

Governance, gender and the appropriation of natural resources: a case study of ‘left-behind’ women’s collective action in China

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Abstract: China’s rapid urbanization has created opportunities for many people – predominantly men - to migrate from rural to urban areas in search of work, leaving their farms and families. This has resulted in many villages being dominated by a large population of ‘left-behind’ women. This situation has required these women not only to take responsibility for their own domestic and farming duties, but also increasingly to get involved in local governance, particularly in trying to prevent the appropriation of collective natural resources. Based on a case study in a typical village in central China, this paper explores an example of women’s collective action to prevent the over-exploitation of collectively owned sand resources. As the case study illustrates, although previously denied the opportunity to participate in local politics and governance, the ‘left behind’ women have seized the initiative and have demonstrated the capacity to impose their will, through a mix of toughness, flexibility and endurance. As a consequence, the study demonstrates that, when empowered to act, the left-behind women are as capable as anyone of defending their community’s resources. This new approach to collective action over natural resource management therefore suggests that rural-urban migration has not been a wholly negative phenomenon for those left behind. On the contrary, it has created a space in which those who were previously denied access to local politics can assert not only their right to govern, but also their aptitude for the types of action that are required to defend collectively-owned resources.

Keywords: Left-behind Women; Collective Action; Rural Natural Resource; Empowerment; China

Introduction

Rapid economic development and urbanization in China has resulted in approximately 300 million people – mainly men - migrating from rural to urban areas (National Bureau of Statistics of People’s Republic of China 2015), leaving behind as many as 50 million

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women, as well as elderly parents and children (Wu and Ye, 2016). Many of these ‘left behind’ women have had to take over the family farm, in addition to their traditional roles of caring for their parents and children (Ye, et al, 2013, 2016; Jacka, 2014; Lee, 2014; Wu and Ye, 2016). However, few of them have yet managed to take over ‘male’ roles outside the home, particularly with respect to joining village committees and participating in the governance and management of the village’s natural resources. As a result, there is growing concern that the gap left in village life by the migrant men is allowing both land and minerals to be exploited for the personal gain of powerful individuals rather than being managed for the good of all the village residents (Kostka and Mol, 2013; Mao and Zhang, 2018).

Attempts have been made by the Beijing Government to widen local participation in resource management as a means of improving environmental governance (Kostka and Mol, 2013; Johnson, 2014; Mao and Zhang, 2018). However, few village committees have responded, and concerns are growing that, without the migrant men to oversee them, many local officials are ‘unruly’ (Johnson, 2014: p. 241) and unable, or unwilling, to prevent the degradation of their village’s environment and common pool resources. In addressing this situation, Beijing has begun to centralize environmental policy and governance, with strategic decision-making increasingly placed in the hands of ‘... capable and uncorrupt elites’ (Mao and Zhang, 2018: p. 218). Not only has this marginalized local officials and village committees, but it has also relegated the scope of local participation to minor issues of implementation, which has further excluded the left behind women from contributing to the management of common pool resources.

There is no doubt that the literature on left behind women has tended to portray them as powerless and vulnerable (Wu and Ye, 2016). However, some studies do accord women considerable agency (Jacka, 2014), while there are accounts of women taking collective action to challenge local officials by asserting their agency as full and active members of their villages (Zhou, et al, 2002; Zheng and Xie 2004; Woodman, 2011; Meng, 2014; Ye, et al, 2014; Jacka, 2014). As Woodman (2011: p. 185) has observed, these collective actions have tended to concentrate on issues of social justice, reflecting the needs of these women to establish their social legitimacy. There are also examples beyond China of the agency of marginalised women in taking action in pursuit of social justice with respect to land and other natural resources (Baden and Pionetti, 2011; Oxfam, 2013; Baden, 2013; Elmhirst, et al, 2015; Morgan, 2017). However, little is known about the impact that such actions have had – and may in the future have - on the governance and management of common pool resources:

Academic research on left-behind women has mainly concentrated on the impacts of labour migration. The tone of these studies is limited to harrowing descriptions of the lifestyles of left-behind people or simplistic descriptions of how rural migration has affected them ..., and this literature is still little known outside China. ... left-behind women are still seen as secondary ... (Ye, et al, 2016: p. 911)

This paper seeks to address this knowledge gap, by posing the following research question: ‘what is the relationship between environmental governance, gender and the sustainable management of common pool resources in China?’ This is a fundamentally important question, for China and for the rest of the world, given that there is currently limited understanding of the governance principles suitable for sustainable natural resource management (Lockwood, et al, 2010), and even less understanding of the role that gender plays in this relationship (Elmhirst, et al, 2015). In addressing this question, the paper will first review current literature on environmental governance and resource

management, before considering the role of gender and the ways in which women have intervened in resource management decisions, in China and elsewhere. The findings of this work will be used to frame a single case study that analyses one example of women's collective action with respect to the sustainable management of natural resources in a 'hollowed out' village in central China. The findings indicate that, while yet to establish a new form of natural resource governance, the women have exposed how poor environmental governance can be when democratic processes are ignored, and that sustainable natural resource management is unlikely to be achieved without making gender a core consideration in environmental governance. This work therefore contributes new knowledge to current debates on the governance and management of common pool natural resources. While specifically addressing the situation in China, the paper resonates with similar issues elsewhere in Asia, and in Africa, and has relevance to broader global debates about environmental governance and the management of natural resources.

