

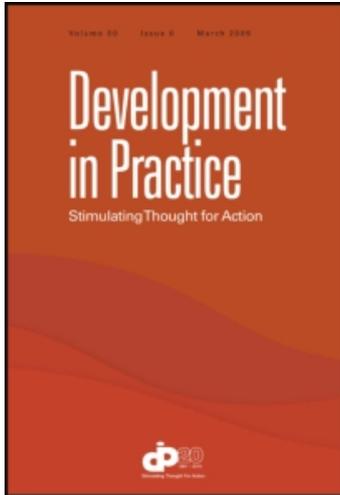
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Combining sanitation and women's participation in water supply: an example from Rajasthan

Kathleen O'Reilly

Water supply and sanitation provision are key elements in progress towards the Millennium Development Goals (MDGs). Women's participation is considered integral to the sustainability of the projects created to meet these two MDGs. Bringing feminist and geographic critiques to bear on gendered approaches to improving sanitation coverage, the research reported on in this article indicates that latrine building and women's participation may be contradictory goals for sanitation projects, despite the fact that women are the target group for latrine-building interventions. The findings of the analysis suggest that attention must be given to latrine building as both a technical undertaking and a gendered political intervention.

Conjuguer assainissement et participation des femmes à l'approvisionnement en eau

L'approvisionnement en eau et l'assainissement sont des éléments clés de la réalisation des Objectifs du Millénaire pour le développement (OMD). La participation des femmes est considérée comme une partie intégrante de la durabilité des projets créés pour réaliser ces deux OMD. Les recherches présentées dans cet article braquent les critiques féministes et géographiques sur les approches sensibles au genre de l'amélioration de la couverture d'assainissement et elles indiquent que la construction de latrines et la participation des femmes pourraient constituer des buts contradictoires pour les projets d'assainissement, malgré le fait que les femmes sont le groupe cible pour les interventions de construction de latrines. Les conclusions de cette analyse suggèrent que l'attention doit être accordée à la construction de latrines en tant qu'intervention politique à la fois technique et fortement influencée par les questions sexospécifiques.

Combinando saneamento e a participação das mulheres no abastecimento de água

O abastecimento de água e saneamento são elementos-chave para se alcançar os Objetivos de Desenvolvimento do Milênio (Millennium Development Goals - MDGs). A participação das mulheres é considerada fundamental para a sustentabilidade dos projetos criados para atender a estes dois MDGs. Empregando críticas feministas e geográficas em abordagens de gênero para melhorar a abrangência do saneamento, a pesquisa relatada neste artigo indica que a construção de latrinas e a participação das mulheres podem ser objetivos contraditórios para projetos de saneamento, apesar do fato das mulheres serem o grupo-alvo de intervenções de construção de latrinas. Os resultados da análise sugerem que é preciso dar atenção à construção de latrinas tanto como intervenção técnica quanto como intervenção complexamente de gênero e política.

El saneamiento y la participación de las mujeres en el acceso al agua

Los servicios de agua y saneamiento son claves para el logro de las Metas de Desarrollo del Milenio (MDM). La participación de las mujeres es necesaria para la sustentabilidad de los proyectos diseñados para cumplir con estas dos Metas. Las investigaciones analizadas en este ensayo aportan perspectivas feministas y geográficas a los enfoques de género que se han utilizado para el saneamiento y plantean que la construcción de letrinas y la participación de las mujeres podrían ser metas contradictorias en los proyectos de saneamiento, a pesar de que las mujeres son la población meta de las actividades de construcción de letrinas. Las conclusiones revelan que cuando se trata de construir letrinas es necesario tomar en cuenta tanto los aspectos técnicos como los complejos factores políticos y de género.

