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Public taps and private connections: the production of caste distinction and common sense in a Rajasthan drinking water supply project

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This paper analyses a drinking water supply project in rural Rajasthan, India, that deliberately sought to create greater equality across caste for water users through a combination of public taps and payment for water. Later, in the post-construction phase of the project, those goals were undermined by the counter-technologies of upper caste households and the village-scale institutions that supported them. The paper brings together geographic research on neoliberal water governance and caste processes in modern rural India to illuminate how neoliberal subjectivities deepened in the post-project phase. It shows the ways that caste norms, village water governance and state power converged to produce 'new' ways of thinking about water access and payment that undermined the social goals and the physical infrastructure of the project. The paper contributes to research on neoliberalisation and the creation of subjects by demonstrating the mutual constitution of caste inequalities and successfully marketised drinking water over the construction and post-construction phases of the project.

Key words water; caste; neoliberalisation; power; India; longitudinal ethnography

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Introduction

Recent geographic work on economic reforms in the water sector has demonstrated that different forms of neoliberal governance exacerbate social inequalities across gender (Ahlers and Zwarteveen 2009; Harris 2009), race (Ekers and Loftus 2008; Von Schnitzler 2008), class (Birkenholtz 2010; Loftus 2006), and combinations of these characteristics (Harris 2006; Sultana 2009a; Truelove 2011). This paper adds to that work by analysing a drinking water supply project in rural Rajasthan, India, that deliberately sought to create greater equality across caste for water users through a combination of public taps and payment for water. However, these goals were undermined by the counter-technologies of upper caste, wealthy households and the village-scale institutions that supported them. The paper brings together geographic research on neoliberal water governance and caste reproduction in modern rural India to illuminate how neoliberal subjectivities deepened in the post-project phase. It will show the ways that caste norms, village water governance and state power converged to alter ways of thinking about water access and payment that undermined the social goals and the physical infrastructure of the project.

Larner posited that neoliberalism is a form of governmentality 'that facilitate[s] the governing of individuals from a distance' (2000, 6). It 'works' by promoting a notion of human subjects as autonomous, individualised decisionmakers. Decisionmaking may correspond to matters of public policy or material consumption, but at neoliberalism's heart is a basic belief that people get 'to make choices about their [own] lives' (Bondi 2005, 499). As this form of human subjectivity normalises via ideas and material practices, people are recruited into neoliberalism, i.e. they become neoliberal subjects. Neoliberal subjects emerge not through a top-down imposition of neoliberal ideology but through economic restructuring, its alignment with citizens' aspirations, and the tensions lying therein (Larner 2000; Bondi 2005). This paper does not claim that neoliberal subjectivities are new in India generally or in the project area specifically, but provides discursive and material evidence that neoliberal subjectivity deepened due to water's re-regulation and caste norms related to water supply. Before the Our Water project functioned, taps were public and water supply was erratic, but no one assembled house connections. We suggest that the Our Water project's water governance reforms, over a period of decades, led upper caste villagers to capture successfully public

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water supply. The same reforms developed an assertion of individual rights and 'choice' that prompted lower caste villagers to respond that house connections for all were the solution to inequity in water access and payment.

Drawing on long-term ethnographic research over the construction phase (1997–2002) and post-construction phase (summers of 2008 and 2011) of the project, the paper argues that existing imbalances in caste/class power and payment for water combined to deepen neoliberal subjectivity in the project area under new conditions for water delivery. The paper asks and answers the following research questions: how did neoliberal water governance contribute to *and* subvert caste inequalities in water supply in northern Rajasthan? Within an existing context of caste/class inequalities, how did water supply technologies and governance institutions enhance the desirability of an individualised (versus communal) supply system? The paper traces the responses of richer upper caste and poorer lower caste villagers when water began flowing through the project supply infrastructure. It details the reactions of caste groups to water scarcity and the prospect of equalising caste/class relations through water supply. It contributes to research on technologies of power, changing institutions, and the constitution of subjectivities (Agrawal 2005; Birkenholtz 2008; Li 2007) by demonstrating the mutual constitution of caste inequalities and water governance reforms over the construction and post-construction phases of the project. Caste/class power and caste distinctions were maintained through the infrastructure and institutions of the drinking water system, and in turn combined with the habit of paying for water to support payment for water through individual meters by those least able to afford it. Due to the Our Water project, lower caste groups sought to engage their neighbours and the state further as neoliberal subjects.

Finally, the paper adds to research on caste in modern India (Desai and Dubey 2011; Jeffrey 2001; Kruks-Wisner 2011; Ramamurthy 2011) by analysing caste-based resistance to the new infrastructure and institutions that were intended to equalise caste relations in rural north India.

The Our Water[1] project was designed to bring a reliable water supply to villages of three northern districts in Rajasthan where the groundwater is saline (see Figure 1), and asked villagers to manage and to pay for that supply. The project's neoliberal goals of decentralised management and application of market principles to water also included an expectation on the part of project planners that the distribution system would decrease social inequality. Planners hoped that the supply infrastructure design of a single meter per village with public taps evenly distributed geographically, coupled with the fact that all villagers would be paying equally for water, would lead to the demise of caste-based discrimination in water supply and access. The post-project phase reality was that upper caste villagers attached hoses and pipes to public standposts (PSPs) that terminated at a tap inside their homes' courtyards (see Plate 1). While arguably these illegal connections simply made water supply more convenient for those who could afford them, their establishment goes to the heart of the relationship between water delivery infrastructure and social power (Loftus 2006; Page 2003; Swyngedouw 2003). Ease of access to water – put in physical terms of who carries water and who does not – demonstrates and reinforces the social status of individuals and their families (Motiram and Osberg 2010; White *et al.* 1972).

The paper will demonstrate that in the initial post-project phase, paying for water drawn from public standposts elicited feelings that project planners were hoping for, i.e. that lower caste groups would express a right to water because they were paying for it. While dominant caste groups similarly expressed a right to water as paying customers (O'Reilly and Dhanju 2012), they also had the means to ensure themselves a supply by capturing some public standposts with pipelines that went to their individual households. These were commonly known as *satkaa* or house connections, and they enabled a convenient supply of water *when* water was flowing to PSPs, which was not often. House connections were illegal, but as most village water committees (VWCs) comprised dominant castes, they were not dismantled. The struggle to obtain water due to a loss of access to public taps coupled with continuing payment for water, led poor, lower caste villagers to assert the need for individually metered connections for every household. The neoliberal logic of active agents, individual responsibility and equal access due to payment deepened to become a 'common sense' solution of individual house connections for all as the solution to the problem of unequal payment and access to water for lower caste groups.

