'Why don't they use the toilet built for them?': Explaining toilet use in Chhattisgarh, Central India

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Poor sanitation poses problems for health and policy. Sanitation policy has traditionally addressed open defecation (OD) by constructing toilets. However, a puzzle remains: in many parts of the developing world, why do people continue with OD despite toilets being built for them? While extant research is insightful, an empirical, socially driven explanation for 'sanitation behaviour' is still elusive. We advance such an explanation based upon fieldwork in central India where the state has built private toilets for villagers. Drawing upon and modifying pragmatic and analytic approaches in sociology and anthropology, we analyse ethnographic examples of individual toilet behaviour to present a social mechanism that explains toilet use (TU) as an emergent social practice resulting from a chain of 'problem situations' experienced by villagers. We find that coercive methods deployed by the state as part of toilet and sanitation policy do not produce durable TU habits, and that good quality toilets are necessary but not sufficient for behavioural change. Instead, we show the need for non-coercive methods of 'nudging' that rely on the dynamics of social learning that may enable context-sensitive policies around toilets and sanitation.

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I
Introduction

More than a billion people in the world engage in open defecation (OD), posing risks to public health and child development (Coffey et al. 2015). Reducing OD is a policy priority for developing societies. Significantly, India contributes about 60 per cent of the world's population that practises OD. Recent policies in India, like Swachh Bharat Abhiyaan (Clean India Campaign, henceforth SBA), have increased household toilet infrastructure, backed by public campaigns and state coercion. However, longitudinal studies point to a substantial puzzle—practices around toilets are not shifting concomitantly from OD to toilet-use (TU). An extensive survey by Coffey et al. (2014) reveals the incidence of OD to be over half in households where the government has either constructed the toilet or provided money and materials for construction. In short, TU lags behind toilet construction, and the gap is substantial and persistent (Coffey and Spears 2018). Policymakers thus face a puzzle, 'Why don't they use the toilets built for them?'

How have scholars explained this puzzle? To begin, stereotypical factors thought to impact switching from OD to TU (e.g., income, education) have been shown to have very low statistical correlation (Coffey and Spears 2017). Scholarship points to several other factors potentially affecting OD and TU—political ecology (O'Reilly and Louis 2014), gender safety and water accessibility (Kulkarni et al. 2017; O'Reilly 2016), availability of technical support (Papafilippou et al. 2011), sanitation behaviour and social norms (Coffey et al. 2017a), and caste (Coffey et al. 2017b; Gupta et al. 2016; Spears and Thorat 2019).

Despite striking insights, most studies only identify 'factors' impacting the phenomenon without embedding these factors within 'social mechanisms' that cause (or enable) the phenomenon. To extend an analogy used by Pierson (2004), we find the above-mentioned studies to be rich in identification of the *ingredients* (factors) but not in specifying the overall *cooking process*, which includes the *recipe*, and the *conditions* for the cooking. This article seeks to explain a social phenomenon by identifying the social mechanisms that produce (enable) it.

We approach this task by taking serious account of the variation in TU in a set of villages in the Mahuvadih *panchayat* (village governing council)

of Chhattisgarh, Central India.[1] We find that some people use toilets, others claim to use them but really do not do so regularly (as found in our long-term observation) and some others clearly do not use them at all.[2] We also find that while some people adopted toilets before their promotion by any government intervention, others stopped using toilets after having tried them out. Again, some social groups use them more than others. For example, Telis, a caste group of traditional oil producers but who now largely engage in farming, use it significantly more than Kamars, a 'tribal' or adivasi group who were traditionally nomadic gatherers and hunters but who are now also engaged in farming after being recently 'settled' by the state. Some variation exists along other axes such as occupation (peasant-farmers vs. shopkeepers vs. wage labourers), age and schooling, but not across gender.[3] In short, we see a good deal of variation within a small geographical area. The puzzle, then, is not only sluggish TU relative to toilet construction but also *uneven TU* (i.e., variation in TU) within small spaces where one would expect greater homogeneity in behaviour.

Attention to variation led us to reconceptualise the puzzle. In locating ourselves in a village context where OD is the default practice, we find that what needs explanation is not OD but TU. OD is a habitual *social practice* that does not assume a set of new and reasoned motivations for social actors engaging in it. On the other hand, TU demands a rationale, and uneven TU demands explanation. Consequently, our research question is the obverse of the government and policymakers' question above. We ask, 'Why do (some) people switch from OD to TU?'

The view advanced in this article is that TU is an emergent social phenomenon, a social practice-in-formation, an effect of the actions of actors who respond (variously) to a 'problem situation' as they perceive it. Social actors when faced with a problem situation mobilise their capacities

[1] All names of villages and individuals have been changed.

[2] Given the large-scale governmental impetus to promote toilet use, which includes punitive practices for laggards, research interviews and surveys need to be viewed as collecting contextually meaningful data rather than 'truthful' data.

[3] On the matter of gender, our experience echoes that of Coffey et al. (2015: 17), who note that 'most respondents find nothing objectionable about women defecating in the open, and many women express positive attitudes toward open defecation for the same reasons that men do'. This is in marked contrast to the official state campaign that constructs narratives of women's modesty and safety that do not resonate with respondents in our study.

variously, including falling back upon old habits with new rationalisations, utilising material resources in new ways, innovating and experimenting, and transforming meanings or symbolic representations. Building upon and modifying Gross (2009), in our analysis, we view social mechanisms as chains of 'problem situations' and individual 'responses', which potentially get transmitted such that a novel 'social practice' (habit) could emerge over time in a population. We argue that over the past few years, villagers of Mahuvadih gradually perceived three 'problem situations' and responded variously so as to cause (or enable) the emergence of TU as a social response with the potential to transform over time into a social practice. These chains of problem situations and responses, which occur over time, help explain our puzzle.

The remainder of the article is organised as follows. Section II locates our approach to 'culture', Section III describes our field context and methods, Sections IV and V describe and analyse our findings. Section VI summarises the conclusions and their implications.

II
The place of 'culture' and variation as explanation: Taking note of the literature

In a series of large-scale survey-based publications on OD, some scholars have ruled out just about every factor imaginable as an explanation for why people continue to practise OD despite the existence of accessible toilets. Coffey et al. (2014) argue that people's behaviour reveals a preference for OD. They explain such a preference for OD by invoking the concept of *culture*, specifically 'how beliefs, values, and norms about purity and pollution of private spaces and of bodies support the practice of open defecation' (Coffey et al. 2015: 3). In a later essay, Coffey et al. (2017b) explore a key cultural reason for continuance of OD, namely perceptions of cleaning latrines as ritually polluting in the context of caste and untouchability. Further, they suggest that 'culture' is inflected by individual-specific 'expectations, rules, and opportunities' to produce individual-specific practices, wherein it is possible that one person prefers TU, while another person from the same household continues to prefer OD. Consequently, they conducted interviews to understand intra-household variation (Coffey et al. 2015). More recently, they suggest that scholarship and policymaking should look at 'household-level mechanisms' and 'social

context' in order to understand how and why sanitation programmes do or do not change 'sanitation behaviour' (Coffey and Spears 2017).