KEY WORDS: Gender and diversity; Methods; Social sector; South Asia

Introduction

The United Nations Millennium Development Goals (MDGs) set an ambitious agenda for improving the human condition by 2015. Included among them was halving, by 2015, the proportion of people who are unable to reach or to afford safe drinking water. Later, at the 2002 World Summit on Sustainable Development in Johannesburg, a similar goal for sanitation was linked to the MDG for access to clean water: to halve the number of people without sanitation. The World Health Organization estimates that 2.4 billion people worldwide are without access to sanitation (WHO and UNICEF 2000). Approximately every 15 seconds a child dies of a disease related to poor water, sanitation, and hygiene – amounting to about 2 million childhood deaths annually (*ibid.*). These two MDGs recognise that water and sanitation are the most essential elements of public health.

Proper disposal of human excreta can reduce diarrhoeal disease by 35 per cent, while good home hygiene (such as washing hands before food preparation) can reduce it by 33 per cent. Either one of these two strategies is more effective than simply the provision of a clean water supply, which reduces diarrhoeal disease by only 15 per cent (Esrey *et al.* 1991). Yet public interest in sanitation is lower than interest in water supply. Concerns about health are not a strong motive for people to build latrines at home (van Wijk-Sijbesma 1998). Instead, communities want regularly supplied or easily accessible water more than they want toilets, so toilets are often subsidised to capture further benefits from providing safe drinking water.

New funding trends, however, disavow subsidy programmes as unsustainable, because (a) people did not use the latrines that were built; (b) they did not maintain infrastructures that were built; and (c) latrine building did not continue once subsidies ran out (van Wijk-Sijbesma 1998; World Bank 2002). The problem, as seen by the World Bank (2002), is that 'approaches to sanitation have focused mainly on the technological aspects of service delivery (i.e., creating latrine structures), rather than on behavioral changes and *creating a market* for sanitation facilities' (author's emphasis).

Gender has proved a most important element in recent prescriptions for marketing latrines to potential users. The International Water and Sanitation Centre (van Wijk-Sijbesma 1998) reports that the main reasons why households will spend money on latrines are convenience, privacy and safety for women, and status. Latrines are convenient for both men and women because they are nearby and can be used day or night and in bad weather. They provide privacy and safety for women because they have doors that can be shut and locked, and their placement near the house eliminates the necessity of walking alone to a distant, private

place. The status of a latrine is often tied to design and quality; they are desirable as an uncommon, luxury item.

Besides the fact that women are targeted as the primary users of latrines, their participation is often encouraged as part of an efficiency approach to sanitation. Women are viewed as having the greatest incentive to keep systems functioning: (a) access to clean water will enable women to spend their time better; (b) sanitation will lower women's risk of physical attack; and (c) family wellness and child survival will reduce women's household responsibilities (Millennium Project Task Force on Water and Sanitation 2005). Any increase in women's free time means that extra time can be spent constructing and managing water and sanitation facilities or engaging in income-generating activities.

Women are also marked as those who can best introduce behaviours that will lead to better public health. In their roles as mothers and household managers, they are best placed to improve their families' sanitation and hygiene practices (Waterkeyn and Cairncross 2005). For example, 'women have accumulated an impressive store of environmental wisdom, being the ones to find water, to educate children in hygiene matters and to understand the impact of poor sanitation on health' (UNDESA 2005: 4). Taking advantage of this knowledge is cost-efficient for sanitation and hygiene projects: '[t]argeting women for training as the main role models and "teachers" within the household is [a] cost-effective way of raising awareness and skills' (UNDESA 2005:10). Women can also play an important role by mobilising demand through 'women to women' contacts (van Wijk-Sijbesma 1998: 112).

Despite the frequent linkage of women, water supply, and sanitation in mainstream development literature, few researchers question the taken-for-granted relationship between women and sanitation, or the direct targeting of women as change agents (Pandey and Moffet 2005 is an exception). The goals of water supply and sanitation projects to encourage women's participation, and their implications for women's empowerment, have been left largely unexplored. Nor do we know what an unexamined, women's participation approach to latrine marketing means for latrine usage by the target group. Water supply and sanitation projects have latrine-coverage targets that they attempt to reach through women's participation. But what has the linkage of sanitation and women's participation meant for women's access to toilets, and women's empowerment goals? This article seeks answers to these questions.