In the section below, we review recent geographic work on neoliberal water governance. This is followed by a brief history of the Our Water project and its goals, before we turn to the literature on caste-based resource struggles in modern rural India. The fifth section is ethnographic and draws on the words of villagers in the Our Water project area to illustrate their responses, both discursive and material, to the Our Water supply. The sixth section discusses the multiscalar practices that drove the deepening of neoliberal subjectivities as evidenced by the calls for an individualisation of the water delivery and metering system. The paper concludes that water governance reforms interwove with caste inequalities in rural north India in ways that maintained caste inequalities in drinking water access. The 'grassroots' solutions that emerged are evidence of

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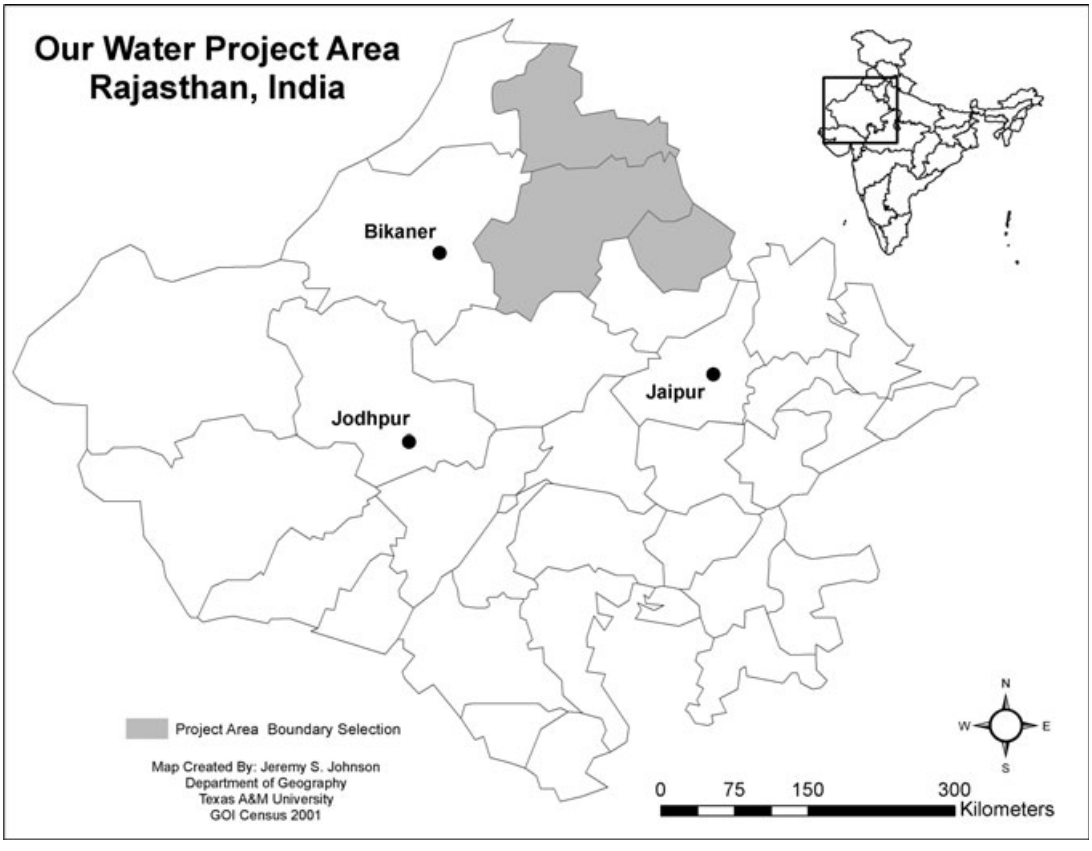

Figure 1 Our Water project area

the impacts of changing institutions and multiscalar techniques of power.

Water, power and common sense

Ekers and Loftus (2008) have remarked on the growing interest among scholars in questions of 'how water figures in questions of the subject and power' and 'how water contributes to the stabilization of social formations' (p. 701). This paper is concerned with both questions, because it is interested in how neoliberal subjectivities deepened in the post-project phase *and* how caste relations re-stabilised at the same time. Much previous work on these two questions has investigated neoliberal reforms in the water sector at the scale of state–society relationships (Budds 2004; Laurie 2007; Loftus 2006; Page 2005; Perreault 2005; Prudham 2004). Others have looked more closely at on-the-ground struggles, for example Truelove (2011) and Birkenholtz (2010), who studied the Indian state's role in the production of the urban waterscape and the multiple practices deployed by residents to access water, as influenced by gender, class and geography. Page (2005) argued for an examination of the production of water that engages with: the social arrangements that govern water's use; rules that regulate people's behaviour at water source; committees that decide about local scale allocation; and water's local values and cultural meanings. Page's Cameroonian case revealed that beyond local vs state struggles are local struggles over water's production that had impacts on prices and rules related to water access. This paper contributes to this body of work studying the microscalar processes behind water's production by exploring local caste struggles as they were inflected by an inherent conflict within the Our Water project: that water governance should be decentralised to a village institution operating in an unequal social field, but that all should have equal access to water.

Substantial work in geography has proven the contradictory nature of neoliberalism's egalitarian social goals. Most notably, the work of feminist scholars of water repeatedly proves that gender-blind neoliberal water policies have intensely unequal, gendered impacts (Ahlers and Zwarteveen 2009; Cleaver and Hamada 2010; Harris 2009) and leave unexamined the burden borne by women as neoliberalised water's referent and labourer (O'Reilly 2006a; Sultana

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Plate 1 Public standpost with house connections attached

2009b). Neoliberal water governance has been criticised for appearing as democratisation while concentrating elite power (Budds 2004; Perreault 2005); depoliticising cost recovery while creating self-regulating citizens (Loftus 2006; von Schnitzler 2008); and failing to provide adequate supplies and/or coverage to the urban and rural poor (Bakker 2007a; Budds and McGranahan 2003; Hall and Lobina 2007; O'Reilly and Dhanju 2012).

