elsewhere, for instance where local governments may need the revenue more. Likewise, existing pollution or plans for new industries may only be stopped temporarily, resuming once the local population and media attention have relented.

Thomas Johnson's article explores these issues with reference to waste incineration in an urban educated middle-class context. It examines the blurred boundaries between personal or localized "not-in-my-backyard" (NIMBY) complaints and public interests forms of activism. Despite strategic shifts in campaigning, the potential and long-term sustainability of citizen participation is shown to be limited. Citizens gathered scientific knowledge on incineration and involved experts and ENGOs in their efforts, but they were not always successful in influencing decisions. Some residents embraced an active role in pursuing alternatives to incineration and became involved in waste sorting projects, but such participation was hard to sustain and was limited to a few residents. Ultimately, the lack of opportunities for effective networking between activists undermined the formation of a broader movement for policy change and constrained anti-incinerator campaigns to highly localized affairs. The fact that even the educated urban middle classes – considered the classic proponents of environmental campaigns – are limited in both their participatory potential and capacity to transcend localized responses suggests that the scope for an effective and sustainable trans-local environmental health movement remains seriously curtailed.

Largely concerned with the same social group – urban middle classes – Jakob Klein presents a rich empirical study of how Kunming residents respond to food-related environmental health threats through food shopping rather than by putting pressure on the state to improve regulation. The institutional emphasis on consumer responsibility intersects with an increasingly intensified, delocalized food supply system that has produced growing uncertainties about food and has reduced trust in existing regulatory systems. For Klein, concerns about the food

supply are indicative of wider ambivalence about modernization and the hazards it has produced. Care taken over food shopping may be seen as an attempt to mitigate the risks presented by industrial food production. Consumers have developed new ties of trust based on cultural understandings of food, seasonality and local cuisine. The economically disadvantaged, however, have more limited choices over what they consume. As the emphasis on consumer choice fails to challenge the presence of unsafe food per se, economic disparities become translated into uneven access to safe food.

In the final contribution, Guobin Yang turns to the virtual sphere to examine food safety issues, how they are covered by the mass media, and how such coverage is contested by netizens. He describes how netizens engage in a spectrum of counter-hegemonic practices whereby diffused dissent may escalate in the form of more vocal and direct protests, as was the case of Zhao Lianhai in the campaign against melamine tainted milk powder. These forms of dissent typically result in severe punishment. Yang shows that, ultimately, netizens are rather alone in being openly critical. Scientists and experts play a limited role in supporting citizens, although they are prominent in defending corporate interests. Likewise, NGOs, despite having become a vital force in many areas, only engage with food safety issues through consumer awareness campaigns, but they avoid any controversial questioning of the role of the state and corporations in regulation.

Scales of Responsibility and Action: From Individuals to Collective and Back

This collection describes responses to pollution which range from the relatively organized (Deng and Yang, Johnson, Yang) to cases where action is more sporadic, relatively absent or individualized rather than collective (Klein, Lora-Wainwright, Tilt). The scale of citizen action against environmental health threats has much to do with where the blame is placed, with levels of economic dependency on polluting industries, and with existing opportunity structures. These factors have a crucial impact on how problems are envisioned and how solutions are framed. Communities may fracture or become unified in the face of risks, depending on whom they hold responsible for curbing them, what their aims are, and what they think the outcomes of seeking particular forms of redress may be. Environmental health complaints serve as a lens to examine how and why citizens embrace collective action or focus on caring for themselves at the individual or family level. Each of these responses mobilizes different moral claims.

Two contributions describe citizens who opt to protect themselves and their families individually rather than through collective action. Tilt argues that individualized responses to pollution are very much encouraged by the state; indeed, they are central to its efforts to place responsibility onto individuals. For Lora-Wainwright, individual actions are a strategic last resort utilized by pollution victims who no longer feel they can effectively demand an end to pollution

and who regard the likelihood of successful collective action to be minimal. Klein shows that while individuals take on responsibility as consumers to buy safe food, they also resent weak state regulation in this sphere. Citizens try to protect themselves with varying degrees of success. Yet, opportunities for doing so are unevenly distributed. Overall, these articles trace a move towards individualized reactions that is at best ambivalent. Citizens attempt to reclaim a moral space by creating new networks of trust in food shopping, or by regarding individualized action as the only way to protect their health, but they are also aware of the limited effectiveness of their actions.

Where Tilt and Lora-Wainwright map a move towards individual action, Johnson's study of three anti-incinerator campaigns shows how complainants moved beyond localized NIMBY arguments by claiming to act patriotically and in the public interest. Here, morality and legitimacy are reclaimed by abandoning individualized and localized actions rather than by embracing them. While this allowed campaigners to deflect criticisms of selfishness and parochialism associated with NIMBYism, it presented them with a different challenge: the potential of confrontation with the state over models of waste disposal. Ultimately, the campaigners were pushed to localize their activities and focus on community waste sorting, which places responsibility on individuals, has limited effects and may be hard to sustain in the long term. Yang maps a parallel movement between non-confrontational individualized action and confrontational collective action in netizens' engagement with food safety. In a yo-yo-like movement, repression may crystallize diffused dissent into more open confrontation; but, vice versa, when confrontation is repressed, citizens resort back to diffused action. Whereas Klein's informants were concerned about the quality of food within their own everyday lives, Yang describes netizens who reject individual responsibility and hold the government accountable for food safety scandals. However, bloggers who overstep the boundaries of what is acceptable in Chinese cyberspace are often silenced and sometimes severely punished.