In the Rajasthan drinking-water supply and sanitation project that I studied, women were recognised as having a potentially unique relationship with latrines, because social norms entail women's seclusion and veiling.¹ Women in rural Rajasthan restrict their urination, defaecation, and bathing to times and places where privacy can be maintained. The project's latrine-building goals and women's participation goals merged by appealing to gendered norms about modesty, while simultaneously suggesting that women's empowerment would occur through village women's involvement in the promotion of sanitation and hygiene. Women's empowerment was expected to lead to increasing sanitation coverage at the village level without the need for subsidies. Women and their families were expected to want the privacy and convenience that latrines would provide, while women would further the project's marketing goals by finding their voices and telling other women about latrines. But a contradiction arose during the course of the Rajasthan project: the sanitation programme marketed women's empowerment and mobility, but household latrines created reasons for women to remain in seclusion at home.

This article seeks to unravel that contradiction and its implications for water supply and sanitation projects that take a gendered approach. Drawing on feminist critiques of development and case-study material from Rajasthan, I argue that inattention to men's and women's different access to village and household spaces has negative impacts for water supply and sanitation projects. Data, in the form of didactic materials and images, project documents, field notes, and informal interviews, support an analysis of how latrines play a role in simultaneously

subverting and reinforcing gendered social norms regarding women's mobility inside and outside their homes. I suggest that combining feminist critiques with attention to gendered, local geographies may result in greater success of sanitation projects *and* their women's participation goals. The examples given here serve to emphasise how a feminist, geographic approach highlights context-specific details that may assist in the devising of more appropriate strategies wherever sanitation projects are implemented.

The German-funded, Indian-operated drinking-water supply project that I studied was begun in three districts of northern Rajasthan in 1994, with the goal of improving health and hygiene in almost 400 villages. The provision of clean drinking water on a use-based, sliding-fee scale was the primary objective. Side-by-side latrine and bathroom (i.e. bathing place) sanitation units were intended to cover 45 per cent of households. At the time of intervention, a project survey indicated that fewer than 10 per cent of area households had latrines; those without latrines defaecated in the open. The Government of India census reported that 85 per cent of rural households in Rajasthan have no sanitation facility (approximately more than 6 million households). The combination of clean drinking-water supply and access to sanitation units was expected to reduce disease and contribute to better overall health in the region. My first visit to the project was in 1997, shortly after activities in villages had begun. I conducted both short-term and long-term participant-observation fieldwork in the area while it was operational, including one continuous year in 2000. The project officially closed in December 2005.

In the next section I discuss the international consensus on women and sanitation that informed (a) the targeting of women as latrine purchasers, users, and marketers; and (b) the changes that were expected to occur if women had access to latrines/bathrooms in their household compounds. This discussion is followed by feminist critiques of gendered participatory approaches, such as those advocated by international aid donors. In the third section, I describe the ways in which latrine building in the Rajasthan project conflicted with women's participation goals, and the repercussions of these conflicts for latrine usage. The fourth section discusses the importance of a localised, geographic analysis of gendered power relations for enabling social changes that would lead to women's latrine usage. This is followed by some conclusions.

Consensus and critique on women, water, and sanitation

There is broad consensus in mainstream donor policy that women's participation is critical to the success of sanitation projects, in both the implementation and usage phases. The World Bank (2002) states that lack of gendered, community involvement is the main reason for 'poor service sustainability' in the water sector. Getting women involved in water and sanitation projects can 'contribute to their satisfactory completion [of tasks] and thus to project sustainability' (Wakeman *et al.* 1996: 7). Mainstreaming gender perspectives will ensure that needs and concerns of women and men from all social groups are taken into account during water and sanitation development (UNDESA 2005:4). Women use latrines more than other household members (van Wijk-Sibesma 1998). Programmes should recognise women and girls 'as primary users of water, hygiene educators and managers' (World Bank 2002; see also UNICEF 2007); and, as such, what they want can be crucial. As 'women are also most likely to be making and carrying out decisions on how a particular facility is used' (Wakeman *et al.* 1996: 5), then accommodating them as users through participatory approaches flows directly into discussions of outcomes and project sustainability. In a widely referenced World Bank publication, *Sourcebook for Gender Issues at the Policy Level in the Water and Sanitation Sector*, Wakeman *et al.* (1996: 6) write that women's input is critical for the location and superstructure design of sanitation units 'that will be acceptable to both women and men'.