We agree with the explanations that view 'culture' as accommodative of variation. This is a welcome change from operating with an impoverished understanding of human action through rational actor models alone. However, we note that Coffey and Spears (2017) themselves do not construct 'household-level mechanisms' conditional on 'social context'. Moreover, they place all their eggs in the *belief* basket, as their proxy for 'culture' (along with values and norms). In doing so, 'culture', which is a dynamic process of meaning-making and always contested, is reduced to a static set of naively shared beliefs. Such a view of 'culture' does not tell us why some people switch to TU and what this means for their beliefs. People frequently hold contradictory sets of beliefs—they doubt themselves at times; construct meanings that go beyond simply holding a belief; and act based upon unarticulated reasons or without motivated reasoning, except as post hoc rationalisations. Arguably, their key explanation—the untouchability taboo and related beliefs, causing anxieties about toilet pit cleaning—though plausible, given the deep roots of caste in the Indian society, is insufficiently sharp since it does not get down to the dynamics of situated human beings.

The biggest challenge in arguing about 'beliefs' producing an aggregate reality is the tracing of the social mechanisms that connect beliefs (in individual minds) to social practices that produce the macro-phenomenon. What are such social mechanisms? Are they at the household level only? Would they operate at other levels (say, village, community)? How do changing beliefs link to durable social mechanisms? Since Coffey and Spears (2017) do not explore such questions, their conclusions stand in danger of making people who practise OD into cultural automatons determined by and acting out their set beliefs. What is missing is an understanding of where these beliefs come from, how they are socially learnt and how they exist with competing beliefs, motivating desires and perceived opportunities (an unevenly created web of meanings) within which people act and make their lives.

While we recognise the general insights of Coffey and Spears (2017), we also open the black box of 'culture' by exploring individual behaviours, social mechanisms and social practice. We also build on the work of O'Reilly and Louis (2014) who argue that successful toilet adoption depends not only on 'political will' on the part of external interveners

(governments, NGOs) but also 'political ecology' and 'proximate social pressure'. They argue that these form a tripod of broad factors influencing toilet adoption, although they do not trace the processes through which these factors (especially 'proximate social pressure') produce adoption outcomes. Thus, while they argue that this is applied through increased wealth and increased connectivity to the outside world, bringing greater exposure to gendered and generational urban lifestyles, we explore the social mechanisms that could make this happen. Combining Coffey and Spears (2017) as well as O'Reilly and Louis (2014), in the manner outlined earlier, allows us to seek explanations for social phenomena by building an explanation of toilet behaviour centred on human action.

III
Methods and field

Mahuvadih panchayat comprises a set of five villages in the Nagri administrative block of Dhamtari district in the state of Chhattisgarh in central India. Farming is the mainstay of the entire population, with most households holding anywhere around 1–4 acres, while a few have larger landholdings. Most villagers supplement their agricultural incomes through trading in minor forest produce. The major social groups in Mahuvadih panchayat are the Gonds and the Kamars (both adivasis or indigenous 'tribes') and a number of Hindu caste groups that are intermediate in local rank (Telis, Rawats and others). There are no Dalit or Brahmin groups in this set of villages. The data for this article are from one of the main villages, Mahuvadih village (105 households with a majority of Gonds but mixed with Telis and Kamars), with supplementary data from another village of the panchayat, Khedapur (51 households, almost entirely Kamars).

Government schemes starting from 1999 (the most recent being the SBA) have introduced modern toilets in these villages. Given the ample forest cover all around, most residents who practise OD can find easy spaces to do so. Access to water is through a hand pump (there are 14 public hand pumps in Mahuvadih village). Toilets are standard-sized (1 m × 1 m × 1.7 m), without windows, and with an asbestos roof. They are about 30 m from individual homes, typically with cylindrical septic pits of 1 m diameter and 1.5 m height. Occasionally, two neighbours share a toilet.

How do researchers study a practice that they themselves do not engage in? This question is seldom posed in the study of OD. It demands reflexivity on the part of researchers. In advancing his concept of 'participation objectivation', Bourdieu (2003: 284) speaks of 'taking a point of view on one's own point of view and, thereby, on the whole set of points of view in relation to which it defines itself as such'. We have tried to be reflexive about the process by which the subjects of our study become the objects of our probing and how we (researchers) remain the 'knowing subjects' all along. While Ajay established continuous residence for over two years in the village, renting part of the house of an ex-*sarpanch* (elected head of the panchayat is known as sarpanch), Suraj and Balmurli were occasional visitors. It was common knowledge to all that we used the toilet that was just outside the house, built by the owner who was a toilet user. Over time, we were made aware of our own conditions of possibility by the following fact: As researchers who asked others what they thought about toilets, their cultural meanings and how they shaped actions, not once did the villagers ask us why we used toilets, or what beliefs and meanings shaped our TU. Participant objectivation, then, is an effort to realise the assumptions underlying the social world that situates the researcher and the researched within unequal relations of power and status (prestige), frequently as 'developed' and 'backward' (or varieties of the 'non-modern').

Participation objectivation opens up avenues for 'thick descriptions' of the context of decision-making and the emergence of social practices. Although we used mixed methods, we did not survey or do formal interviews until late in our study (after about 15 months). The data in our study are thus qualitative (social histories, personal trajectories of individuals, observation, informal conversations), quantitative (survey questionnaire) and mixed (based on a set of spatial data about the availability and use of spaces for OD by the villagers over time). For this article, we have relied mostly on the qualitative data.

IV
Our findings

Our census survey of 105 households, comprising 391 people over the ages of 10, shows that in the village of Mahuvadih, overall TU is about 66 per cent, but the variations are striking. Here, 25 per cent of the Kamars, 60 per cent of the Gonds and 86 per cent of the Telis use toilets. In the

Kamar village of Khedapur, we found that an overwhelming majority of households practise OD. To trace processes at work, we present six 'pathways' to TU that we came across in our study. These pathways offer glimpses into the dynamics of individual thinking and decision-making of Mahuvadih's residents.

Although 66 per cent of the residents of Mahuvadih village use toilets, they engage in TU for a variety of reasons and have followed different paths to it. These six 'cases' have not been selected in an a priori manner, but they have emerged from considering the *differences* between individuals who we encountered in our observations and discussions. They were chosen not as a representative sample of villagers but rather in order to represent our overall understanding of the different underlying social mechanisms that shape social practices of TU and OD (and the transition back and forth between them) among the residents.

Case 1: Vishnu Ram—The recidivist

Vishnu Ram is a middle-aged Gond man living in Mahuvadih. Many years ago, he worked as *munim* (clerk) with a forest contractor. During that time, he often travelled outside Mahuvadih. In one of his travels, he had the opportunity to meet another forest contractor at the latter's home. It was there that Vishnu Ram saw his first toilet and developed a desire to have one in his home too. Emulating the contractor, Vishnu Ram managed to build a twin-seat toilet with his own money and began using it. Thus, long before the SBA came to his village, Vishnu Ram was an enthusiastic toilet user, as were his wife, sons and their families. After the coming of the SBA to his village, Vishnu Ram became a member of the *nigrani samiti* (surveillance committee) set up by the state to surveil and proscribe OD.[4] Here, he sought to persuade more people in the village to use toilets. Often, he was heard singing praises of the advantages of TU since it provided a *suvidha* (convenience), especially to avoid snakes when 'going out', and the comfort to go out any time, even at night.