Ekers and Loftus (2008) argued that a more productive arena for pushing forward debates on water provision is to go beyond the context of state–society relations and to take a close look at how hegemony operates at the scale of the everyday. Foucault's governmentality is also useful, they argued, because of its attention to the micropractices of power that create self-disciplining subjects. We find convincing the argument of Ekers and Loftus (2008; see also Birkenholtz 2009) that a theoretical rapprochement between Gramsci and Foucault, although not seamless, enables an analysis of the power of the state as real and occurring in a top-down manner, but also accepts that power operates diffusely, relationally and repetitively from the ground up (see Butler 1993). For both Gramsci and Foucault, social formations persist and subjectivities are created/stabilised through everyday interactions in the material world. The contrast and overlap of their ideas about power and its operation offers a way to consider simultaneously the top-down and bottom-up technologies and practices that influenced the villagers of the Our Water project area over a period of nearly a decade. The exercise of power at multiple scales lays the groundwork for a subject ready to pay for water, and later ready to individualise metering. In the case of Our Water, through drinking water supply technologies that began as a manifestation of state power, emerged an infrastructure indicative of class/caste power supported by village-scale governance institutions.

Loftus (2006) found in his study of the contemporary waterscape in Durban, South Africa, that the commodification of water and its associated technology became controlling mechanisms that regulated people's everyday time, habits, spending and socialising. Residents found themselves requesting low-flow technologies, despite the water scarcity hardship they caused. The picture presented by Loftus is one in which technology played a key role in establishing water consumers as responsible, paying (if necessary) subjects who resumed using inconvenient public standposts or low-flow faucets as a way to balance their water needs with their pocketbooks. Forced to choose under the conditions of the 'free water policy', self-regulating subjects emerged. We do not claim in this paper that technology is an actor, as it has no ability to respond on its own, but Loftus' research is convincing that a fuller understanding of the household technologies drawn on by human actors to manipulate water is illustrative of social relations. The technologies under consideration here include: the public standpost infrastructure; the single meter at the entrance of every village; pipes for house connections; and cisterns (*kunds*) for storing water in private households. These technologies did not stand alone but combined in various configurations and relied on social institutions to support caste distinctions.

VWCs as institutions formed by village elites also played a role in supporting caste distinctions in water. VWCs were formed with the intent of facilitating community participation – they were supposed to represent each village as a whole with regard to caste, and at least one woman was to represent village women's interests. Abundant work on community participation by feminist scholars and others indicates that community participation is rarely representative, nor democratic when it is (Agarwal 2001; Cornwall 2003; O'Reilly 2007). Participation should be understood as an arena in the struggle for power (Cooke and Kothari 2001), and as Cleaver (2001) has shown, in the struggle for resources, which may include a calculation that access to resources is enhanced by opting-out of participatory schemes. Cleaver (2001) suggests that opting out may be particularly appealing to lower caste

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groups (in mixed caste communities) and women because they enter the participatory arena in a disadvantaged position. Community participatory schemes have been criticised for assuming a level playing field for negotiations over common property resources (Agarwal 2001), but caste-based inequalities in access to resources is well-documented for India as noted above.

In his work on irrigation water in Rajasthan, Birkenholtz (2009) finds that decentralisation of governance succeeds in merging the interests of upper caste groups and the state. State interests in conservation converged with the interests of upper caste groups in capturing available irrigation resources through a shared discourse of lower caste farmers as those who do not use irrigation water wisely. The creation of tradable entitlements to water hinged on successful conservation; those who conserved would retain their rights, those who did not would lose them. Birkenholtz argued that this process set the stage for elites to maintain their class power by 'enclosing one of the main means of production: groundwater' (2009, 217). Lower caste groups were set up to lose their water rights without consideration for the political economic context that drives them to intensify their farming practices in ways out of sync with state conservation goals. Birkenholtz's findings dovetail with those of Jeffrey (2001) and Loftus (2006) when they argue that the state is complicit in the maintenance of class and caste/race hegemony (respectively) in the water sector (for discussion of the same at a different scale see also Kaika and Swyngedouw 2000; Swyngedouw 2003). The neoliberal state's need for decentralised management either in irrigation conservation or drinking water supply relies on elite support to the detriment of egalitarian goals.

In the next two sections we detail the Rajasthan drinking water supply project and its social context, including a discussion of the connections between water and caste distinction.

Background: the Our Water project

The Our Water project supplies 378 villages in Rajasthan's three northern districts with drinking water through a network of public standposts. As designed, each standpost (two taps per standpost) was to serve 150 people and standpost locations were selected by villagers in a participatory process. It was assumed that (1) community participation in standpost site selection and (2) a rule that no standpost be further than 200 metres from any given house would mean that all households had equal opportunity access to water (Our Water *Handbook on water distribution management* no date). Access for all castes was made explicit, 'All villagers, inclusive of the poorer sections [linked to caste; see below], should have their fair share of facilities inside of the village boundaries' (Our Water *Handbook on water distribution management* no date, 15). Additional standposts could be purchased by interested families or neighbourhoods. In reality, standpost selection often was the decision of the VWC, project engineers or, by default, the location of pre-existing public water sources that were replaced by project standposts (O'Reilly 2006b). Although public taps were intended to subvert spatial boundaries of caste, the pre-existing distribution of standposts in villages reflects the previous public water distribution network (built earlier by the Government of Rajasthan Public Health Engineering Department (GOR PHED)) in which caste-based village neighbourhoods each had a water source. Our Water project planners assumed a greater equality through community participation initiatives, e.g. 'make sure that the underprivileged groups in the village are properly involved in Project activities' (Our Water *Handbook on water distribution management* no date, 36), and fieldworkers encouraged villagers across castes to demand water as paying customers (O'Reilly and Dhanju 2012).

A single meter where the system pipeline connected to the village network measured monthly usage. Using the traditional *angaa* system, each village's monthly bill was divided by the number of village members,[2] including a calculation for livestock, and households paid based on the number of members. The system was presumed to generate greater equality in the water marketplace by distributing it and paying for it fairly. It was also presumed that all households had equal access to water, all had an equal ability to pay and all would abide by the rules. The maximum price for water was 0.16 rupees for 40 litres, which was the project's calculated rural daily usage amount. There was generally little resistance to paying for water in the project area villages when Our Water was introduced, and villages paid at rates of nearly 100 per cent (O'Reilly and Dhanju 2012).