Community participation is now *de rigueur* for development interventions in the water supply and sanitation sector. Women's participation in particular is expected to create sustainable projects by (a) including women as primary users, consumers, and managers; (b) increasing women's social capital; and (c) accessing women's knowledge. While recognising that international consensus supports gendered participation in water supply and sanitation, Cleaver (2001) and Wallace and Coles (2005) argue that 'gender' has become a technical problem solved by the inclusion of women in projects (see also O'Reilly 2006). They insist that when 'gender' is seen as the problem with water-resource sustainability, such a viewpoint indicates that sustainability can be achieved simply by getting women to participate. The tools to fix gendered problems are instrumental rather than thoughtful.

Moreover, the insights of gender theory have been omitted from technical approaches. For example, 'gender' has come to mean simply women and men, not 'gender' and the power relations that constitute it (Wallace and Coles 2005). Frameworks designed for gendered participation have become oversimplified and the commitment to their feminist goals lost (*ibid.*). Gender is a term that is constantly in use, but is little theorised and ill-defined in most projects and supporting policy documents (*ibid.*). Preliminary analyses of gender in the local context are often poorly done, if done at all, and 'radical rethinking of purpose and process' that will enable men and women to influence design and implementation of development interventions is often lacking in gendered participatory approaches (*ibid.*: 8). As I will show below, these criticisms are key to improving latrine usage, because women's participation in latrine marketing and building and their use of latrines in home spaces are both influenced by social relations of unequal power.

Women's participation is often treated as synonymous with empowerment; however, *what* empowerment is, *how* empowerment happens, and *whether* it happens in groups or individually remain important questions in the field of development studies (Rowlands 1997). For Rowlands, empowerment is a process through which self-confidence, agency, and dignity increase. Part of the empowerment process includes analysing gendered imbalances in control of resources and opportunities (Rowlands 1997). As water supply and sanitation interventions are often handled by engineers – sometimes with help from NGOs (as was the case of the project that I studied) – a gendered analysis of power seldom occurs (see Rydhagen 2002 on feminist engineering for sanitation). Empowerment's radical meanings have been depoliticised, due to the mainstreaming of empowerment as a development goal (Cleaver 2001); a movement from women's participation to women's empowerment is often asserted, but development project plans fail to indicate how this will occur.

Although outwardly containing feminist goals, combined women's participation and latrine-marketing programmes address both women's participation and latrine building as technical problems, to which the answer is the inclusion of women as 'marketers' of latrines to household and community members and 'consumers' in their own households. Sanitation programmes' proposed solutions remain largely technical: problem *x* can be solved by technique *y*. For example, simply building latrines does not mean that they will be used, but their non-use is attributed to a failure to include women, who were not involved or committed to the project (van Wijk-Sijbesma 1998). The problem: toilets are not being used. The solution: women's participation in projects. What passes largely unnoticed in these technical policy suggestions are questions of *how* latrines gain particular social meanings because of their linkage to women's empowerment. While policy literatures do recognise 'cultural reasons' for having latrines, more attention should be given to existing, gendered, local understandings of excretion that affect demand. Technical solutions do not go far enough in considering the role played by latrine-building programmes in the shaping of meanings about latrines, and also the shifting,

gendered geographies associated with their marketing and use. I examine below how latrines marketed as status symbols curtail women's movement outside their homes.

A gendered, latrine-marketing programme drove the sanitation component of the Rajasthan project that I studied. While primarily supply-driven and construction-oriented, it also sought women's participation in increasing coverage beyond what subsidies might encourage. In the section below, I illustrate the contradictions that arose between the project's latrine-building goals and women's participation goals.