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[4] Nigrani samiti volunteers from the village wear uniforms and patrol well-known paths used by villagers to go for open defecation (OD). In Mahuvadih village, the patrols blew whistles whenever they saw someone 'going out' during the early morning hours (4–7 AM). Although some villagers were 'caught', there was no case of anyone paying a fine. The nigrani samiti wound up after a few months.

However, Vishnu Ram slowly lost his enthusiasm. This switch away from TU to OD coincided with the end of the nigrani samiti in Mahuvadih, about a year after its inception. More recently, he was spotted frequently going on his bicycle with his *lota* (mug). In our interviews, he admits, a little shamefacedly, to going back to OD largely because he felt that he would not be fined now. In further conversations, Vishnu Ram admitted that his toilet did not suit him anymore and downplayed his previously articulated reasons. Nonetheless, he spoke about how having a toilet had proved useful when his son had diarrhoea and was in the hospital.

Vishnu Ram's trajectory includes an initial learning experience observing the toilet at his workplace, a stint in the nigrani samiti that temporarily boosted his rationalisation for TU, and then a post-*nigrani samiti* phase when he gave up TU. The fact that he initially built the toilet with his own money speaks to the enthusiasm with which he adopted TU. This may have been due to a 'quest for prestige' associated with the higher status of his workplace and boss as compared to the village and villagers. This quest for prestige competes with another possible force shaping him— the convenience offered by the toilet as per his own admission. However, the fact that he denied the same and flipped once he left the nigrani samiti compels us to view convenience as a temporary rationalisation for him. This could have been due to the low toilet quality and actual TU not measuring up to his expectations. His earlier fascination, however, allows him to acknowledge that the toilet has its uses (for instance, during sickness). Vishnu Ram is a TU recidivist, reverting to the default OD social practice. Coercion (via the nigrani samiti) energised him, but this enthusiasm fizzled out due to lack of convenience, perhaps, compounded as he ages. He does not have a resource problem (there is a tube well right in front of his house). He could be an example of someone living with 'cognitive dissonance', balancing two psychologically inconsistent cognitions (Hedström 2005: 51).

Case 2: Thakur Ram—The reluctant user

Thakur Ram is a Kamar man in his mid-50s. He lives in Khedapur village, where most households are Kamar. He is a steady and willing interlocutor on a variety of issues concerning life in Khedapur. He alerted Ajay first about the fact that no one in Khedapur (except his family) used the toilet even though toilets had been constructed in Khedapur households through the SBA. Interestingly and in contrast with other villages, people in

Khedapur openly admit to practising OD. Although a nigrani samiti was formed here, it had almost no impact on TU. State coercion did not seem to have taken root in Khedapur, and OD continued as the default social practice. Thakur Ram asserts that people in Khedapur did not care for the toilet since they are not afraid of the authorities who threaten them with sanctions (for instance, cutting subsidised rice through the Public Distribution System—PDS) if they practise OD. As he noted, when residents of Khedapur hear any rumours of state officials coming for an inspection of the toilets, they 'simply take a cup of water and throw it in the toilet bowl' to show that it has been used.

When asked about his own TU, he wryly noted, 'It is not I who built the toilet. The government built it for us'. He continued, '…What can I do, my friend? In my home, my wife is the Ward *Panch* [elected member of the panchayat]. If we ourselves do not use it [toilet] then what will the others say?' When asked whether or not he uses the toilet of his own 'free will', he said, 'I started using it due to pressure from the government, but now it has become a habit'. He then matter-of-factly contrasted his own TU with the fact that 'even Gonds' (from Mahuvadih) and 'even the women' (in his village) freely 'go out' for their business. His comments challenge the general stereotype that Kamars are the sole 'laggards' in TU, and the state's construction of women as most in need of toilets (due to OD purportedly being 'unsafe' and 'inappropriate' for women's 'modesty').

Thakur Ram is a complex man, one of the few men (Kamar or otherwise), who does household work and cleans the toilet (taking turns with his wife who attested to this).[5] When asked whether the toilet had added to their burden in terms of cleaning work, he dismissed the notion that toilet cleaning is much work and retorted by asking whether it was not work to walk to the jungle to 'go out'? He then paradoxically complained about the discomfort in going to a toilet that was too small and hot due to the asbestos top that enclosed the space, and he even admitted to OD being 'rational' in such a context. All the while, Thakur Ram expressed frustration with his fellow Kamars of Khedapur for not doing TU, but he blamed the state for not making TU attractive:

[5] In most households in our study, toilet cleaning was left to women (usually the daughters-in-law).

Here, the entire jungle is available. One's 'work' is done with one bottle of water. Who will fill an entire bucket of water and go sit in the 'room' [toilet]? Here people are not able to keep their homes clean, how will they maintain the toilet? Further, most of the residents of Khedapur stay in the *lari*.⁶ They think of their home only during the rains. So why will anyone come home to use the toilet, when they can simply 'go out' anywhere in the jungle?

Thakur Ram clearly shows concern for his wife's official position and what it entailed in terms of his practising TU. As it turns out, he and his wife did 'go out' for some time, even after she became an office-holder. It was only later, with some coercion by higher officers of the state, that they both started TU. Thakur Ram's actions are thus shaped by the status of his wife's official position, his urge to live up to the expectations of this office and his affection and partnership with his wife. His admitting to TU as a habit and rationalising it through his actions (taking a role in cleaning and maintaining the toilet, and claiming that this does not add to the burden of TU) are also indicative of his positive view of the toilet.

Like Vishnu Ram, Thakur Ram's views are shaped by the coercive power of the SBA, but unlike Vishnu Ram, he does not try to convince others about TU, and he shows a clear disposition to accept the toilet. There is more than a hint in Thakur Ram of a deeper disposition to think that TU is 'appropriate' (a prestige bias similar to Vishnu Ram), as revealed by some of Thakur Ram's own preferences and behaviour of setting himself apart and a little 'above' his fellow Kamars. For instance, he only drinks 'English liquor' unlike most others who prefer the local brew, *mahua*, and talks far more with the schoolteachers who come from outside his village than do his fellow villagers. Nonetheless, Thakur Ram is able to see why other Kamars do not practise TU. In sum, Thakur Ram is a nonconformist in Khedapur and yet appears 'normal' in the eyes of his caste brethren (being an avid hunter and engaging in the other activities Kamar men do). While they do not mock him for using the toilet, he too revels in frequently acknowledging the pleasures and rationality of 'going out'.

⁶ A makeshift temporary shelter on the edge of the field, where Kamar families usually stay for extended periods of time.