Environmental Governance and the Sustainable Management of Natural Resources

As Lockwood, et al, observe:

Sustainable natural resource use and management make novel demands on governance arrangements ... [which are] characterized by complexity and contestation originating from multiple problem causes, divergent problem perspectives and solution strategies, and fragmented institutional settings. (Lockwood, et al, 2010: p. 986)

In this context, they understand governance as an institutional process that determines how power over, and responsibility for, natural resources is exercised, and how decisions are taken. Conventionally, such institutions have been located within either bureaucratic regimes, as in China, or within the market-based processes typically found in Western democracies. Costanza and Liu (2014) have questioned the effectiveness of the Chinese model, while others argue that conventional forms of governance – particularly markets, but also bureaucracies - tend to over-simplify complex issues of environmental management and protection and thus reinforce traditional patriarchal power relationships, to the continuing disadvantage of women and other marginalised people (Federici, 2011; Elmhirst, et al, 2015). This is very much the case with respect to the patriarchy that continues to dominate the village committees that provide the basic institutional form through which natural resources are controlled in China (Iossifies, 1986; Xie, 2016).

In her seminal work on managing the commons, Ostrom (1990) argued that there is no one universally superior form of institutional organization. Rather, there are design principles associated with good governance that transcend specific organizational forms. These principles include ensuring that there are clear boundaries and rules relating to use of common resources, collective governance, effective monitoring of activity and clear and appropriate sanctions for non-compliance. While most of these principles are not overly controversial, the requirement for collective governance challenges conventional approaches to natural resource management in China, by suggesting that good decision making must involve state officials, civil society organizations and private citizens (Howlett and Rayner, 2006). Similarly, in their more recent work on the governance of natural resources, Lockwood, et al (2010) have advocated the need for social inclusiveness, again stressing the importance of governance extending to include all those

who are affected by decisions about the allocation and use of common pool natural resources. The growing popularity of inclusive approaches to institutional organization is due to their perceived legitimacy and also to a growing belief that complex distributive issues are better addressed through collaborative deliberation and social learning (Irvine, et al, 2016). This is particularly the case with respect to the sustainable use of common pool natural resources, where concepts such as social equity, inclusivity and distributional justice are highly pertinent (Miller, et al, 2014; Warlenius, et al, 2015; Heindl and Kanschik, 2016).

Following decades of economic growth, China now faces the challenge of improving its environment and managing its natural resources in more sustainable ways. Empirically, this has largely been addressed through top-down regulation and policy allied to bottom-up management at the local level, mainly through village committees (Shen and Steuer, 2017). However, as Mao and Zhang (2018) have observed, this has not been without conflict, often because limited state capacity at the local level has allowed local officials to prioritize short-term political expediencies – and relationships - over environmental protection and the sustainable management of natural resources. In addressing this, China's Ministry of Environmental Protection first introduced a measure of public participation, termed 'extended governance,' to enlist the public in encouraging local officials to follow top-down environmental policy, and more recently introduced further controls on the power of local officials and committees.

While ostensibly allowing more opportunities for citizens – including women – to participate in the governance of natural resources, doubts remain about the extent to

which local officials will respond to this form of rule-based governance, given the complexities of state administration and their continuing allegiance to Guanxi relationships with powerful local people (Lau and Young, 2013; Du, et al, forthcoming). This means that many villages continue to face serious governance issues associated with the transfer of rights over land and natural resources, such as sand and gravel, from the community to private individuals and companies. Although there is limited information about the extent of these practices, it is clear that powerful local men have used their relational influence – and the declining power of village committees - to forcibly occupy and control natural resources that belong to the village collectively, resulting in multiple social injustices and deprivations (Woodman, 2011; Fischer and Qaim, 2012; Meinzen-Dick et al., 2004). As Federici (2011) has observed, with reference to Africa, this type of situation underlines the extent to which patriarchy and its resultant gender discrimination continues to reside in natural resource commons, with left behind women having few, if any, formal channels through which to challenge these actions.