Conflicting goals in a rural Rajasthan water-supply project

In rural India, women want latrines because they cannot urinate as discreetly as men can. Cultural norms require privacy for women's urination and defaecation, so women often resort to holding in their urine during the daytime while they wait for the cover of darkness; the inevitable result is that they must eat and drink less. Influences of social class and gender in rural India combine to increase the desirability of latrines for wealthy women who live at the village centre and so have to walk farther to find a place to defaecate. Poor women, on the other hand, use the chance to go out to relieve themselves when they collect wood or fodder (van Wijk-Sijbesma 1998).

The primary, gendered reason given for latrine building by the Rajasthan drinking-water project was the convenience afforded to women by having a household latrine. Other reasons included eliminating the chance that a woman would be bitten by a snake, or attacked on her walk to the fields. Rural women in Rajasthan protected their modesty by coming and going from the fields on the outskirts of their villages before sunrise or late at night, in order to avoid being seen by men. Evading men's gaze was a hardship faced by women when performing everyday bodily functions. Urination and defecation themselves were understood as ordinary physical processes; it was social norms about women's visibility that rendered the normal act of elimination burdensome. It was understood that open defaecation creates a particular problem for women, because social norms require that although it takes place in public, women should not expose themselves to men. Neither women nor men typically defaecated in full daylight; however, men were free to urinate in public at any time and could be seen defaecating in the open at dawn and sunset. It was men's felt responsibility to provide safety and privacy for the women of their family that gave them an incentive for investing in a latrine (van Wijk-Sijbesma 1998).

The Rajasthan drinking-water supply and sanitation project set early goals of 45 per cent coverage for each village, i.e. 45 per cent of households would have latrines by the end of the project. These coverage goals were assisted by generous subsidies which provided between 70 and 80 per cent of the cost of building latrines to a few households below the poverty line, per village. These poor households contributed between 20 and 30 per cent of costs in cash or in labour. Over the course of the project, latrine costs varied (between 2750 and 1500 rupees) as staff and engineers sought out the cheapest methods and materials for building, while keeping quality high. Marketing strategies at the village level (such as women telling other women) were expected to boost remaining construction towards 45 per cent. Between 1998 and March 2001, 5782 units were built in almost 100 villages. By August 2005, coverage had reached 35 per cent for the area.

Early project documents suggested that double-pit dry latrines were ideal for the area. A dry toilet was desirable because of water scarcity, and a double pit because they could be used permanently, one pit composting while the other filled. However, double-pit, pour-flush latrines were eventually adopted, because villagers expressed the greatest interest in that model.² Reasons given for preferring the double-pit, pour-flush model included reduced odour;

higher price (which would bring a higher subsidy); and best overall technology. The project feasibility report stated that the clean drinking-water supply was not to be used for toilet flushing, but suggested that any other water – rain, used, well, or brackish – was acceptable to pour down toilets. Such distinctions between acceptable flushing waters were generally not made by villagers, as convenience was primary.

The decision to build pour-flush latrines appears to have affected latrine usage in two ways. First, water supply took longer than expected to reach villages, so pour-flush latrines were built before water was flowing on a regular schedule. For villages where water was scarce, precious water, even used water, was not generally used to flush latrines. Second, the supply system provided water to neighbourhood public taps, not individual households, so all water used by the household was hauled daily by women from the taps to their home. Containers were placed inside latrines for storing water that could be used for washing and flushing after urination and defaecation. However, even after water was flowing into villages, water was usually not stored in latrines, but brought when needed. This practice suggests that latrine usage was unusual and not habitual, and required an extra effort beforehand.³ The necessity of hauling water also made it more difficult to clean the latrines. The units were designed to be easy to clean, with a smooth concrete floor and fitted, sealed pan. Water and a brush were all the supplies necessary, but as extra water had to be brought from a short distance away, latrines were not cleaned consistently.