Case 3: Mohini—The 'official' acceptor

Mohini is a Teli woman in her 30s and lives in Mahuvadih village. She got one of the first toilets built when the SBA scheme came to the village. Commenting on the fact that the early toilets were much smaller in comparison to the current ones, Mohini noted, '[We built it] only for guests who wished to use it. Our habit is to go out'. However, things changed when Mohini became the vice-president of the panchayat in 2015. As she put it, the government needed to meet its 'building targets' and put pressure on panchayat officials to build toilets first for themselves and use them too. It was then that she, not unlike Thakur Ram and his wife, started TU.

Mohini is known to berate others in her village who continue to practise OD. According to her, many residents in her village including those from the Teli community still 'go out'. Notably, in our conversations, she unfailingly presented herself in the voice of the government. She bemoans the fact that the nigrani samiti no longer operated in her village. For her, the dilemma is of living among the same people who she is supposed to govern. She said, 'The government wants to stop the rationed PDS [food grain] to those who "go out". However, how many people's PDS can I stop, brother? Everyone is known to me in this village'. Thus, unlike Thakur Ram who faults the state ultimately for not making toilets attractive to fellow Kamars, Mohini bemoans the limits to governing fellow villagers.

On another occasion, at an informal meeting in her village, Mohini's 'state-speak' came out strongly. She narrated an earlier incident in which someone had justified not using the toilet by complaining that the cover for their toilet's septic tank had been stolen, and that the panchayat needed to replace the cover. Mohini had feistily retorted then, 'Why will the panchayat replace the cover? Having built the toilet once for the people, whose responsibility is it to maintain it? Will the panchayat keep doing this work all the time?' However, the response to Mohini's narration this time was different. Many at the meeting retorted that it was, indeed, the responsibility of the panchayat since no one had requested toilets in the first place, and the government had simply foisted them. Put on the defence, Mohini insisted that she was only doing the bidding of government administrators.

In her conversations with us, Mohini did not articulate any rationale offered by the SBA for promoting toilets. Nor did she show cognisance of factors that shaped people's practices of 'going out'. This was in contrast to both Vishnu Ram and Thakur Ram who articulated these

reasons fairly well. Her own unapologetic TU conformed to the situation of an 'official-acceptor' of TU—accepting TU as part of her office and, to some extent, her Teli community norms (Telis having the highest rate of TU in Mahuvadih), and perhaps at a deeper level, she thought of TU as 'appropriate' behaviour. She attempted to coerce rather than convince fellow villagers of the appropriateness or positive features of TU.

The next three cases describe responses that contrast with the first three in a major way. While the first three responses were primarily shaped by the coercive power of the state in imposing TU, the latter three are shaped by ideological forces. Siyaram openly rebelled against what he perceived as the ideological power of the state, whereas the couple Pahad Singh and Sita Bai and Tukaram were influenced by the broader forces of 'modernity'.

Case 4: Siyaram—The ideological resistor

Siyaram is an elderly Teli man, about 60–65 years of age. It is well known that Siyaram 'goes out'. This occurs despite the fact that he is also Mohini's father-in-law, living in the same house as her and among Telis who have the highest rate of TU among all social groups in Mahuvadih. When asked about the toilet and the nigrani samiti, Siyaram critiqued the SBA: 'In this village, why is there a need for a toilet? There is no space in the city, but here, there is ample jungle all around. Then what is the necessity of a toilet?' Pulling no punches, he asked, 'Why is the government doing *dadagiri*?' *Dadagiri* is a common term used to describe bullying. From Siyaram's perspective, the toilet is an illegitimate imposition upon villagers. Denying its purported advantages as claimed by the state campaign (such as its convenience and its safety for women), he simply noted that people had been 'going out' for generations without any complaints.

He then trained his guns at the government officers: 'One lota of water used to be enough, now we need one bucket of water. Now the time has come when the *sahab-log* [a term of exaggerated reverence and a mocking gesture for 'upper-class' people, in this case, government officers] will tell us where to eat, where to sleep, and where to shit. We are left with no free will'. Siyaram added that the SBA was part of state policies and practices of surveillance and social control. When asked why previous schemes did not quite work, he pointed to the coerciveness of the current scheme, saying, 'Earlier, they [government] only talked about it; now this government has

made toilet use the "law" leaving people with no alternative'. When asked to clarify what the 'law' was about the toilet (since there is no such law, in fact), Siyaram argued compellingly that it was a de facto 'law' since if one did not use the toilet and insisted on 'going out', then one was fined ₹500 or lost one's rights to the PDS. In presenting himself thus, Siyaram seems to be the clearest 'ideological rejecter' of the toilet.

Case 5: Pahad Singh and Sita Bai—The enthusiasts

Pahad Singh and Sita Bai are Gonds, between the ages of 50–60 years, married and living in Mahuvadih along with their two sons, their wives and four children. All of them except for one son, use the toilet. Pahad Singh had a disability due to a paralytic attack a few years ago. Sadly, he passed away in 2017. Both Pahad Singh and Sita Bai had desired to have a toilet in their home long before the SBA. As the panch 10 years ago, he had had the opportunity to travel outside the village to the city, where he saw that people had private toilets in their homes. As he put it, in contrast, 'Our people have to take their *dabba* [cans] and go out into the jungle. Since then, I had thought that there is a need for toilets in our own homes too'.

Although they did not have the money at that time, he and his wife made a pit in anticipation with their own money but had to wait a few more years for the government scheme to actually pay for the toilet construction. Further, both Pahad Singh and Sita Bai did not mind the extra burden of procuring and carrying water from the tube well, which was managed by their 10-member family. They held that now that they had a toilet, they did not have to 'go out' and sit under the forest cover or fear passers-by there. In sum, Pahad Singh and Sita Bai, unlike most others we met, seemed to be enthusiastic users of the toilet, having put in far more effort and personal money to build and maintain their toilet. While this appears to be only about the suvidha that toilets provide vis-à-vis OD, their more general views indicate that their response was also partly shaped by an attraction to this new technology.

Case 6: Tukaram—The ideological user

Tukaram is in his 30s, and a Halba man (an adivasi group, one of only two such families in Mahuvadih). From a very young age, he admits to have felt *sharam* (shame) at having to shed his clothes (when going for a swim with friends) or going for OD (and having to do it in the company

of others). When he was 10 years of age, he went to live with his *mama* (mother's brother) in Sandul town, where he began using a toilet, which was inside the home and had plumbing. This had allowed him to nurture his sense of 'modesty'. Later, he studied at Nagri College (about 25 kilometres from Mahuvadih and the only town in the block) and is the most formally educated person in this set of villages (having two M.A. degrees in the humanities). After graduation, he got a job as a schoolteacher in a neighbouring district, where he worked for a few years. He has been back in the village for a year and is looking for another teaching job.

In our interactions with Tukaram, he frequently categorised fellow villagers as 'uneducated' and, therefore, in his view, they did not see the value of toilets. He dressed differently (wearing Bermuda shorts and T-shirt even while doing farm work), and in his conversations with us and other villagers, he frequently inserted English words and phrases. An avid TV news watcher in a village where almost no one watches the news, Tukaram is our best example of an individual for whom TU has become a habit. He was exposed to it very early in life, felt some bodily discomfort in practising OD and ideologically embraced it as a 'modern' and appropriate trait without being coerced.