Gender dimensions in the governance of common pool natural resources

It is not so much that women, through their relative absence from the public arena, are responsible for the exploitation of natural resources, but more that the sustainable long-term management of such resources depends at least in part on broad community representation in decision-making. For Sargeson and Song (2010), this connects with questions about who qualifies as a member of the village and thus has a say in how the common pool resources are used. While the qualification for village membership may have shifted over the last century, from patrilineality to residential (hukou) rights (Chan

and Zhang, 2009), the position of left behind women remains fragile, particularly in terms of the relative autonomy that they enjoy when their husbands have migrated to the cities:

... in villages across China, government bodies are dominated by men and by patriarchal interests. Women are very rarely elected to positions of leadership in village government because it is assumed that their “low quality” makes them unsuitable for the task, they are too busy with their “inside” work, and in any case, “good” women devote their energy to caring for their family and do not interact with people outside the family, especially men. (Jacka, 2014: p. 197)

In terms of traditional understandings about the division of labour in rural China, it is common in farming families for the man to be responsible for work and social interactions outside the home, supported by the woman who is responsible for housework and raising the children (Mu and Walle, 2011). This suggests that when the men leaves to work elsewhere, the women who remain are unfamiliar with community-related affairs and lack the knowledge and skills to replace the men. Accordingly, the conventional wisdom is that they face high opportunity costs if they engage in rural public resource management (Nguyen and Locke, 2014). Yet, as Croll (1978) has argued, the reality in many villages is that women have always been active outside their homes, particularly in forming ‘solidarity groups’ through which they can support each other:

Although the domestic and political spheres were highly differentiated in rural China and authority was hierarchical and largely in the hands of the male members of the domestic group, women might establish relationships outside their own family and in the women’s community. In village affairs, the women’s community of loose and overlapping groups of women was at its most visible when women of neighbouring peasant households gathered together to wash clothes, perform other domestic chores and talk and exchange information. (Croll, 1978: p.141).

While these solidarity groups might have been primarily related to personal and domestic matters, their existence was recognition that women have the agency, social space and capacity to self-organize (Jacka, 2014) – although largely within the relational boundaries established and maintained by their husbands (Lau and Young, 2013; Ye, et al, 2013). In more recent work, Ye, et al (2016: p. 913) have argued that a minority of left behind women have begun to use their organizational skills to participate in the public affairs of their village, thus providing them with ‘... a larger public space in which to perform.’ As Jacka (2014: p. 198) observes, ‘... this might enable individual women to work with others, not just to help themselves, but also to address gender inequalities, for example in land usage-rights, and thereby improve gender equality and the well-being of women generally.’ One recent example of this type of action in China involved a group of women seeking social justice when a large amount of village land was taken over by a commercial farmer without adequate compensation for those living in poverty (Woodman, 2011). While trying to halt corruption, the women sought to implement a new form of deliberative resource governance, informed by solidarity and a fair share for all, which linked social and economic rights for members of the village.

Women in many other countries have similarly had to take collective action in order to make their voices heard in decisions over the allocation of natural resources (Baden and Pionetti, 2011; Manzanera-Ruiz and Lizarraga, 2015; Pandolfelli et al., 2008). For example, Morgan (2017) noted how protest enabled women in Indonesia, who had at first opposed permits for the expansion of palm oil plantations, to expand their activities to more active participation in local resource governance. Similarly, Elmhirst, et al (2015: p.4) have noted how women’s limited engagement in public decision making continues to ensure that the impacts of resource allocation decisions remain differentiated by

gender. The situation regarding left-behind women is no different, in that their actions are against oppressive natural resource governance regimes that subjugate them according to both class and gender – even when they become responsible for resources in their own right, as farmers. This resonates with Federici's (2011: p. 42) argument, that natural resources cannot be understood as unproblematic entities, but rather must be viewed as '... terrains of conflict ...' in which pre-existing power relationships are maintained. In this way, the left-behind women can become farmers and can make decisions about their own land, but they remain somehow 'unsuited' to participation in wider governance structures. For Ye, et al (2013: p. 1129), this is because agriculture is already marginalised and of little political consequence in village life.

The place of left-behind women in China is thus an interesting case in terms of broader work on the role of gender in natural resource governance. On the one hand, many of these women have rights to land in their villages (Zhan and Andreas, 2015), even if they themselves move away, and traditionally they have enjoyed broadly equal political status with men (Croll, 1978). The out-migration of their husbands has certainly given them more authority as farmers, as well as additional income and independence (Ullah, 2013). However, many villagers view these women as little more than labourers working in a largely discredited industry (Ye, et al, 2013) meaning that, in common with women in many countries, they continue to lack access to the local political forums in which collective decisions are made. As such, gender-based discrimination remains central to the governance of natural resources, with women largely excluded from participating when major land use or other such decisions are made.