Status symbols that reduced women's mobility

The project's didactic images, intended for use with non-literate villagers, depicted women performing new roles associated with latrines and moving freely in village lanes. The images suggested that through the provision of latrines women would become empowered in terms of 'finding their voices', participating in public women's meetings, and moving from house to house in order to proselytise about latrines. Staff expected that village women, having learned the facts from project staff and through their own positive experiences, would tell other village women about sanitation units and the reasons for having one, how to get one, and how to use it (Project Social Side 2001). Woman-to-woman communication was expected to increase demand for sanitation units. Although we can be sure that women talked to each other in general, project plans expected women to actively contact other women and discuss with them the value of having a latrine. There was a suggestion in the didactic images that latrine marketing would override social norms about women's seclusion, and that women's empowerment would occur.

Latrines appeared in project materials as a reason for women to leave the house (in order to tell other women about them), but in fact they were marketed as status symbols that increased women's confinement. Fieldworkers addressed the status aspect of latrines by mentioning that they eliminated the need for women to leave the house. Their arguments built on existing distinctions of gender, class, and caste. In rural, northern Rajasthan, class and caste differences between women are distinguishable through women's public visibility (O'Reilly 2006). In contrast to rich, upper-caste women in seclusion at home, women of poor, lower-caste households must work in their families' fields in the public eye. A sanitation unit could increase the status of a poor or low-caste family by removing the need for women to leave the house in order to defaecate. For an upper-class or caste family, a latrine would appeal for the same reasons. Latrines took on meanings as status symbols, in part because of their role in enabling women's seclusion.

Simply having the structure on one's property conveyed status – a latrine need not be used as a toilet for this status to be conveyed. For example, in a village where few families had sanitation units, a Chamaar (*dalit* or so-called untouchable) family with sons in good jobs

built a bathroom which served both practical and display purposes. On spot checks in villages with project fieldworkers, we saw toilet pans covered with a wood plank upon which sacks and boxes would be stacked. Bathrooms were occasionally used for penning goats. How the unit was used did not matter as much as its very presence. Latrines were often proudly spoken of by villagers as something made available to guests, although project fieldworkers would remind families with sanitation units that all household members should use them, not just guests (O'Reilly 2006).

Decisions about siting that curtailed women's usage

Motivated by a desire to increase women's social capital within their households, project staff began insisting that latrine packages be put in women's names. The empowerment objective behind this decision was that if women rather than men were eligible to acquire latrine subsidies (by filling out the paperwork in their names), it would convey status upon women within their households by making them the necessary link to latrine subsidies. But even when a woman did bring the subsidy into her home, placement of latrines in the front of a family's courtyard prohibited their use by women, because that space was used primarily by men and guests. Eventually an effort was made to encourage women to decide on the location of the household's latrine, so that they could choose a place that allowed for discreet access at any time. However, staff had no control at the household level, and could only suggest that families let women take these decisions.

By March 2001, staff were monitoring in which villages women chose the site for sanitation units (e.g. 29 villages between January and March 2001). Field staff reported that in a few cases 'women were not using the facilities. The most important factor was improper site selection of the facilities' (Project Social Side 2001:38). The proper procedure would entail that a 'site should be jointly selected by male and female, and to be reconfirmed by the female head of the household'. But project management realised that 'we [are] facing [a] great problem in this concern [due to the] huge amount of time required to convince the male society about the advantages of women's site selection' (*ibid.*: 38). This statement indicates very clearly that women's ability to use sanitation units is a gendered problem, not one that can be solved by 'women's participation' alone. In the following section, drawing on lessons learned from this case study, I discuss the difference that a feminist analysis of latrine marketing and usage would make to ensure the success of sanitation projects.

Successfully combining gendered participation with sanitation

Much of the existing literature on women and latrines indicates the pressing need felt by women, but does not adopt a critical perspective on gendered approaches to sanitation coverage. The authors claim, like many proponents of participation, that women face the burden of lack of access, and that empowerment will result if the problem can be solved. However, they fail to consider how gendered participatory approaches that place the problem and its solution on women's shoulders increase women's work burden without tackling the fundamentals of women's inequality (O'Reilly 2006). Gender is understood as 'women' and 'men,' instead of as the power relations between women and men that create them as distinct separate categories. Analysis of gender as a relational system is needed if women's participation in water supply and sanitation is to lead to their empowerment and effective sanitation.