The above six pathways of individuals from the major social groups in Mahuvadih provide distinctive descriptions of the factors and processes at work in shaping toilet behaviour. In the next section, we construct an explanation for the puzzle we began with.

V
An explanation for the puzzle

How can the aforementioned cases help us to identify social mechanisms as chains of 'problem situations' and to understand individual 'responses' as having the potential to be transmitted socially such that a novel 'social practice' (habit) is 'installed' over time? The three key terms—*problem situations*, *responses* and *social practice*—need elaboration. We do this below through our readings of Gross (2009), Bourdieu and Wacquant (1992) and Hedström (2005).

Problem situations and responses

Working from within the pragmatic tradition, Gross (2009) views humans as quintessential 'problem-solvers', solving 'practical problems that arise

in the course of life'. Further, he insists that 'problem situations' are 'always interpreted through a cultural lens' (pp. 366–67). The insistence on practical action and the centrality of 'culture' as a meaning-making activity are welcome focal points within explanation. Yet, problem situations are not merely 'discovered' through the lens of culture. Actors actively construct 'problems' through interpreting a situation. Culture is the human capacity that *creates* such a 'problem situation' and enables its recognition as 'fact' by social actors.

For instance, in all the villages of Mahuvadih panchayat, rumours circulate about the punitive action (fines and loss of access to the PDS) for those who do not use toilets. Indeed, none of these villagers have faced punitive action thus far for not using toilets. The Kamars of Khedapur were relatively unmoved by the circulating rumours, not viewing them as a threat or challenge to their daily lives. At some point, they cognised or acknowledged the need to do something for a changed situation (i.e., the 'fact' that a government official would occasionally visit the village to check if people were using their toilets). They then chose a path of minimal action (namely throwing some water in the otherwise unused toilets), an action which did not change their existing mode of social life in that domain (namely going out for OD). On the other hand, people in Mahuvadih village, across social groups, actively interpreted the circulating rumours as a threat or challenge to their daily lives and started conforming to the toilet regulations. Subsequently, in a short while, Mahuvadih village had constituted a nigrani samiti. This contrast is not simply a matter of how the larger configurations of power operate differently in these villages. It is also a matter of how the 'thick webs' of moral assumptions, beliefs, commitments and obligations that all humans create and live within shape human actions (Smith 2009: 8). In Khedapur, for instance, the authority of the nigrani samiti is undermined in everyday talk. Thus, it was pointed out matter-of-factly by some villagers that the volunteers who made up the nigrani samiti in Khedapur themselves 'go out' to defecate while wearing their uniforms.

At some point in time, social actors' 'sense' (cognitively and in embodied ways) that OD (their default social practice) faces some hurdles, maybe a challenge or a conflict with a competing possibility. Such 'sensing' tends to become a practical problem for them. Again, they sense that some change in the local context is afoot but may not cognise or identify 'it' as a problem that requires (immediate) action. This 'sense' of a conflict

leads social actors to recognise their being within a *problem situation*. Consequently, we view 'problem situations' as temporal moments when social actors construct their situation as problems due to conflicts that have become 'facts' to contend with in their lives, problems to their quotidian social reproductive rhythms. Over time, the conflicts build up and can no longer be neglected or accommodated within the existing mode of social being. In short, they become contradictions and are viewed as a 'fact' demanding action—maybe a review (or rethinking, reassessment, reconfiguration, rehaul or rejection) of an established social practice (namely OD), or its replacement or a gradual realignment of life with a new social practice (namely TU).

Further, 'culture' quintessentially works through the power to name, to make meaning and impose one's meaning as a basis for social interaction. This makes culture contested even within a relatively close-knit structure such as a family, household or a community. Consequently, variations are part of any sociocultural group or social space. Meaningful entities like the 'toilet' or the social practice of OD, which are both cultural artefacts, have a different significance even within a relatively homogenous population. Thus, it becomes problematic to assume any easy agreement about whether a problem situation exists at a point in time, and its contents. In turn, it raises the possibility that no amount of chains of problem situations and responses *at the level of the individual* may produce a coherent social mechanism, which causes a macro-phenomenon (in need of explanation). It is here that the terms 'response' and 'social practice' gain significance.

Gross (2009) lays out in commendable comprehensiveness the ways that social actors mobilise responses to problem situations from their repertoire of habits (or habit sets). But in our view, he makes too fine a distinction between his focus on practical or routine problem-solving and what Bourdieu and Wacquant (1992) call 'social positioning' (*prise de position* or position-taking or strategising) that social actors go through while mobilising various forms of capital available to them. Consequently, the link from individual actions to a social practice are not made clear by Gross who ultimately seeks to keep the pragmatist model of action 'thin…at the meso- and macro-levels', preferring the micro or individual level (Gross 2009: 368).

Our view is that problem situations *qua* conflicts (that are identified later as contradictions) are experienced or 'sensed', not by isolated and
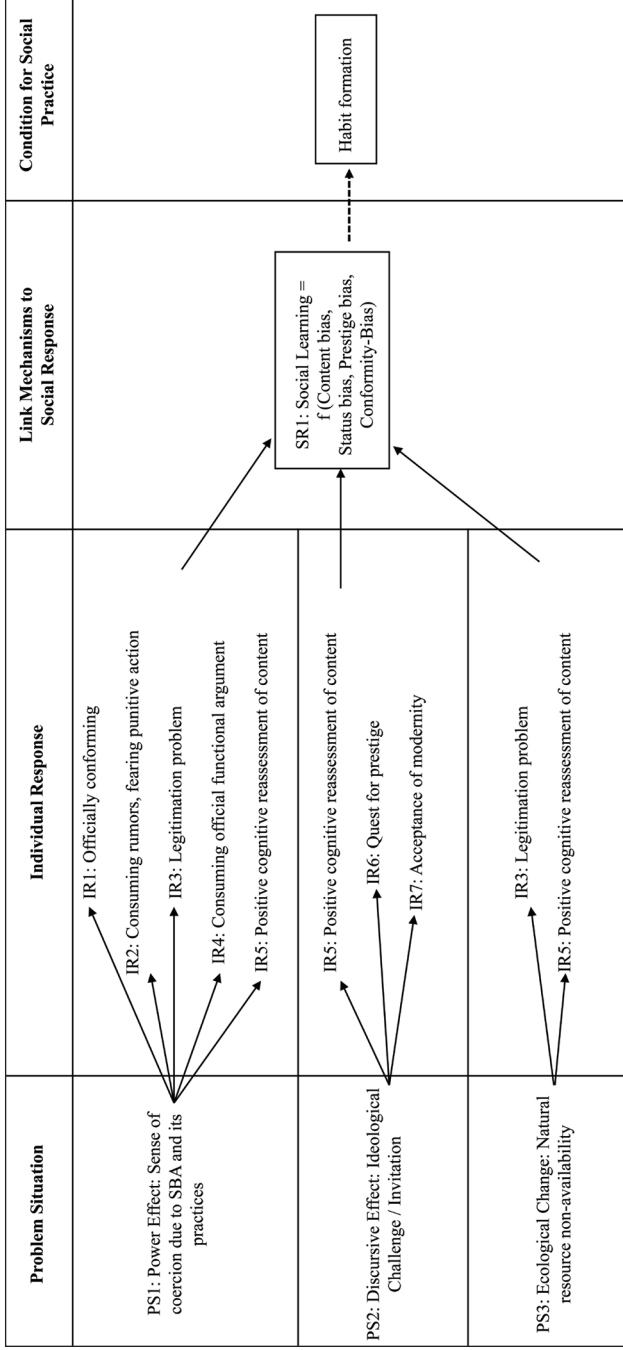
independent individuals, but intersubjectively through social interactions. Here, viewing individual social actors as shaped by 'structured individualism' (Hedström 2005), or 'regulated improvisation' (Bourdieu and Wacquant 1992: 132), offers ways to draw out the links from the individual to the social. The presence of structure within the individual is captured by the concept of *habitus* or 'durably installed dispositions' that allow actors to engage in position-taking in regulated ways (Bourdieu and Wacquant 1992). From a different tradition but with a similar objective, Hedström (2005) sees social practice through the prism of interlinked desires (D), beliefs (B) and opportunities (O)—what he calls the DBO matrix—to resolutely 'build up' from motivated human (individual) action.[7] Such views dissolve the analytic distinctions of structure/agency and micro/macro levels of society, and they show how individual responses to problem situations enable the emergence of social practice.