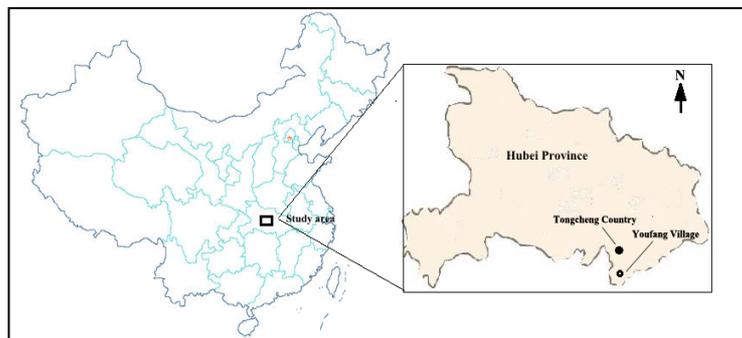
This gender-based marginalization is further exacerbated by the social stigma associated with citizens – especially women – seeking to question or challenge village committee decisions. Indeed, as Du, et al (forthcoming) argue, many villagers would rather put up with hardships caused by the loss of access to natural resources than challenge the authorities and the very fabric of rural life. Thus, any form of collective action by women is very much an action against men (the local leaders and decision-makers), against the gendered identity of natural resources and against their own community culture and values. Yet, as Woodman (2011), Jacka (2014) and others have argued, women – especially those left behind to fend for themselves – increasingly understand that they have little option but to insist on their right to participate in the governance of common pool natural resources. By way of example, we have sought to analyse one village community in China where a group of women chose to protest against the proposed exploitation of communally-owned sand resources.

Data generation and study area

Hubei Province has the largest outflow of migrants, who mainly head to the eastern coastal cities of China. In 2013 alone, around 20% of the provincial population left the province to find work in cities. The site of the research, Youfang Village in the south of Hubei Province (see Figure 1), is typical of the ‘hollowed-out’ villages that suffer from out migration. There are just over 4,000 villagers separated into 28 village groups. The villagers have a low annual income, which has led to about half of the population migrating to find employment. As is usually the case in such villages, the majority of those left behind are women, the elderly, and children. Fieldwork was conducted with

one of the 28 village groups (Group One), which has suffered comparatively greater migration than the others, with 77 of the 119 villagers now having migrated. Of those remaining, there 16 women and 5 men of working age, 10 elderly people and 11 children. The 16 women are typical of those left behind, in bearing responsibility for farming and care for the young and old.

Figure 1. Location of Youfang Village in Hubei Province, China



Group One is located near a river with rich communally-owned sand resources that have never been used; the river is also the source of irrigation for Group One's farm land. On December 1, 2008, the owner of a local mineral company signed an agreement with the villagers in Group One to obtain the rights to extract the sand for 4 years, at a total price of 11,900 yuan (less than \$2,000). It was regarded by the members of Group One as a good deal because it provided money for road improvements. However, too much sand was extracted, which lowered the water table and caused serious damage to the farmland and houses adjacent to the river. In addition, the (mainly women) farmers had to deepen their wells by approximately one metre per year, to prevent them from drying up. Clear-cutting bamboo and other trees adjacent to the river, to aid the extraction of the sand, also destroyed the flood defences. Since then, flood events have occurred more frequently and violently, damaging the villagers' businesses and health. As a result, most of the women

from Group One decided to take action against the mineral company to prevent it from obtaining a new extraction licence in December 2012, when the original contract expired.

The data for this paper are drawn from a qualitative study that took place in July 2015. The researchers conducted three group discussions with the women, some of their parents, and some of the few remaining men. All the discussion groups took place in the evenings, after work, and focussed on two questions: *how did the protest happen?* and *what do you think of the conflict?* Fifteen in-depth semi-structured interviews were also conducted, in the period April to July 2015. The interviewees were drawn from village cadres (Z), mineral operators (Owner L and Boss C), village group leaders (F and L), and some of the 16 women. The interview questions focussed on the interviewee's attitude to the extraction of sand and to the behaviour of the women when undertaking their protest. Site visits were undertaken and additional interviews were conducted in February 2016, when many of the migrant men returned home to celebrate the Spring Festival. Finally, the study also draws on information from archived papers, including official documents, contract agreements, receipts, letters of appeal, civil litigation, and other similar texts that the researchers collected.

The action

Collective silence on the conflict of overused river-sand resources

In reflecting on the original decision to grant the licence to the mineral extractor, many of those in Group One admit that, at the time, they saw it as an opportunity to raise capital. Indeed, it was widely described as a 'win-win' agreement:

At that time, they (Group One members), had big problems with raising funds for village road construction, and welcomed my proposal greatly. That evening, they all voted for me unanimously, and praised me for providing timely support. (Owner L, male, 52 years old)

It should be noted that Owner L's claim to have unanimous support reflected only that of the village committee, which comprised only men. Most of the women did not get involved initially because they regarded the sand resource to be a matter for the group leader and village cadres rather than them. Indeed, several stated that it was the business of the men and not something that women should be involved with. Indeed, some of them described being in a 'decision-making panic' in which they felt unable to act or speak out. This was despite knowing that if they did not act, no-one would. Thus, when faced with dry wells and damage to their houses, they felt that it was their role to remain tolerant and silent, as explained by W:

We are just women who have never been outside the village, compared to Owner L, who is well acquainted with village officials and has a wealth of business experience How can we fight with those people (Owner L) We chose to be tolerant at that time mainly because of fear (W in Group One, female, 52 years old)

This 'decision-making panic' was understood by many of the women to be a condition of their traditional dependence on, and subordination to, men. Indeed, few of the women had previously participated in decisions about their own family farms, let alone decisions about the governance and management of the village's natural resources. Therefore, the women lacked knowledge of the village's common pool resources, did not realize the economic value of the sand, and thus did not take effective measures to protect it. Given the situation, most of the women thought that, although they would get relatively little money from the deal, it was a waste just to leave the sand where it was, so they might as well let Owner L extract it, as explained by woman M:

Sand resources belong to the public. Those living near to the river (whose houses are suffering from cracks) have not complained yet, and I do not see the profit [in doing so]. I have no spare time or energy, as I have to take care of my sick parents....Even if I do not (participate), the others will do it. (L in Group One, female, 47 years old).

With the benefit of hindsight many people could see that the community had suffered a considerable loss, of both public and household interests. Yet there is no record of any villagers trying to stop the extraction, or protest against it, even when the agreement expired in December 2012. One year later, one of the former group leaders said that he found the situation deteriorating out of control and tried to bring the issue to the Village Committee Meeting, but without response. He also tried to organize household meetings to protest, but no one supported him, which he blamed on the women failing to carry out their husbands' decisions:

I deliberately chose several days during the Spring Festival for group meetings. Many migrant villagers (men) were aware of the suffering and agreed to take action... However, after the Spring Festival they all left, and the hostess (left-behind woman) gave the lame excuse that she did not care what her husband agreed to. Nothing was changed. (F, male, 59 years old, former group leader)

The women themselves felt in a difficult position in which they had largely been excluded from the original decisions, were still excluded from the political life of the village, but were expected to respond to the demands of the men to take action to reverse the poor decisions that had previously been made. For many of the women this was too much: they had enough to do already, on degraded land, without taking on battles that ought to be fought by the men.

From silence to protest

On May 25, 2014, another (male) member of the village elite (Boss C) got involved. He heard that the extraction agreement had expired and consulted with F, the former group leader, to express his willingness to take over sand extraction at a much higher price. F

tried to negotiate a better price with Owner L, but without success. Shortly afterwards, Boss C drew up his own sand extraction contract, including a provision that every villager would receive 800 *yuan*, and the person who signed the contract for his or her household would receive an additional payment of 100 *yuan*. Most of the left-behind women running the households agreed and signed the agreement, assuming that Boss C would take over the sand extraction.

However, Owner L claimed still to have the right to extract the sand, despite a failure to renew the initial contract and Boss C's counter claim, and a bitter argument started between them, culminating in violence and a short prison sentence for Boss C. During these events it also became clear that the Village Leader had taken bribes from Owner L and thus did not support Boss C. Having failed to substantiate his claim and having lost the support of the village committee, Boss C encouraged the women to take collective action to get him on site, reminding them of the money that they would receive. As he stated:

In the process of contracting, he (the original contractor, Owner L) was very arbitrary, blocking me several timesHe threatened me with ... gangs, and put me in prison by framing me and bribing the police, so I struck back I also came up with many ideas and provided various resources to help the villagers protest. (Boss C, male, 48 years old)

There is no record of how the women made the decision to get involved, although it is likely to have been through informal meetings and discussions in the village. What seems to have been influential is the emergence of a credible new (female) leader (X) who was able to challenge the village committee and depose the current – discredited – leader. While not feeling that it was their place to take action, many of the women thought that their original group leader, F, was not capable of leading the fight against

the mineral company. Indeed, they felt that he might undermine their position due to his weak economic position, limited relationship networks, and poor resources, in contrast to owner L. In her interview, Z talked about F with contempt:

He (head of group, F) has been a farmer for many years and should not have been selected to manage our group. He earns less money than my husband does. Why should I follow his words? (Z in Group One, female, 46 years old)

One of the key changes between the women's initial response and their subsequent mobilisation was the interest of Boss C, who used what he termed 'selective incentives' to stimulate the women's wish and power to fight. These included providing promises of sufficient money to meet the women's economic demands and interests. This reflects the key role of direct economic incentives in stimulating the women's early motivation to engage in resistance, but on its own it does not explain how the action started. This was much more associated with the legitimisation that the women experienced when Boss C wanted to work with them and encourage them to take action. To this extent it is apparent that the women's action was catalysed by a powerful man who has been able to 'gift' some of his social capital to them, as explained by the new group leader, X:

All the women in our group may be 'snobbish' (shi li yan). At first, we did not worry about this matter and thought it was none of other people's business. However, if not for his (Boss C) support, including money, social capital and other important information.... I am afraid it [would have remained] a mess ... (X, head of Group One, female, 38 years old)