A Nepali water and health project purposefully targeted men, women, and children for health training, rationalising that the chances of changing people's behaviour and improving health were greatest if all community members were reached (Pandey and Moffet 2005). Trained

members of staff were able to persuade men to join training sessions, although men resisted sitting with women in such meetings, because health work was viewed as women's responsibility. In this case, separate spaces had to be created for men so that they would attend health training sessions. Instead of making the all-too-common recommendation that women be hired for the purpose of facilitating women's participation (O'Reilly 2006), the need was felt for male trainers so that men would participate. The result of this feminist participatory approach to sanitation – in which gender meant analysing men and women in relation, and included addressing what locational shifts would enable men's trainings – was improved sanitation coverage. Poor households in villages where a gendered approach was taken had twice the percentage of sanitation coverage, compared with poor households in villages where there had not been an attempt to reach both men and women (Pandey and Moffet 2005:202).

However, the goal of increasing sanitation coverage is meaningless unless the sanitation units are actually used. Gendered participatory approaches to sanitation are inherently conservative when they do not question the social inequalities behind the particular difficulties that women face. Too often, latrine building and women's participation depend on appeals to existing social norms about women's modesty, while men's near-total spatial access goes unchallenged. As the project reports acknowledged, fieldworkers realised that convincing men to let women choose the location of a latrine required a significant investment of time. Nonetheless, conversations that entailed convincing men to consider women's choices for latrine siting at the household level could have sparked wider discussions about men's and women's differential access to space in the family compound and beyond.

Women may be the agents best able to promote sanitation among other women, but a host of other factors (for example, latrines as status symbols) play a role in determining whether women do or do not use latrines. In general, both women and men in the project area preferred urinating and defaecating in the open, as opposed to using the dark, close confines of a latrine. Even female project staff working in villages in the daylight hours did not always use latrines that were available. For special segments of the female population, however, latrine use was more consistent. Older people, especially women, declared that they used latrines. The size of the unit allowed for pregnant women's use, and its proximity made frequent urination less of a difficulty. A latrine could provide privacy for daytime defaecation. In rural Rajasthan, menstrual sanitary protection took the form of sand wrapped in cloth, and so disposing of and replacing sand was most easily done outside a latrine, even if being seen was a risk. Rural communities in north India do not consider infant and toddler excrement to be unclean, so women caring for children do not insist on young children using latrines in order to prevent the spread of contamination. However, children's faeces deposited outside latrines could easily be disposed of later inside latrines, and some women realised that this extra step could be eliminated if children simply defaecated into the latrine pan itself, and thus they would carry children to the latrine so they could squat above it. Child care, especially the dirtier aspects of it, was women's work; latrines made women's work of cleaning up after children a bit simpler.

Like many technical development interventions, building latrines created new physical structures but did not remove all difficulties of women's access to facilities. A sanitation unit built near the entrance to the family courtyard meant that women did not feel comfortable using it, since courtyard entrances open on to public lanes (and courtyards are men's spaces when men are at home). Having a latrine at home did not eradicate gendered, social conventions about women's modesty. Latrines did not enable women to move about freely or relieve themselves unconcernedly. Instead, women's need for privacy from men was reconfigured around having a latrine at home. Previously a woman needed to shield herself from men when going to the village outskirts; after a sanitation unit was built at home, its use still entailed not being seen

to do so. Latrines at home may have eliminated men's concern with providing safety for women family members, but for women the need for privacy in public was replaced by the need for privacy at home.