In our understanding, this means that the individuals and the trajectory of their coming to engage in TU in the previous section are but 'entry points' for our analysis. They are *individual responses*. What needs to be shown is how they build up as *social responses* that enable (or cause) social practice. To do this, we view a social response as *that action by an actor which responds to the actions of other actors*. Such a view allows us to see how individual actions build into a social process. As we will see in the following, this implies socio-cognitive processes like *social learning*, which characterise human sociality. Further, social responses enable *social practice*—which has been characterised as the 'prereflective, infraconscious mastery that agents acquire of their social world by way of durable immersion within it' (Bourdieu and Wacquant 1992: 19).

We are now in a position to construct our explanation. We ask, what are the problem situations for which the individual responses in the cases of Vishnu Ram, Thakur Ram, Mohini and others could lead to social responses that cause (or enable) TU as social practice in Mahuvadih. We present our analysis in Figure 1.

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[7] Our cases above implicitly point to acquired desires and some motivated action by individuals. We note that Hedström's (2005) notion of opportunity (O) too is culturally mediated. A toilet may exist and be easily accessed, but it may not be perceived as 'fit' to use. It only appears as an opportunity to those who have sensed a problem situation.

Figure 1
Social Mechanism Chains for TU

Problem Situation	Individual Response	Link Mechanisms to Social Response	Condition for Social Practice
PS1: Power Effect: Sense of coercion due to SBA and its practices	IR1: Officially conforming IR2: Consuming rumors, fearing punitive action IR3: Legitimation problem IR4: Consuming official functional argument IR5: Positive cognitive reassessment of content	SR1: Social Learning = f (Content bias, Status bias, Prestige bias, Conformity-Bias)	Habit formation
PS2: Discursive Effect: Ideological Challenge / Invitation	IR5: Positive cognitive reassessment of content IR6: Quest for prestige IR7: Acceptance of modernity		
PS3: Ecological Change: Natural resource non-availability	IR3: Legitimation problem IR5: Positive cognitive reassessment of content		

Source: The authors.

Column 1 presents three *problem situations*—power effect (PS1), discursive effect (PS2) and ecological change (PS3)—that meet the criteria detailed in the earlier part of this section: they are constructed within culture and appear as contradictions to be contended with by some action. Thus, the early Vishnu Ram faced a conflict (PS2) in his OD practice when he saw his boss using a toilet. Similarly, Thakur Ram and Mohini faced conflicts (PS1). Thakur Ram's dilemma was whether he should show support for his wife (practising TU) or conform with the default OD practice, even while actively assessing TU. In contrast, Mohini, having ostensibly accepted TU openly, nonetheless, faced a conflict of how to present herself in an empathetic light to fellow villagers who openly admitted to practising OD. Again, whereas Siyaram faced the conflict (PS1 and PS2) of allowing the state to dictate terms, and hence of assessing the legitimacy of TU, Sita Bai, Pahad Singh and Tukaram faced the conflict (PS2) between the default OD practice of their fellow villagers and the positive content of toilets and/or the modernity argument it represented. The third problem situation (PS3) has not been captured in our six cases. However, we anticipate this problem situation, currently latent in Mahuvadih, to take shape with the creeping 'enclosures' of forest areas as a result of state policies. Already, villagers in this region are being slowly proscribed from collecting wood for fuel, small-game hunting and even some minor forest produce that they have collected and traded for generations. As open space reduces, people's sense of a problem situation comes into focus demanding action.

Our six cases yielded a number of *individual responses* (Column 2) to these problem situations. Mohini and Thakur Ram exemplify IR1; many villagers in Mahuvadih IR2; Siyaram the opposite of IR3 (i.e., illegitimation); the early Vishnu Ram IR5 and IR6 with the later Vishnu Ram rejecting IR5; Sita Bai and Pahad Singh, Mohini and many other Telis IR5; and Tukaram IR5 and IR7. The figure also illustrates how the problem situations generate individual responses. The individual actions of (the later) Vishnu Ram, Thakur Ram, Mohini and Siyaram arguably arise from PS1; (the early) Vishnu Ram, Mohini, Thakur Ram, Sita Bai and Pahad Singh and Tukaram arise from PS2; with PS3 being a latent problem for many particular parts of the village facing enclosures. Note that cognitive reassessment of content (IR5) is a possible response in all three problem situations. This is because any change in the problem situation (through power, discourse or ecology) can trigger a

cost–benefit recalculation on the part of the individual.[8] The social actor then cognitively reassesses TU.

Column 3 shows how individual responses (Column 2) could be transmitted to the rest of the population, that is, become *social responses* or actions by actors who respond to the actions of other actors. Drawing upon the scholarly literature on how cultural traits are transmitted (Sperber 1996), we identify one link mechanism (SR1)—*social learning*—largely comprising the activity of 'imitation' (when individuals observe others using the toilet and decide to imitate it). Social learning (SR1) enables transmission of a trait (TU in this case) even when not every social actor senses the problem situation (PS1-3). This is because SR1 introduces what are called 'transmission biases'—selected tendencies that favour transmission of one cultural variant over another within a population (Richerson and Boyd 2005: 60). In our view, SR1 could potentially introduce four kinds of 'biases' or socio-psychological processes that could aid transmission of a trait like TU in Mahuvadih.