In deciding to support X the women effectively moved out of the shadows and into the political life of the village. Under the leadership of X, they then urged the Village

Committee to terminate the original agreement with Owner L. As Liu and Ravenscroft (2016) have argued, for collective action to be initiated there has to be a shared and legitimate understanding of what might happen if action is not taken. This was very much the case, with the women being wary of both the environmental hazards and the potential financial loss if the mineral company pulled out. The women used the words resentment (*yuan*) and anger (*qi*) to describe their emotions. A group of at least ten women felt so strongly and desperately that they took direct action to damage the extraction equipment. This prompted Owner L to threaten that if it happened again he would kill them. This made the women feel that their lives were in danger and that his words had ‘trampled on their dignity.’ This legitimised the collective action, for these and other women.

Apart from the direct action, the women also sought support from higher levels of government, by protesting to the County Petition Office and the Water Conservancy Bureau. Various strategies were used, including vigils and demonstrations inside and outside the offices, often including the elderly and young children to underline the intergenerational impact of the threat. While the purpose of these protests was to force government to intervene, the tactics were very much to disrupt government routines and embarrass officials, particular in making them feel responsible for the plight of the young and old members of the village:

On the day of [the] petition, I took the lead in ‘flouncing about like a mad woman’, crying, and making trouble in front of so many officials, such as threatening to jump from the county committee building, pulling the clothes of officials one woman also brought her grandsons to the office. It was a real mess (for them), with a group of children crying and making trouble.... (I didn’t want to do this, but) Otherwise, I do not know how many times we would have had to petition to make them give [us] a response... (S in Group One, female, 46 years old)

The tactics seem to have paid off, because the officials of the Water Conservancy Bureau eventually decided to investigate the women's claims in the hope of resolving the conflict. However, the investigation did not solve any problems, with many of the women believing that it had been a delaying strategy while Owner L continued sand extraction as usual. This belief was fuelled by rumours that both the Water Conservancy Bureau and the Village Committee were deeply involved with Owner L's sand extraction business, as shareholders. This further united the women, who then decided to take legal action by suing Owner L in the County Court. At first, they received financial support from Boss C, which included paying for lawyers. However, the County Court rejected the women's claim, on 31 July 2014, asserting that the case was beyond their jurisdiction. This was because natural resources are owned by the state and there was no suggestion that this ownership was being challenged. Rather, the issues raised by the women were about the governance of the resources, which rested on the power and competence of the village committee.

This provoked Boss C to quit and withdraw his support for the women, while Owner L responded by intensifying the extraction operation and threatening to sue the women for loss of earnings. The withdrawal of Boss C provoked both resentment and anger in the women when they realized that he had sought to maximize his own interests and had treated them as mere tools to be used. Worse, the women felt Owner L was more insulting to them once they had no help from Boss C. According to X:

His behaviour has become more rampant and the sand resources will decline further.... what [does] that mean? It means that our women are weaker than Owner L when there is no help from the outside world, and we

should take more risks in the future—[it is] not just [that] the well [will be] dry[but the river may] even break the levees. (Village Leader X)

However, the women were no longer in awe of Owner L. Indeed, the situation inspired them to continue the fight – in the knowledge that their homes and futures were increasingly at stake. Without backing from Boss C, the next stage of litigation was financed by each household donating 50 *yuan* to hire a lawyer for the Appeal Court. Rather than being about ownership, the women’s challenge was now firmly about the poor governance of the resources caused by the fraudulent conduct of the village leader and committee, and the officials from the Water Conservancy Bureau. While this was considered to be a legitimate case, their appeal was rejected on technical grounds. Undeterred, they then referred the conduct of the officials to a review body:

Since the sand resources are state-owned, now we pay more attention to the issue of collusion between officials and businessmen rather than sand mining. So on 27 October 2014 we reported to the County Commission for Discipline Inspection and asked them to investigate the illegal sand mining that the Water Conservancy Bureau and the Village Committee had issued. (C in Group One, female, 45 years old)

The County Commission for Discipline Inspection decided, in March 2015, to review the case, during which time Owner L was required to suspend sand extraction. As X, the Village Leader recalled, by this time they had become much more adept at politics:

We were told by others working in the city that the Central Inspection Group was coming to our County and we decided to seize this opportunity. We prepared many materials, went to visit the Inspection Group individually, then got together, and handed over the complaint paper. Finally, we got a temporary victory. (X, head of Group One, female, 38 years old)