Not all communities scale down from collective action in the face of obstacles or political sensitivity. Deng and Yang show that if one type of collective action fails, citizens may embark on more collective action but package it differently. In their case, collective action could be sustained because the local community was relatively united against a shared enemy from outside the community. In contrast, villagers turned a blind eye to pollution caused by other villagers. As this shows, opposition to pollution depends heavily on how costs and benefits derived from it are distributed. Since development benefits the community directly, desire for it supersedes concerns with mitigating harm. Here, the two meanings of "dying for development" overlap for the same social group: they reap financial benefits at the same time as they suffer from its negative environmental health consequences.

However, more often than not the costs and benefits of development are unevenly shared. This raises vital questions about marginalization and social justice. Migrants in particular are excluded from the benefits of industrialization

(such as land and pollution fees, which are reserved for registered residents) while being a vital engine for local and national development. When, as is the case in several of the contributions, it falls upon individuals (rather than communities or institutions) to moderate risks, the unequal geographies of who strives for development and who falls sick from it become all the starker. The ability to circumvent risks and buy safe food is only available to those who can afford to do so. In portraying some of these contexts in-depth, these articles offer a window onto troubling patterns of inequality whereby not only incomes are uneven, but the ability to live in a clean environment and consume safe food are subject to the same lines of stratification. Contributors present diverse answers to the moral question of whom, or what, citizens hold responsible for reducing the harm caused by development.

Environment, Health and Citizens' Agency

The growing literature on collective action raises important points for the study of citizens' responses to pollution.[9] Kevin O'Brien and Lianjiang Li's influential work on "rightful resistance" has examined how citizens appropriate the central state regulations and rhetoric which endow them with the right to complain and protest against breaches of the law and failures in implementing policy.[10] Similarly, looking mostly at civic organizations (such as NGOs) and legal forms of redress (such as the "letters and visits" system), contributors to a volume edited by Peter Ho and Richard Edmonds present examples of "embedded activism," whereby civil society agents are allowed to be active, provided they do not undermine or directly confront the central government.[11] Both these concepts – rightful resistance and embedded activism – point to a space for citizen action which is limited by parameters and forms of rhetoric elaborated by the Chinese Party-state. They portray state–society dynamics which also apply to the field of environmental health.

Faced with the monumental challenge of measuring and assessing pollution, let alone governing it efficiently, the Ministry of Environmental Protection has taken measures to encourage public participation in order to deal with the limitations of top–down regulatory mechanisms and to help it tackle the implementation gap.[12] At the same time, by encouraging public participation in the service of the state, the state also reclaims and disciplines forms of activism which may otherwise challenge its legitimacy and justifies repressing confrontational demands in the interests of social stability. As Yang's article shows in the case of food safety scandals and the online responses to them, the state becomes repressive when critiques are aimed not at specific companies or

9 Cai 2010; Goldman and Perry 2002; Lee 2007; Li and O'Brien 2008; Perry and Goldman 2007.
10 O'Brien and Li 2006.
11 Ho and Edmonds 2008.
12 Johnson 2010.

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localities, but rather at the political system and development model themselves. In this context, avenues for meaningful and effective participation – actual mechanisms for citizens to obtain information, express their concerns and take part in decision-making processes – remain inadequate.[13] The results of participation are limited and uncertain at best. Citizens need to be skilled at reading when and where opportunities for participation may appear and must present their case strategically or risk facing repression.[14]

This collection shows that in the sphere of environmental health, concepts such as rightful resistance or embedded activism may be euphemistic in two senses. First, environmental health presents a particular potential for creating social instability because so many of the problems originate from China's development and modernization strategy. Tackling these problems may require systemic challenges which go well beyond rightful or embedded parameters, but making demands to do so results in repression. In some cases (see Yang), citizens take the risk and complain on this basis. The alternative is for citizens to revise their demands while continuing to feel that this is not an adequate or effective way to curb pollution. This is made particularly clear in Johnson's article. He shows that citizens' attempts to scale up their responses and question incineration as a whole are pushed back into specific localities. Conversely, when ENGOs become involved in these campaigns on the premise of public responsibility (rather than local opposition), their efforts are limited to waste reduction projects and only challenge incineration indirectly.

Second, and related because of the inherently politically sensitive nature of some of these problems and the economic stakes involved, citizens may stop believing that any change is possible and cease demanding a healthy environment, as Lora-Wainwright's piece demonstrates. Paradoxically, when they frame their grievances narrowly, these citizens may be accused of being selfish and parochial; yet, when they make broader accusations and demands (as in Yang and Johnson's articles) they are either repressed or forced to narrow them. In this context, citizens' responses are complex. They may discursively refuse individual responsibility for addressing environmental health risks and despise the local or central state and polluting firms for not doing more. Yet, as they have to live with the risks, they also do what they can as individuals and families to protect themselves, to recreate networks of trust or to benefit directly (financially) from polluting enterprises through employment and compensation.

As a whole, this collection sheds light on the limited potential of citizen action. Often, citizen participation is presented as a miracle cure for problems in implementing environmental protection effectively. Of course, citizens can play an important role in demanding more transparency, accountability and fairness, but their influence is constrained. Socio-political contexts intersect with the

13 Zhang and Zhong 2010; van Rooij 2010.
14 Mertha 2010.

development imperative to shape citizens' agency in diverse and contingent ways. This collection portrays a range of complex positions that citizens inhabit in relation to pollution and how they evaluate the costs and benefits of the developments it is often coupled with. It outlines the array of types of action (or lack thereof) local populations take to stop, limit or avoid pollution at different scales (individual, family, village, township, city, province, national, transnational and online). In doing so, it illustrates the role of citizens in overcoming challenges to environmental enforcement, leaving these challenges unchanged or crystallizing them even further. It also raises important questions for comparative environmental health governance by mapping out an uneven terrain in which citizens are concerned with environmental health threats, are diversely positioned to overcome them and embark upon varied pathways of action to protect themselves individually, as a family or as a community.

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