First, 'content bias' refers to the tendency for some people to imitate TU, due to perceiving it as an effective (i.e., more adaptive) solution to a changing environment, signalled by the 'problem situation' they experience. Thus, some villagers admit that toilets are ideal when someone falls ill or has a disability, and hence it confers a convenience that makes it better than OD. Such individuals are not common yet in Mahuvadih, a point that may be linked to the low quality of the toilets (for instance, many toilets were constructed with poor quality material, were very small, windowless and frequently had leakages in the septic tank). Second, 'status bias' refers to the tendency of for some people to imitate TU due to it being practised by individuals enjoying a high status in the community, for instance, the early Vishnu Ram (being an articulate ex-panch) or Tukaram (being a young, educated 'modern'-minded person). This too has not quite produced many imitators, given that status differences with respect to TU have yet to develop in a clear way in Mahuvadih, both within and across the major social groups. Third, 'prestige bias' refers to the possibility that the toilet itself acquires a status of a prestige good and hence is favoured

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[8] For instance, we can imagine situations where TU is viewed as a 'time-saving' practice by people in ways that are relevant to their lives. This sometimes occurs in the case of women who have very little time to spare (juggling household chores and maybe childcare), but not in the case of women who have the time to practise OD.

by some. Ironically, the fact that toilets are built by the state for everyone precludes the toilet from being viewed in this manner.

Finally, 'conformity bias' refers to the tendency of some individuals to adopt TU due to the need to conform to the growing numbers in the community who adopt TU over time and in the manner described above. This is when TU tends to become a 'norm' and exerts its own pressures. As discussed earlier, norms are formed intersubjectively through social interactions. Thus, as more people practise TU *and* talk publicly about it (including publicly representing it through signs in the village) as being 'appropriate' to their lives, TU tends to become a social response of the residents. We are ultimately then left with the possibility that once SR1 is in place, it brings in various biases that organically transmit TU within populations, with the possibility that it may become a habit over time and gain durability as a social practice (SP1, Column 4).

In the following, we specify the social mechanisms as they exist now but note that it also allows a dynamic representation of a fluid situation. The following chains, in our view, explain Mahuvadih:

1. [PS1 – (IR1, IR2, IR3, IR4, IR5) – SR1],
2. [PS2 – (IR5, IR6, IR7) – SR1 – TU as habit] and
3. [PS3 – (IR3, IR5) – SR2]

Chain (a) above produces TU as a social response based entirely on official (state) coercion and some consequent social learning. This tells us that even though SR1 was instituted to some extent within the population, it is unstable. Arguably, even if TU may acquire norm status, it would still be reflected upon in public discourse and popular narratives and may come to be perceived as illegitimate and a problem for a democratic society. Complicating this is the possibility that IR5 is also not shared widely in the population. Chain (c) may also produce an instance of TU adoption as a social response due to the thinking of OD as a problem stemming from structural coercion (state policies of 'enclosure'). Again, there is the possibility that people may seek to revert to OD were it possible. Since that option may be ruled out here, it may go further than chain (a) and lead to habit formation. Yet, given that it is not democratically achieved, chain (c), therefore, shares with (a) the problem of legitimacy for TU and hence may be unstable.

It is only chain (b) that is thus far capable of producing a durable adoption of TU (individually and socially) in Mahuvadih. The combination

of IR5, IR6 and IR7 is key here. Although content bias has not set in at Khedapur (because IR5 is not in operation), it is in existence to some extent in Mahuvadih. Notably, the absence of IRs derived from PS1 possibly allows IR6 and IR7 to take root in such a manner that TU gets a chance. The 'low quality' of the toilets, articulated by many villagers in Mahuvadih as a hurdle to TU adoption (lack of IR5), may turn out to be not as strong as the pull of IR 6 (e.g., Pahad Singh, an ex-panch, continued with TU after leaving office unlike Vishnu Ram) and IR 7 (e.g., Tukaram and some others like him). Hence, the fact that two-thirds of Mahuvadih villagers practise TU is also a testament to the variability of what a 'good toilet' means to people. Thus, on its own, IR5 is not enough to produce link mechanisms to social response and habit formation. It needs some other discursive mechanisms, chief among which could be IR3 (legitimacy), combined with IR6 and/or IR7.

Our fieldwork was conducted at a time of TU that makes Mahuvadih at best a 'transition village', where problem situations have been sensed, but where IRs have yet to be transmitted durably to the population. Khedapur is unlike Mahuvadih since its residents have not even sensed problem situations. Consequently, none of the 'chains' of social mechanisms summarised earlier have yet produced TU as a social practice in Mahuvadih.

VI
Concluding remarks and policy implications

Explanations need a degree of *comprehensiveness* (i.e., accounting for multiple scenarios that may be at play and variation within groups), *plausibility* (i.e., keeping the explanans close to the reasonableness of real life processes, a reasonableness that admits to conflicts and contradictions in knowledge or cognition, and emotions, and hence in motivations of humans), and some level of *parsimony*. We have advanced an explanation based on social mechanisms that build up from micro-realities to macro-realities in a causal manner. Our modified use of problem situations (insisting on conflict sensing), and distinction and linkage between individual and social response, has allowed us to specify real and realistic (even if not directly observable) mechanisms that enable the transmission of TU as a cultural trait within populations. Attending to power dynamics and ecological factors at work allowed us to bear in mind the ways that

politics shapes technological adoption. In the meanwhile, the fact that villagers (who make up about 90 per cent of people engaging in OD)[9] have their own 'rational' ways of engaging in habitual and innovative behaviour has hopefully been clarified.

Note that although 'beliefs' are not represented explicitly in our explanation, they operate as part of the cultural shaping of responses. The 'beliefs' that were articulated by subjects during our fieldwork do not resonate with the analysis by Coffey and Spears (2017): people in Mahuvadih do not seem to be worried about the pit and its eventual cleaning. This is possibly because Mahuvadih panchayat has no 'untouchable' castes or any social group structurally coerced to empty the pit. On the point about caste beliefs, we are studying another village where dalit castes reside in significant numbers and where IRs and SR1 are more stably installed.

Our study offers a critical perspective on the growing concern within 'Community-Led Total Sanitation' (CLTS)—an action methodology for mobilising communities to eliminate OD—for context-sensitive policy, design and training (Bongartz et al. 2016). It urges attention to 'explanations' in designing policies for behavioural change, consideration of the implications of coercive methods of state and non-state actors and reflexivity about data collection—and it challenges us to rethink basic assumptions about OD. Highlighting the adverse effects of OD on health and safety, policy thinking in India has framed OD as a 'problem' to be solved through TU. To address it, policy in India and elsewhere initially adopted a supply-side perspective: subsidising and helping build toilets. Given that adoption of TU practices was limited, later policies attempted to impact behaviour, not just create infrastructure.

Often, behavioural interventions to induce switch from OD to TU have taken the shape of coercion—financial penalties and threats to stop state subsidies, use of whistles to deter OD and shaming (Ajay 2016). Non-coercive interventions have been rarer. Tagat and Kapoor (2018) suggest that sacred imagery in places of OD can induce a switch to TU.[10] Haryana

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[9] The 2011 Census estimates that 92 per cent of households without access to a toilet were rural. The 2012 India Human Development Survey (IHDS) estimates that 89 per cent of households reporting OD were rural (available at https://www.icpsr.umich.edu/web/DSDR/studies/36151, accessed on 15 August 2019).