The outcome of the protest

In taking action, the women of Youfang Village understood that they were challenging the cultural norms of rural China, in which their participation in collective affairs was limited compared with men's. They understood that the cultural status quo demanded that they are more tolerant than the men and that they do not to look for trouble but instead trust that – in this case – the village's natural resources will be used in the best interests of all the villagers. This created multiple difficulties for them in the early stages of the protest, in having to challenge the cultural norms while at the same time working out how to organise collective action. This meant that many women remained silent until it was clear that the protest was legitimated by others – principally Boss C. However, once they had overcome the initial constraints, the women found that they could self-organize and that they could form a powerful group with formidable internal bonds and a strong fighting spirit. They would never give up before achieving the goal, while on the opposite side, the much more powerful man, Boss C, accepted his failure easily when he rationally considered the future chance of winning. An older person in Group 1 shared what she saw and heard:

Because of the unsuccessful lawsuit, Woman B complained that their long struggle finally resulted in nothing but a lawsuit failure. Group head X was so angry, and complained to the other women that she also had made great efforts to protect the embankment to avoid it bursting in the future ... Later, being mollified by other women, woman B cleared up her complaints and the women's group become more united. (H, Group 1, female. 63 years old)

This reflection indicates the flexibility of the women in understanding the situation and making the best of it. It also reflects the ways in which the women became accustomed to working collectively in the public sphere. Indeed, many women spoke of recognising

that not only could they participate in the political life of the village, but also that they could be effective in their participation. As a result, their willingness to engage in the public sphere grew, in areas such as empowerment, expressing their interests, and fighting for their rights. This suggests that a significant change took place, from deference and non-participation at the beginning of the action, to the initial expression of their interests as the protest mounted, to more strategic tactics at the end. For some women at least this was not a surprise – they knew that they could challenge men in the public realm – but for the village community itself it was a new phenomenon that had previously been neglected or at least underestimated.

It was widely recognised at the start of the action that, because of their absence from ‘resistance’ or public events, few of the women had the experience and ability to deal with natural resource conflicts; they therefore appeared weaker than men in the public sphere. However, once the resistance began, the women proved to be flexible, and learnt to improve themselves through daily events, strengthen their ability to engineer themselves into formerly male spaces that contain multiple risks for women participants, and finally to become sufficiently strong to control matters by themselves. Through this process, the women learnt many action strategies and accumulated much resistance experience. As their strategies became increasingly professional and diversified, they became more confident and maintained a watch for another opportunity to fight, even after the initial failure of their action. When asked what had changed in their ability to participate in protest in her own village, one of the women explained:

I was afraid of him (Owner L) for his power at the beginning and worried about my safety. Now, I am not so afraid after several encounters with him and the things I have experienced - cutting ropes; violent threats; getting in touch with the police, county officials, and lawyers ... If I were injured, I would continue fighting to the end. (Woman Q, 43 years old)

One of the key outcomes identified by the women was the establishment of broader horizons and greater gender equality in awareness of the world outside their families, marriages and village. This took many forms, but included a heightened awareness of the economic and environmental values of collectively-owned natural resources. The women also gained a much clearer understanding of the problems of exploiting resources, as well as the ways in which regulations could be used to manage the resources in more sustainable ways. They gradually learned to connect the natural resources with rural development:

The [right to exploit] the sand deposits should not have been sold. We have to bear great losses ... for such little money. We are going to do it by ourselves if possible, so that we don't need to work outside our village. (X, head of Group One, female, 38 years old)

As this observation underlines, gender is at the core of the governance of natural resources: following the narrow financial perspective of the men had exposed the village to 'great losses' that will be borne by those left behind – predominantly women. As X also observes, these women will endeavour to ensure that this does not happen again. Consequently, it will become more difficult for the village elite (still predominantly men) to capture the common opportunities and benefits of the village's natural resources that should be available to all. In this sense, the protest has greatly enhanced the women's right to express their voice and have the opportunity to engage in public affairs. They have recognized their ability to make a difference to the men's groups and the village, to express their voices in public to the community, and to reduce the likelihood of public resource conflicts in the future.

Conclusion: the influence of women's collective action on natural resource management

Before the urbanization of China, and in the absence of a formal governmental structure at the local level, rural public goods were often provided collectively. Management of these public goods was reliant on voluntary participation by local people (men) and a strong community-based control mechanism predicated on equality of access for all (see Fujiie, et al, 2005). This was most notably the case for agricultural lands, water, and forests (Liu et al., 2016; McCarthy and Kilic, 2015; Liu and Ravenscroft, 2016). In the context of rapid urbanization, there have been many changes to traditional community mechanisms. The greater utilization – or exploitation - of collective natural resources is prominent among these changes in rural areas. The widespread rural migration to urban areas, mainly by young men, led to the dismantling of many traditional community mechanisms and, with them, many of the customary ways of managing natural resources. This vacuum in governance has been widely – often corruptly - exploited, with natural resources variously brought under private control, overused, or abandoned, with little supervision from the government or the community.