The Our Water drinking water supply scheme was a state-initiated project aimed to alter water governance in the project area. Water governance took a hybrid form combining state-led and market-led reforms (O'Reilly and Dhanju 2012). Water remained in the hands of the state, i.e. it was not privatised, but villagers were expected to pay for water that they had previously had for free, i.e. water was commodified (O'Reilly 2006b). Payment for water was intended to reduce water wastage, and to emplace the habit of paying for water, thus preparing 'customers' for a future when tariffs might reflect the cost of provision. Water was partially marketised as it was commercialised, i.e. market principles of economic equity, economic efficiency and cost recovery came into play despite a not-for-profit, non-competitive system (Bakker 2003 2007a;

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O'Reilly and Dhanju 2012). A rising block tariff was intended to enable eventual sustainable cost recovery, while enabling the poor to pay for a minimum supply of water (Page 2005; Loftus 2006). The technology deployed, i.e. public standposts with a single meter, was expected to empower citizens as a community to demand excellent service from the GOR PHED.

The management of the system was decentralised, following a *Panchayati Raj* model. *Panchayti Raj*, formalised in Rajasthan in 1994, is a system of decentralised government that enables decisionmaking and spending of government funds at the local level. Similarly, control of the village water supply was given to a VWC that was expected to manage the system inside village boundaries, collect payment and report on drinking water quantity and quality problems to the GOR PHED, who was responsible for operation and maintenance of the larger system (see O'Reilly and Dhanju 2012). Ideally, 'all neighborhoods and castes should be represented on the VWC' (Our Water *Feasibility study* no date, E9/8), meaning that a representative from each neighbourhood that had a public standpost (PSP) had a representative sitting on the VWC. The Our Water *Feasibility study* went so far as to recognise that villagers might want to have separate VWCs based on neighbourhoods (which were geographically divided by caste), but to our knowledge, this never occurred and was not encouraged. Each VWC representative was to act as a liaison between their neighbourhood and the committee.

The guidelines that VWCs should reflect village castes according to neighbourhood and include women representatives usually amounted to tokenism. For an example of caste and gender tokenism combined, one Brahmin VWC member told us, 'Sheela (a Jat woman) knows nothing; she's on the committee because we needed Jat representation as well.' It is not clear from this quote that this Brahmin man spoke of her as 'knowing nothing' because she was Jat or female, or in fact, knew nothing. But his statement makes clear that he understands how the game is played, and that 'we' (meaning Brahmins) had to have a Jat on the VWC. While some VWC leaders told us that people of all castes represented their caste-based neighbourhoods in the VWC, there were too many spontaneous meetings of VWCs (when we arrived in villages) in which only upper caste members appeared to believe that these organisations were truly representational. Furthermore, almost always in lower caste neighbourhoods, men and women living there had little-to-no knowledge of how the Our Water scheme worked, including those who said they were VWC members.

The fieldwork for this project was undertaken during six weeks of summer 2008. Of 378 villages in the project area we visited 47 – at least one in each of the 37 subdivisions, based on village size and its position in the pipeline, which we expected to tell us something about water pressure across the project network. We conducted 58 interviews across caste and gender, 55 mixed gender group interviews and 23 women-only group interviews. We tested drinking water quality in every village where there was sufficient water to making testing feasible (33 of 47). We inspected and photographed the majority of standposts in every village. We returned to three of these project villages in summer of 2011 as part of a different study and surveyed water supply conditions across one of the project districts over a period of six weeks.

Caste and water in northern Rajasthan

Caste discrimination in the area of water supply did not begin with the Our Water project – public taps already reflected caste-based neighbourhoods. Historically, ritual purity for Hindus means that upper caste groups do not drink water from sources or vessels of lower castes (or of Muslims; Joshi and Fawcett 2005). Traditionally, lower caste groups do not touch the sources or vessels of upper castes' water. These elements of ritual purity continue to have everyday resonance in the project area. Often in lower caste households, despite the fact that it was blazing hot, we would not be offered *jal sewa* (drinking water) unless we asked for it because families assumed that we would not drink their water from their vessels. By contrast, in upper caste households, a call to serve us drinking water was often made before we even had a chance to introduce ourselves.

There were multiple castes in each village of the project area – usually between two and eight different castes per village depending on the size.[3] Most villages were Jat-dominated in numbers and influence, with few upper caste groups like Rajputs and Brahmins, and some lower caste groups like Kumhars (Other Backward Class [OBC]) and Meghwals (Scheduled Caste [SC]).[4] A few villages had Muslim families. SCs are a government-defined group of castes that face 'extreme social, education and economic backwardness arising out of the traditional practice of untouchability'[5] (Government of India, Ministry of Social Justice and Empowerment 2003). The Census of India does not enumerate caste besides SCs, which in most recent figures stood at 24 per cent of rural households in Rajasthan (Census of India 2001). OBCs are also a bureaucratic category selected on the basis of 'social and educational backwardness' (Government of National Capital of Delhi Commission for Other Backward Classes no date). Jats are an OBC in Rajasthan, but they usually are dominant in rural villages (Muralidharan 1999). As Jeffrey (2001) elaborates, Jats may not be the highest caste group in villages in rural north India, but they are frequently the most powerful group due to their numbers, solidarity

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and landholdings. Brahmins and Rajputs in northern Rajasthan are rarely the dominant group, but all are aware of their ritual status as highest caste. Lower caste and ex-untouchable groups included Nai, Meghwals, Chamars, Nayaks, Kumhars and Meenas. Members of ex-untouchable groups often referred to themselves by their bureaucratic distinction of SC or Harijan (Gandhiji's term, meaning children of God). Their choice of term is reflected in the text.