Latrine marketing and usage involve influencing social norms about public and private spaces. Significantly, the family compound is a public space – not the space of women as it had been imagined by project plans (see also O'Reilly 2006). Therefore, facilitating women's empowerment through situating latrines in the family compound would entail (among other things) developing awareness about the consequences of constraints on women's mobility. The overall idea of women's modesty was built upon as a reason for people to acquire latrines, not as a social problem that seriously limits women's contributions and opportunities in society. Technical solutions to women's participation are concerned with an 'effect' (building a sanitation unit), not the social processes that enable or disable that 'effect' (such as men's control of household spaces). In the case of latrine building, the structure may be built, but the spatial inequalities experienced by women may have not undergone any change. Putting latrine subsidies in women's names served only as a technical attempt to increase women's social capital but did not necessarily result either in an improvement in women's social capital (which was never examined by staff as either a baseline or as a project outcome) or in women's access to toilets. The *status quo* remained unchallenged: men's proprietary access to space was not called into question; women's access came second.

Coupling consideration of existing beliefs and priorities (Wakeman *et al.* 1996) with attention to the geographies of defaecation practices at the beginning of a project can enable strategies that encompass the spatial changes necessary for success. For example, for some men with vivid memories of urban public toilets, a latrine is a stinking room that should not be allowed near the house. But such sentiments, when seen from the point of view of women wishing to avoid being seen by the men of the household, can combine to enable siting acceptable to all household members. A decision could be encouraged that placed a latrine at the rear of a family compound, where men would not regularly see or smell it, but women would have easy, invisible access. While such a decision does little to overturn gendered, spatial inequalities, it would enable women actually to use latrines.

In addition, latrine structures themselves create changes, and the changes that they create are influenced by and influence social relations of power. For example, if subsidies enable poor, lower-caste families to participate in latrine building, then latrines become status symbols, in part because they enable the confinement of women. Poor families with latrines may increase their social standing with their neighbours, but it comes at the expense of women's mobility. Although increasing sanitation coverage by marketing latrines as status symbols is not intended to occur at women's expense, a project's latrine-building goals may stand in direct opposition to its empowerment-related goals. Gendered, technical approaches to latrine marketing and usage are not presently designed to handle the social and spatial complexity that surrounds such interventions. More *in situ* analysis and flexibility are needed to determine and shift strategies when competing goals emerge between sanitation building, usage, and women's participation.

Conclusions

Research on women and sanitation to date has not explored the relationship between social norms, gendered inequalities, and access to space. But development scholars and practitioners neglect these relationships to the detriment of project success, specifically when those projects link gender and sanitation. Latrine projects are embedded within social and physical geographies; an analysis of gendered geographies can spotlight how sanitation projects both build

on and seek to subvert existing inequalities that influence access to space and related issues of sanitation.

In this article, I have shown that local gender relations and geographies complicate sanitation interventions. By critiquing the technical solutions sought by policy makers and project planners alike, I have argued that the structure and siting of latrines are important social and material interventions that have political effects in the communities and households where they are built. Although the drinking-water supply and sanitation project grappled with local norms particular to north India, gender inequalities are a global problem. Projects attempting to increase sanitation coverage and usage will undoubtedly confront and influence existing social relations of power, and their corresponding geographies, wherever they operate. The task is to learn for each location the complex relations of power that enable or disable women's participation in latrine marketing and decisions about siting, and their usage of latrines. Only then can projects be designed that incorporate measures to change those relations of power that have the potential to bring about both better community health and women's participation. As feminist critiques suggest, gender relations must be understood in context first.

The findings of this research have wide application for water-supply and sanitation projects insofar as they suggest that latrine building and usage promotion are both technical and gendered political interventions. As feminist scholars of water resources have frequently noted, technical interventions will not work to solve gendered relations of unequal power. Instead these issues of power must be analysed and confronted. An analysis of gendered access to public and private spaces is one way to see afresh the gendered power relations affecting drinking water supply and sanitation.

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Notes

1. Regardless of their age, women living in their in-laws' homes practise *purdah* (literally 'curtain'), which entails remaining inside the family compound, covering their faces (*ghuunghat*), and speaking little or quietly in front of strangers, senior men, and senior women. Unmarried girls who live with their parents do not practise *purdah* or *ghuunghat*.
2. Not storing water also eliminated breeding habitats for disease-carrying mosquitoes.
3. Sanitation units were not electrified, nor did area villages have a 24-hour electricity supply.

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