This was very much the case in Youfang Village, with a tragedy of the commons (in Hardin's 2009 terms) occurring as a result of the over-exploitation of common pool resources overseen by 'unruly' local officials, absent men and, initially at least, a remote elite. Yet, as Ostrom et al have observed, such tragedies can be brought under control through the development of suitable institutional arrangements:

Although tragedies have undoubtedly occurred, it is also obvious that for thousands of years people have self-organized to manage common-pool resources, and users often do devise long-term, sustainable institutions for governing these resources (Ostrom, et al, 1999: p.278)

This is very much the position in Youfang Village, at least in as much as the exploitation has been curbed. As yet, the collective action that achieved this has not fostered a sustainable institution for the governance of the sand and other natural resources. However, the action has challenged the gender presumptions inherent in the current approach to governance, giving space for new people and new thinking to develop suitable governance – especially about the ways in which the whole community can be involved in decisions about the use of common pool natural resources. What the case of Youfang Village also indicates is that the collective action that was undertaken by the women was consistent with many similar self-organised collective actions that have been undertaken in many parts of the world (van Zommeren, et al, 2008). In this case the women perceived there to be an injustice, in terms of the way in which the sand was extracted and the way in which the powerful men assumed that the women would not object. The subsequent actions of the men (Owner L, Boss C and many of the migrant men) confirmed to the women that their action was a legitimate response to the injustice. Through this combination of injustice and efficacy, the women began to develop a new collective social identity in their own right. This was as villagers who are active in the public and political life of the village and who are not afraid to stand up for their beliefs and rights, despite living in a culture in which they are expected to remain at home and defer to men.

What characterises all these situations is a lack of suitable institutional governance

structures allied to unsuitable conditions for new collective action to emerge (see Ostrom, et al, 1999). However, as in other parts of the world, the emergence of the women's action has changed this, and may provide a new approach to community and natural resource governance in rural China. At the core of this new approach are women who self-identify as empowered, capable and resourceful community members who have a major stake in the future social, environmental and financial health of their community. By organizing around the allocation and control of natural resources in this way, the value of collective action to solve a common problem is maximized, which undoubtedly changes the perceptions of women's roles within the community, as a local worker explained:

Those women and my wife look very docile. I've never thought they could make 'trouble' (naoshi). Although finally we haven't got any compensation or clear answer, at least we have saved the sand resources. (H, peasant worker in Group One, male, 47 years old)

It also provides a new approach to rural community governance in the context of rapid urbanization. Our research into the recent hollowing-out of the rural population in China demonstrates that this process has prompted women to become involved in women-only collective action. Left-behind women had a significant influence on their husbands who work outside the village, forced local authorities to pay more attention to them, and challenged the gender perceptions that placed them at the margin of the benefits of village governance. This action may help to break down gender stereotypes and the historical perception that women's status is at the margins of community management. The increasing absence of men from village community governance has created weak governance. Those left behind – predominantly women - are required urgently to take up the functions of decision-making and governance. This has created the opportunity for

women to express their demands, break down gender roles, and take part in village governance as a remedial mechanism as well as a new path. One village officer shared his perception of community governance and women's participation in the following way:

This event is beyond our expectation, and women in this group are stubborn, which has really refreshed my understanding.... it seems that we should give [them] more chances to engage in our community in the future. (Z, the village secretary, male, 58 years old)

Although women were traditionally excluded from public activities and marginalized, it does not mean that they have no motivation to protest nor that they cannot take collective action. As this research has shown, when empowered, the left behind women were able to mobilize, and played a key role in the collective action, which halted the exploitation of the sand. While initially adopting many standard approaches to governance, the women learned and adapted soft strategies that played to their strengths, thereby gaining attention while avoiding the risk of violent conflict. In addition, the left behind women showed endurance and courage to continue their action regardless of the setbacks that they experienced. Their capabilities grew rapidly and managed to gain more and more support inside and outside the village.

This, then, is the key to our research question, about the relationship between environmental governance, gender and the sustainable management of common pool resources in China. Surfacing the issue of gender is fundamental to understanding how natural resources are governed: the tradition, in China and elsewhere, is to assume that this relationship is gender blind while ignoring the way in which power is brokered and deployed in ways that privilege men over women. This imbalance of power is exacerbated by strong Guanxi relations that also exclude women, meaning that superficial

questions of economics are, in reality, mechanisms designed to maintain gender-based governance institutions. As this research has shown, even the most entrenched power is not immune to well-organised and focussed collective action. Yet, it remains unclear how far the women's action has catalysed wider change in the governance of common pool resources and, if it has, whether it is more than the substitution of one gender for another, and substitution of a narrow patriarchal power base with a broader community-focussed one. The social standing of the left behind women is of great significance to this question. The ongoing rapid urbanization continuously drives the young and, in particular, men to urban areas, leaving vacancies in the traditional management institutions in most rural areas, which has led to various social, economic and political problems. Until recently there was grave concern about who would fill the governance gap. As this study has shown, the left behind women - the largest population group living in many rural areas - have offered an answer, but as yet not whether a new governance structure will emerge as a result.

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