Caste and class go together as well, although there are exceptions. Villagers, whether they were rich or poor, would commonly refer to SC families as BPL (below poverty line) or *chayanit* (selection), as if the two distinctions were synonymous. Project staff made a similar association. For example, a man in village #2 told us when we asked about the caste composition of the village, 'There are 10% Jats and the rest *chayanit*', meaning SC or ex-untouchable. The research of Desai and Dubey (2011) definitively showed a mutually reinforcing relationship between caste and class in modern India. Based on a quantitative analysis of the India Human Development Survey, Desai and Dubey argued compellingly that

> once stripped of its religious and ideological trope, caste in modern India offers one of the most interesting examples of consolidation of material resources in hands of certain groups even as market mechanisms continue to take hold. (2011, 47)

They demonstrated that upper caste groups capture resources intended for all, and attributed this ability as due to access to other resources including social networks and education.

The relationship between caste, class and resource capture that Desai and Dubey (2011) found concurs with Jeffrey (2001) on caste and social capital and Jeffrey *et al.* (2008) on the difficulty for educated lower caste men to acquire government jobs that circulate among the elite. Anderson (2011) found that lower castes tend to be the poorest in mixed caste villages, due to elite capture of resources (e.g. irrigation water) and subsequent intra-caste networking in local water markets to the detriment of lower caste groups. In villages comprising only lower caste groups, poverty was less severe (Anderson 2011). This paper takes as its starting point that upper caste families often outcompete lower caste families for resources, which partially explains their ability to afford private household water infrastructure.

In rural India, caste also has a geography. Upper caste and/or dominant caste groups usually live at the village centre, while SCs occupy village outskirts. During fieldwork, if ever a family was distant from a PSP, they were inevitably an SC household. By contrast, Rajput families living at a distance from the village centre almost always had their own PSP, even if its construction was very basic. In village #3, the Meghwal (SC) neighbourhood was on the outskirts of the village near the school and the rubbish tip. The electricity poles in the village did not go out to their neighbourhood and the PSP was at a distance too. When we asked why there was no PSP nearby even though there were many houses, a woman replied, 'Chamars (SC) are poor people and so we have no voice. So how can we get a PSP here? Those with power get it on other side.' In a few cases, SC families living at a great distance from any PSP had one built, but these were of the cheapest and crudest construction. For example, in village #2, the Nayak (SC) *mohalla* (neighbourhood) got their own PSP after the others were built and water came on line because the nearest PSP to them was still far away, and happened to be located in a Jat neighbourhood.

It is important to mention that villagers are aware that caste discrimination is neither legal nor politically correct, so we have been quite cautious in our use of villagers' comments about caste. People downplayed caste anxieties, as when one Jat woman said to us, 'What is caste? We all have the same blood.' In a statement that was clearly for our benefit, an elderly Jat woman sitting next to her said that she would marry her grandson to a Chamar. These examples show that many interviewees were ready to distance themselves from the existence of caste conflicts, which were put in terms of 'there used to be caste issues, but not anymore'. In village #3, a man told us that in his mixed caste village there were no problems. He had heard of caste problems in the nearby town, but most caste issues are in theory, not in reality, he asserted. Others, like a young man in village #5, said newspapers exaggerate caste-related news, but that no such things really happen in villages. Despite the interest of some to appear politically correct, many villagers spoke freely about caste conflict, and their language displays concerns with caste separation along lines of religious purity as it relates to water as a material resource.

The paper will elaborate ethnographically below how decentralisation enabled the consolidation of water resources in the hands of upper caste groups, effectively spoiling an explicit attempt at equal access by project planners.

Public standposts and private connections

As was hoped by project planners, lower caste groups did begin to assert themselves as paying customers with a right to water. Villagers understood that bills must be paid or the GOR PHED would cut off their supply (O'Reilly and Dhanju 2012). We heard frequently across villages, 'We are poor but we must pay.' Payment rates were nearly 100 per cent across the project (O'Reilly and Dhanju 2012). Prior to the project, all

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castes expected the GOR to deliver water, but payment for water intensified feelings of a right (*haq*) to water by all and a right to PSP access by lower caste groups. A Kumhar (OBC) young man in village #6 told us: 'All people pay and so if any high caste tells them anything about PSPs, all can say they too pay for water like others do, so they have a full right to water.' He understood that payment put lower caste groups on an equal footing where access to water was concerned. As a Meghwal man in village #7 said to us, 'There are no caste issues, at least not in this village. We know our rights. At the PSP near my house, eight Jat and fifteen Meghwal families all fill water together. There are no issues.'[6] An elderly Harijan woman in village #18 told us, 'We pay for PSP water and so the PSP is the government's – not the higher caste peoples' PSP. We will break the tap if any caste problem happens on [the] PSP.' She stated fiercely that payment gave Harijans a right to 'our water'.[7] These quotes are representative of the understanding of many lower caste people regarding their right to water, secured through payment. Paying for water played a role in equalising access to water, as lower caste groups understood it.

As stated above in the background section, besides payment for water, the allotment of PSPs by neighbourhood (and a participatory site selection process) was intended to equalise caste-based access to water. In contradictory ways, PSP placement was expected to alleviate caste-related water access problems because (a) the proper separation between castes was maintained because PSPs were in single caste neighbourhoods and because (b) theoretically, any caste could access any PSP. In reality, it was the separate geographies of caste-based access to water supply that appeared to alleviate tensions. In village #15, men told us that no one besides Meghwals used the PSP in the Meghwal *mohalla* (neighbourhood). One Meghwal man in village #13 said that there was no caste discrimination at PSPs, but that PSPs were allotted by neighbourhood and his neighbourhood was Meghwal. The fact that people referred to PSPs by the names 'Rajput PSP' or 'Meghwal PSP' signifies that PSPs had a caste-based, locational association, even a proprietary one.

Caste groups might mix at a PSP but separate PSPs for upper caste and ex-untouchable groups were the norm in villages. Village #14 was in many ways typical for the project area: One PSP was all Gujar (OBC); the second PSP served Jats and non-SC castes that were near to it; the third PSP was for Chamars, who lived 'one side further down' and had their own PSP. The situation led many to declare caste a non-issue. In village #9, the Brahmin VWC leader said, '*Jati ki samasya thodi si hai*' ('There is a little caste problem'). Some additional VWC members sitting there agreed that there was some differentiation. However, another man denied that there was 'a little caste problem' saying, 'All castes use all PSPs, except Harijans who have their own PSP.' For this man, and for others, lower caste and higher caste groups might share PSPs, but SCs (i.e. ex-untouchables) must have their own water sources. In village #16, Rajput and Nai (OBC) women said that the Harijan PSP was nearest to their house but that they themselves did not take water from there. Harijan women did, however, take water from their Rajput-Nai PSP. The Rajput women said, 'They take from our PSP but we don't go to the outskirts' – in reference to SCs living on the outskirts of villages and Rajput women's avoidance of that location and their water.