[10] However, the logistics of doing so, especially in open rural spaces, appear insuperable. Further, there is an element of structural coercion (enclosures), as discussed in the text.

state tried a social marketing campaign encouraging brides' families to make marriage conditional on toilet construction by grooms' families.[11] Our exploration of OD and TU has led us to explore an under-researched phenomenon: how does the state construct and realise policy? How, in other words, does the everyday life of the institutions of the Indian state (from the state capital and district level to the village panchayat), actively conceptualise, shape, operationalise, implement and construct meanings in the process of 'doing bureaucracy'?

Our research has implications for the policy paradigm described earlier. First, it is worth countering the macro-assumption that OD is a 'problem' everywhere. No doubt OD can have adverse health and other impacts. However, these vary by context, and we find little evidence of adverse impact in and around Mahuvadih. Second, the quality of the toilet matters in shaping its use. Although this is a somewhat obvious point, the history of toilet construction by the state in Mahuvadih and elsewhere suggests that scant attention is paid to it. Toilets constructed as part of past and present policies are cramped, ugly and uncomfortable places, often with no water access and poorly built septic tanks that can produce ill health. This is one reason why many villagers in Mahuvadih did not see suvidha in TU. Third, coercive policies (fines, threats of stopping subsidies) are inadvisable, both because of their patronising, unjust and non-democratic nature and because they do not yield durable social practices, as we have argued in the case of Mahuvadih. Fourth, in contexts where OD is, indeed, a problem, to induce a durable behavioural switch to (good quality) toilets, an intervention would have to (a) demonstrate in the field that those specific toilets do, indeed, provide suvidha in those particular contexts *and* simultaneously also (b) activate social mechanisms that associate TU with status and prestige, leading eventually to increasing conformity and therefore durability in the new social practice. Note that both (a) and (b) are deeply contextual, countering the current policy stance of macro-level 'silver bullets' as policy recommendations. Suvidha, status, prestige and conformity are all matters that have to be understood and negotiated in local contexts. Failing that, we get *acontextual* presumptions about OD as problem, toilet construction as solution and coercion as means—none of which produce durable changed social practices.

[11] Doron and Raja (2015) critique the policy as reinforcing the gendering of public spaces (namely 'protecting' women from unsafe public spaces), as well as glossing over the realities of gendered violence and inequality within private spaces.

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REFERENCES

Ajay, T. G. 2016. 'How "Swachh Bharat" is Being Forced Upon Chhattisgarh Villagers.' *The Wire*, 15 December. (Available at https://thewire.in/government/open-defecation-swachh-bharat. Accessed on 7 February 2020).

Bongartz, Petra, Naomi Vernon, and John Fox. 2016. *Sustainable Sanitation for All: Experiences, Challenges and Innovations*. Rugby, UK: Practical Action Publishing.

Bourdieu, Pierre. 2003. 'Participant Objectivation.' *Journal of the Royal Anthropological Institute* 9(2): 281–94.

Bourdieu, Pierre, and Loïc J.D. Wacquant. 1992. *An Invitation to Reflexive Sociology*. Chicago, IL: University of Chicago Press.

Coffey, Diane, Aashish Gupta, Payal Hathi, Nidhi Khurana, Dean Spears, Nikhil Srivastav, and Sangita Vyas. 2014. 'Revealed Preference for Open Defecation: Evidence from a New Survey in Rural North India.' *Economic & Political Weekly* 49(38): 43–55.

Coffey, Diane, and Dean Spears. 2017. *Where India Goes: Abandoned Toilets, Stunted Development and the Costs of Caste*. Delhi: Harper Collins.

Coffey, Diane, Dean Spears, and Sangita Vyas. 2017a. 'Switching to Sanitation: Understanding Latrine Adoption in a Representative Panel of Rural Indian Households.' *Social Science & Medicine* 188: 41–50.

Coffey, Diane, Aashish Gupta, Payal Hathi, Dean Spears, Nikhil Srivastav, and Sangita Vyas. 2017b. 'Understanding Open Defecation in Rural India: Untouchability, Pollution, and Latrine Pits.' *Economic and Political Weekly* 52(1): 59–66.

Coffey, Diane, Aashish Gupta, Payal Hathi, Dean Spears, Nikhil Srivastav, and Sangita Vyas. 2015. 'Culture and the Health Transition: Understanding Sanitation Behavior in Rural North India.' *International Growth Centre Working Paper*. London. (Available at http://sujal-swachhsangraha.gov.in/sites/default/files/Rice_Institute%20-%20culture_and_sanitation_behavior%20%281%29.pdf. Accessedaccessed on 15 August 2019).

Doron, Assa, and Ira Raja. 2015. 'The Cultural Politics of Shit: Class, Gender and Public Space in India.' *Postcolonial Studies* 18(2):189–207.

Gross, Neil 2009. 'A Pragmatist Theory of Social Mechanisms.' *American Sociological Review* 74(3):358–79.

Gupta, Aashish, Diane Coffey, and Dean Spears. 2016. 'Purity, Pollution, and Untouchability: Challenges Affecting the Adoption, Use, and Sustainability of Sanitation Programmes in Rural India.' In *Sustainable Sanitation for All: Experiences, Challenges, and Innovations*, edited by Petra Bongartz, Naomi Vernon and John Fox, 283–98. Rugby, UK: Practical Action Publishing.

Hedström, Peter 2005. *Dissecting the Social: On the Principles of Analytical Sociology*. Cambridge, UK: Cambridge University Press.

Kulkarni, Seema, Kathleen O'Reilly, and Sneha Bhat. 2017. 'No Relief: Lived Experiences of Inadequate Sanitation Access of Poor Urban Women in India.' *Gender & Development* 25(2):167–83.

O'Reilly, Kathleen, and Elizabeth Louis. 2014. 'The Toilet Tripod: Understanding Successful Sanitation in Rural India.' *Health & Place* 29: 43–51.

O'Reilly, Kathleen. 2016. 'From Toilet Insecurity to Toilet Security: Creating Safe Sanitation for Women and Girls.' *Wiley Interdisciplinary Reviews: Water* 3(1): 19–24.

Papafilippou, Nikolaos, Michael Templeton, and Mansoor Ali. 2011. 'Technical Note: Is There a Role for External Technical Support in the Community-Led Total Sanitation (CLTS) Approach?' *International Development Planning Review* 33(1): 81–94.

Pierson, Paul. 2004. *Politics in Time: History, Institutions, and Social Analysis*. Princeton, NJ: Princeton University Press.

Richerson, Peter, and Robert Boyd. 2005. *Not by Genes Alone: How Culture Transformed Evolution*. Chicago, IL: University of Chicago Press.

Smith, Christian. 2009. *Moral, Believing Animals: Human Personhood and Culture*. Oxford: Oxford University Press.

Spears, Dean, and Amit Thorat. 2019. 'The Puzzle of Open Defecation in Rural India: Evidence from a Novel Measure of Caste Attitudes in a Nationally Representative Survey.' *Economic Development and Cultural Change* 67(4): 725–55.

Sperber, Dan 1996. *Explaining Culture: A Naturalistic Approach*. Cambridge, MA: Cambridge.

Tagat, Anirudh, and Hansika Kapoor. 2018. '"Sacred Nudging" and Sanitation Decisions in India.' *India Review* 17(3): 301–19.