Water scarcity can lead to the reconfiguration of long-standing social norms about water (Sultana 2009a). Villagers were promised clean water coming 24 hours daily, but in summer 2008 our sample (n = 47) showed 70 per cent of villages reporting a water supply shortage (O'Reilly and Dhanju 2012). Nor did conditions appear improved in summer 2011; the GOR PHED generally ensured that water came at least a few hours daily. Meghwal (SC) women in village #9 told us that if there was no water in their own PSP, then they would get water from the one nearby in the Jat *mohalla* (neighbourhood) and if none were there, they would go to another one. They claimed that there was no problem with using other PSPs, but flexibility of caste-based access should not be overstated. The freedom of access that the Our Water system gave lower caste groups was noted negatively by upper caste groups. As one Rajput woman told us, the caste system was being undermined by the water project. She said, 'SCs come and take water from our PSP. This water system has spoiled the [caste] system.' She and her Rajput neighbours felt the combined pinch of SC women's assertion of their right to water and state-induced water scarcity.

Water scarcity after the onset of the Our Water project led wealthier families to build *kunds* (underground storage tanks) in their household compounds that could be drawn from when no water flowed in PSPs (O'Reilly and Dhanju 2012). A house connection enabled convenient access to water when water was flowing, and could fill a *kund* to enable long-term storage for when water was not flowing. If enough house connections were operating simultaneously, they could depressurise other PSPs in the village and along the network. As one Jat boy explained in village #1, where house connections were everywhere, 'All houses have house connections, except some poor Chamar and Nayak (SC) families. That's because they can't afford the pipe and tap for the house connection.' Additionally, poor SC families did not have house connections because of the expense of building a *kund*. Put another way, Meghwal women in village #9 said to us that all

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those families that have *kunds* have house connections. They themselves had no *kunds*, therefore, they had no house connections.

Not having a *kund* necessitated finding an alternative water source. In village #23 someone told us, 'Jats have *kunds* at home but Nayaks and Chamars have no *kunds*. They have to go to their rainwater harvesters in their fields when there is no water.' A Valmiki (SC) woman in village #20 said that she borrows water from her Jat friend who has a *kund* when water is not available at PSPs or at night if she needs it. Most houses in the Valmiki neighbourhood did not have *kunds*, unlike Jats and others in the village. In village #21, most houses had house connections, except the Harijan *mohalla*. Those who did not have a house connection used the neighbour's tap or the single tap that served the government child care centre.

Kunds enabled class-based differential access to water and assisted women in asserting their differences along caste lines. For example, in village #18, Harijan women told us that they faced problems getting water from Brahmin and Jat *kunds* when no water flowed from their own PSP. In village #8, a Jat woman noted that things had changed before and after the project, 'We used to do *sewa* (service) and pour water for Chamars. Now even I tell them to fill up yourself [from her household *kund*].' She was suggesting that the days were over when lower caste groups had to wait for upper caste groups to pour water for them. Another Jat woman in village #19 told us that she let other caste people fill one or two pots of water from her *kund* when there was no water. This woman declared that caste was no issue in the village, but like many others, it did not occur to her that caste/class might be the reason that SCs did not have access to water when she did. That her household could afford to build a *kund* while SC households could not was something she took for granted. Caste and class came together by ensuring a supply for upper caste groups when no water flowed from PSPs, and through occasionally depressurising the PSPs of those who could not afford house connections.

VWCs signed contracts with the GOR PHED stating that they would thwart the tapping of public standposts with pipes for house connections. Engineers communicated to VWCs that the system was designed for public taps only – that accurate flows and pressures for all villages could only be maintained based on that design. Individual house connections were simply not feasible. Nonetheless, house connections proliferated – 29 of 47 villages had house connections. In some cases, one public tap was left unaltered, while the other side of the PSP was manipulated to accommodate private connections with either iron or plastic pipes that were fastened to public taps (O'Reilly and Dhanju 2012).

On paper, VWCs had the power to dismantle house connections but they seldom did. As one Brahmin VWC leader told us, 'I raised my voice against illegal house connections but then stopped because villagers with illegal connections told me to mind my own business.' In some cases, VWCs were those who had house connections first. VWCs stacked with dominant caste groups were ineffective in halting the proliferation of house connections or dismantling them, usually because the offenders were relatives or members of their same caste group. Caste favouritism did not go unnoticed. Durgaram in village #7 claimed, in front of his Jat neighbour, that the VWC was disbanded because he was a Meghwal and wanted all the houses in the village to be given house connections, but the Jat-dominated VWC did not want that. Durgaram was adamant that 'We [Meghwals] must bring up issues and fight for all supposedly controversial things like house connections.' On the one hand, Durgaram was fighting caste discrimination of the kind that means SCs cannot have access to material resources like pipes, taps and resources like water as Jats did. On the other, he was also noting that those who had easy access to water were hoarding those resources for themselves by arguing against the expansion of house connections. VWCs argued in two primary ways against demands for house connections. The first argument was that they were illegal. The second was that if there were too many house connections and the pressure of the system was disrupted in a noticeable way, then the GOR PHED would descend on the village and forcefully remove *all* house connections.[8]

At all PSPs where pipes or hoses were attached we noted water leakage, but despite the proliferation of house connections, the single village meter and *angaa* system did not change. The single meter system remained even as village public taps were being turned into private ones, and people across castes continued to pay. Meghwals and other SCs, when asked about paying for water, were likely to say that water was expensive, but that it had to be paid for (*majboori* or compulsion). Nat (SC) and Meghwal women in village #24 said water was very expensive now, but that they had no other option. 'We pay, otherwise we will not get water', they said. Frequently SC women reported that working in the government minimum daily wage scheme (the Mahatma Gandhi National Rural Employment Guarantee Act or NREGA) provided the money to pay for water (in effect, the national government paying the state of Rajasthan for water).

A VWC leader in village #25 said that poor families' main complaint was that they did not use the same amount of water as those who had *kunds*, but they paid the same *angaa* as those who were able to store extra water. Poor lower caste villagers' complaints were not about water access, but about paying for water others had used. The VWC leader confirmed that this was why individual meters were a good idea. Working on the

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assumption that those with private taps at home used more water because of its convenience than those who had to haul water pot by pot, the single meter and *aanga* payment system subsidised wealthier users with house connections. As we were told in village #3, 'We already pay for water now, so we might as well pay a little more and get household connections.' For SCs, house connections solved caste problems. For example, in village #21 a Meghwal man said 'Now that everyone has household connections, and now [that they] are more educated, there are no caste issues around water.' A similar statement was made by multiple people in village #22 that 'Now that there are house connections, so there are not caste issues. Earlier there were problems.' A separate group interview confirmed: 'There is 10 percent casteism still in the village, but it is not related to water because all have taps at home now.' Taps at home became the answer to payment problems and caste conflicts in villages. Contrary to project plans of constant supply and communal billing, *satkaa* were the answer to caste problems.

Water governance reform and caste struggles

The events that unfolded over the course of the Our Water project illustrate a process by which 'neoliberal common sense' deepened after its initial introduction through a combination of top-down and bottom-up techniques of power: state-induced water scarcity; decentralised water governance; regular payment for water; and upper castes' private house connections. The project began with the simple idea that payment for water would lead to greater social equality by creating citizen-consumers, and by the time of this research, the creation of paying subjects was well-established in the project area (O'Reilly and Dhanju 2012). Based on the statements of lower caste groups asserting their right to water, the project's egalitarian goals for access also took hold when water first came on line. Willingness to pay for water remained as house connections proliferated in later years; however, dominant caste capture of public PSPs, supported by the inaction of the VWCs and the GOR PHED, led poor, lower caste residents to conclude that individualising the community supply would remedy the injustice of caste-based unequal access to water.

State-produced water scarcity was a key reason that wealthy families built *kunds* to store water for future use. Had water supply been more regular, wealthy families may not have felt the need to build household *kunds*, which became more numerous in the post-project phase of Our Water. The presence of pipes connected to PSPs was a material reminder of caste power. When water was flowing at PSPs, lower caste groups could notice that upper castes did not need to haul water. When water was not flowing at PSPs, lower caste groups had to ask upper caste groups for water, and upper caste groups could refuse. Dominant caste groups were able to re-assert their dominance through their control of PSPs and water in their *kunds*. They were assisted in this, albeit inadvertently, by the state.

Mehta's (2007) argument, that beyond water's material scarcity are institutions comprising dominant caste groups whose actions increase water scarcity along caste lines, points to the role that decentralisation played in the reproduction of caste inequality. The GOR PHED consolidated its control of drinking water resources and established cost recovery through VWCs formed by upper caste elites. The Rajasthan state relied on existing caste inequalities to support the state's interests in decentralised drinking water supply management, laying the groundwork for the maintenance of caste-based inequalities related to resource access (see also Birkenholtz 2009). Public taps were the responsibility of VWCs in the legal, contractual sense and were assumed to be village common property by project planners. However, when wealthy, dominant caste families began establishing house connections, the VWCs supported them by not dismantling the house connections. VWCs that questioned the legality or fairness of house connections were told to mind their own business. Decentralised drinking water management depended on caste power, leaving the state dependent on the very institutions that undermined both the project's egalitarian goals and the supply system infrastructure.

Although it owned the Our Water scheme, the GOR PHED assisted in maintaining caste-based unequal access through its failure to act against house connections. Without support, lower caste groups were severely limited in their ability to re-capture PSPs or contest billing inequalities. Lower caste VWC members were 'tokens' and had little power to fight successfully against house connections *or* to fight for all households having them. This research advances the work of Jeffrey (2001) and Birkenholtz (2009), who showed that state officials *act* in rural caste politics to the advantage of the state and dominant castes, by demonstrating that decentralisation enables the selective *absence* of the state – an absence also to the advantage of dominant castes.

As shown above, the introduction of partially marketised water occurred easily due to the alignment of the state's goals for water governance and interests of rural people in a reliable water supply. When that water supply was not reliable, when the communal form of payment did not align with pay-for-what-you-use principles, lower caste groups sought solutions to those problems from within a neoliberal framework, as neoliberal subjects. To return to Larner (2000) and Bondi (2005), neoliberalism is a form of governmen-

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tality. Economic reforms, ideals of individual choice, decisionmaking and freedom, and material practices recruit humans into a self-disciplining form of subjectivity that is neoliberal. Neoliberal subjectivity in the Our Water project area was normalised through ideas of individual freedom and responsibility, payment reforms and decentralised governance, competing distribution technologies and everyday water practices. Lower caste groups acted as neoliberal subjects, i.e. individuals who recognised themselves in relationships of unequal power, disciplined themselves as paying customers, and then acted to solve their own problem through a market-based solution. In the case of Our Water, the original alignment of state and villagers' goals of paying for access to water stayed the same, but in the post-project phase, lower caste, neoliberal subjects asserted their rights to water that could only be fulfilled through further economic reforms, i.e. individual meters and billing. Paradoxically, the introduction of neoliberal water governance deepened expectations for individual choice beyond the ability of the project infrastructure to cope with the demand that it generated.

How should we understand the choice to increase individual responsibility for water access by those least able to afford it? The solution of individual household connections emerged as a choice in the post-project phase of disciplined water payment and ongoing caste inequality. As Ramamurthy (2011) found for SC (or Dalit) farmers in Andhra Pradesh, it is better to be poor than to live with caste inequality and dependence. 'Rational economic man' would not make a decision to grow crops he cannot profit from, but Ramamurthy concluded that there exists a 'vernacular calculus of the economic' (2011, 1036). This calculus drives Dalit farmers to grow cottonseed, a crop that enables them to escape the humiliation and dependency of certain crop growing relations, although such a decision keeps them impoverished. These farmers, Ramamurthy found, value pride and independence more highly; they prefer to be poor and retain their dignity. Seen in this light, although the choice is not currently so stark, for lower castes in Rajasthan the cost of water is not the only consideration behind the desire for individual house connections. Searching for water at other PSPs, waiting for access at the remaining tap, re-arranging one's schedule to be available for water when it arrived would be alleviated by an individual house connection. This paper demonstrates the ways that neoliberal solutions to resource governance both assist dominant groups in maintaining their dominance, and market solutions become the 'obvious' choice for those on the social fringes. It adds to research on the apparent contradictory decisions of marginal groups by highlighting the ways that lower caste groups assert themselves within relationships of inequality. Beyond research highlighting the cost of neoliberal reforms for marginal groups (e.g. Harris 2009 on gender; Loftus 2006 on race), this research suggests that they may nonetheless find themselves pursuing even further reforms.

Institutions and technologies new to the project area impacted how lower caste groups thought of themselves in relationship to water and to the state (Agrawal 2005). They believed that as paying customers the state would assist them in accessing water via individual meters. By accepting greater responsibility for water's use and payment, individual meters held the promise that poor, lower caste groups would only pay for what water they used, they would enjoy the same convenience as village elites and daily, caste-related tensions over water would subside, advancing the state's goals for economic reform aligned with multiple aspirations of lower caste groups. Desire for household meters by those least able to afford paying for water is evidence of a growing alignment between the state's goals for cost recovery and decentralised, if unequal, drinking water management, and the rural poor's goal of water security.

Conclusions

This paper illuminates how 'a socially closed system like caste adapts and manipulates emerging class inequalities in a society undergoing economic transformation' (Desai and Dubey 2011, 47). Desai and Dubey (2011) argued that caste functions to achieve social closure, and that economic opportunities create new arenas where castes can distinguish themselves from others. In the initial post-project phase it appeared that caste-based access to water might fade, but dominant castes seized on pipes and hoses as a way to distinguish themselves in the arena of water supply. Jodha (1986) found that appropriation of the commons was the most significant factor among land processes for caste distinction, by depriving the lower caste poor of important livelihood assets. As Desai and Dubey (2011) made clear, dominant caste groups maintain their dominance through the capture of resources – including common property resources that are intended by the state to be shared more equally (see also Mehta 2007). They argued that caste matters most in matters of resource access 'even as market mechanisms take hold' (Desai and Dubey 2011, 47). We argue here that market mechanisms actually assisted dominant caste groups in seizing public resources. PSPs were the 'new' water commons in the Our Water scheme. Although the economic benefit to dominant castes was minor (given the current cost of water) and caste-based discrimination in water access was not new, this paper demonstrates how water supply persisted as an arena where caste groups operated to maintain their distinction (Joshi and Fawcett 2005; Mehta 2007). Paradoxically, the move by some villagers for caste distinction

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(a group formation) drove an assertion of individual rights to water.

From inside debates about public vs private provision of water, the Our Water project provides an example of an effort to bring together a view of water as an economic good at the scale of the state and a 'commons view' of water at the scale of the village (Bakker 2007b). In response to those favouring the 'commons view', Our Water offers strong evidence that without the support of the state, decentralisation of water management compromises water access because the institutions created to manage water do not emerge from a neutral social field. In response to those favouring an 'economic view', Our Water offers strong evidence that application of market principles similarly compromises water access because cost recovery is not introduced in a neutral social field. Water governance reforms impact everyday caste/class relations to the disadvantage of lower caste groups; caste and class can further water reforms, also to the disadvantage of lower caste groups. This paper shows clearly that neoliberal reforms can stake no claim to political neutrality.

We have drawn from a theoretical framework that sees the material landscape of drinking water supply infrastructure as one that reflects the norms and values of the powerful, while producing certain subjects that operationalise these norms (see Ekers and Loftus 2008). State power materialised a drinking water supply infrastructure with the intent of creating paying customer-subjects, and in this, it was successful (see O'Reilly and Dhanju 2012). But a closer look at a different scale of analysis shows how changes to infrastructure in the post-project phase illustrate the reassertion of caste and class power in villages. This paper contributes to studies on water and power by demonstrating how state-led commodification of drinking water combined with social goals to create greater caste equality, but were later manipulated by dominant caste groups in ways that re-asserted caste-based differences in water access along material and spiritual (i.e. caste purity) lines. It adds to work on micro-political practices of water access (e.g. Loftus 2006; Page 2005) by illustrating how goals for water governance reform and social equality were subverted by local caste struggles, and how caste struggles over water intensified in the post-project phase. As Page (2005) has argued, beyond state and local contests are local–local struggles that deeply impact (de facto) water prices and rules of use. Progressive water pricing can be turned against the poor when public sources are captured for profit or social gain (see also Birkenholtz 2010). The research undertaken here provides a compelling case for the mutual constitution of neoliberal water governance, the production of subjects that support it, and the reinforcement of caste and class inequalities through resource access. Together, the common sense solution of individual meters was produced. Water has long been an arena for social distinction in India; it always and everywhere has meaning beyond the economic (Linton 2010). This paper illustrates how water's multiple meanings may be usefully traced at multiple scales to analyse the on-going operations of power that stabilise social and material inequalities while deepening neoliberal subjectivities.

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Notes

1 A pseudonym that reflects the 'buy-in' from villagers that project planners hoped for.
2 In some villages, girls were not counted as members (see O'Reilly 2011).
3 Caste is the conventional English term for *jati* or sub-caste, and the names used here indicate sub-castes that are arranged into four *varnas* (castes or main groupings), each with a different ritual status. Castes identified here as upper caste are in the highest two *varnas* and those identified as lower caste are in the lowest two *varnas*.
4 Although historically castes had specific occupations, generally in the project area families of any caste with land were farmers and those without land were labourers, with great variation by household. A full discussion of the interweaving of traditional caste-based occupations and present-day livelihoods is beyond the scope of this paper, but see Mines and Lamb (2010).
5 Untouchability is illegal in India but still a widely held belief in northern, rural Rajasthan.
6 But he was saying these things while sitting on a low stool (*mooda*), while an elderly Jat man sat in a (higher) chair. Such things as high and low seating positions that denote social hierarchy (e.g. age, caste) are naturalised to the point of unnoticeability.
7 As this woman was talking, a young Meghwal man came upon us and all discussion stopped. He said, 'There are no caste issues here and even if there were, you cannot do anything about it.'
8 It appears that in some instances the GOR PHED was forced to act. During fieldwork in 2011, we noticed that individual house connections had been dismantled in some

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villages. An analysis of these events goes beyond the scope of the current paper.

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