

Participatory Theater Empowers Women: Evidence from India

Karla Hoff^a Jyotsna Jalan^{b,c} Sattwik Santra^c

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Law, economic growth, and education entertainment do not suffice to end many injurious restrictions on women's autonomy and its most extreme form, domestic violence, still widely tolerated in many low- and middle-income countries. This paper undertakes the first large-scale evaluation of community-based participatory Theater of the Oppressed by analyzing the impact of *Jana Sanskriti* in West Bengal, India. Dramas of familiar kinds of oppression are initially performed without interruption; then they are repeated to permit any spectator to interrupt the performance, go onstage, and take the role of a protagonist-victim in an attempt to overturn the oppression. Participants collectively take apart and discuss norms they had long taken for granted. Using a stratified random sample across 100 villages of over 3,500 households, an endogenous treatment analysis suggest that village exposure to Theater of the Oppressed reduced the level and acceptability of domestic violence and increased women's voice. The paper contributes to recent research that quantitatively estimates the impact of narratives on perceptions and behavior.

Keywords: social norm, domestic violence, narrative, framing, gender, patriarchy

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^aThe World Bank

^bCentre for Training and Research in Public Finance and Policy, Kolkata

^cCentre for Studies in Social Sciences, Calcutta

[M]an is an animal suspended in webs of significance he himself has spun.

Clifford Geertz¹

A large literature shows that immersion in a narrative –whether non-fiction or fiction— can change beliefs and attitudes. Individuals do not process information in bits, as the rational actor does. Instead, individuals use cultural categories and narratives to group information, and the categories and narratives mediate their experiences. “One does not just see, one *sees as*” (Bacharach 2012, 63). That means that the personalized model of human thought is wrong (DiMaggio 1997, Nisbett 2004). Many social and political organizations through activism and education seek to change conceptualizations in order to change behavior and substantive rights (Evans 2018). The current paper is the first large-scale, quantitative evaluation of Theater of the Oppressed. We show that by changing conceptualizations and creating a space for the rehearsal of social change, it can reduce the level and acceptability of domestic violence.

In low- and middle-income countries, domestic violence is a regular and frequent occurrence in many communities (Boudet *et al.* 2013); it is widely accepted by women of childbearing age in nationally representative surveys.² Intimate partner violence affects almost one-third of all women at some point in their lives, causing injuries (in 42 percent of the cases), disease, substance abuse, depression, death, and perinatal health problems (WHO 2013). Legal prohibitions do not end such violence. In a wave of laws between 1990 and 2010, for the first time, many countries prohibited domestic violence; but Htun and Jensenius (2019) find that prohibitions are only weakly enforced in countries where domestic abuse is socially accepted. Nor does economic development ensure substantial progress in women’s empowerment in the

¹ From *The Interpretation of Cultures* (1973, 5).

² www.STATcompiler: The DHS Program.

face of stereotypes that women are inferior to men (Duflo 2012, esp. p. 1076; Heise and Kotsadam 2015).

Many organizations have developed mass media education entertainment (*edutainment*) to change mind-sets and the norms embedded in them that endorse domestic violence. The two evaluations that have been done to date find mixed success. Banerjee *et. al.* (2019) evaluate the impact on 18- to 24-year-old Nigerians of exposure to three hours of a drama, *MTV Shuga*, whose main purpose is to reduce the incidence of AIDS and whose secondary purpose is to reduce domestic violence. Assessed eight months later, the number of instances in which forced sex or wife beating was accepted as legitimate was significantly lower among men exposed to *Shuga* than among men not exposed, but there was a “precisely estimated zero change” in women’s judgment of the acceptability of domestic violence. Green *et. al.* (2018) evaluate the impact of a mass media campaign in Uganda. The Ugandans watched three short videos showing relationships in which domestic violence resulted in injury or death that might have been prevented if bystanders had reported early acts of violence to the police. Watching the videos made women more willing to report abuses they witnessed to local and state authorities and family members; and it led to some reduction in incidents of violence. However, the authors concluded that “the campaign failed in many respects: we did not change audiences’ core values about the morality of VAW” (violence against women) (p. 3).³

³ Jensen and Oster (2009) is the only case we are aware of where a reduction in the acceptability to women of domestic violence is attributed to mass media. The authors show that expansion of cable TV to remote villages in India was associated with the following responses by women one year later: an increase in women’s reported autonomy, a decrease in the number of reasons that they believed wife beating was justified, and a reduction in son-preference. These results, as the authors emphasize, are correlations. It is difficult to ascribe observed changes in attitudes to a generic phenomenon, such as the expansion of cable TV, since the correlation is based on a small number of villages (the 21 villages that acquired access to cable TV in 2002 or 2003) and the mechanisms that induced the changes are not identified. If the expansion of cable television to remote villages, which occurred primarily in 2001-05, caused women’s autonomy to increase and their tolerance for domestic violence to decline, then it would predict a reduction in domestic violence. However, in the years after 2005, no national reduction in domestic violence occurred according to the two most recent National Family Health Surveys (NFHS) of India: in both rounds of the survey, 2005-06 and 2015-16, the percentage of women who reported experiencing domestic violence in the last 12 months was 24 percent. (We do not present data from earlier NFHS surveys because they used a different definition of abuse.)

Participatory theater, also called Theater of the Oppressed and Forum Theater, has the potential to overcome two factors that limit the impact of interventions using mass media—the limited agency of victims of oppression and imperfect knowledge of the true support for a social norm in one’s community. Severe constraints on autonomy throughout life diminish a person’s self-concept (*e.g.*, Bem 1981, Abu-Lughod 1986, Nussbaum 2000). Women in extremely patriarchal societies may not judge their oppression as immoral nor try to end it. As anthropologist Abu-Lughod (1986, 237-38) writes of a Bedouin society in Egypt,

it is a matter of self-respect and pride that the individual achieve [the prevailing] standard...There exists no source of self-definition or evaluation other than the standard...Belonging is essential because there is no life outside the group.⁵

Theater of the Oppressed gives men and women the opportunity to go onstage in a relatively safe environment (because of the protection afforded by the community-based theater team) and rehearse new strategies and new gender roles, broadening their self-concepts and sense of agency.

In addition to low agency, a second obstacle to norm change that Theater of the Oppressed addresses is common knowledge of what one’s own community will accept. Widespread compliance with a traditional norm may lead people to believe that everyone supports it, but “real and perceived support may be at odds” (Bicchieri 2016, *xiv*). In Saudi Arabia female labor force participation is very low, and a woman’s participation in the labor force is largely decided by her guardian (her husband or father). Burszten *et al.* (2018) find that most men incorrectly believe that female labor force participation would be stigmatized. Three to five months after his team randomly corrected men’s misperception, wives of

⁵ Even in relatively open societies, gender norms limit agency. See Boudet *et al.* (2013) for an overview in poor countries. For the US, a striking finding by Coffman (2014) is that women and men both self-censor in areas that they believe are outside the domain of their gender. (Sports and Games were viewed by the participants as the domain of men and Arts and Literature were viewed as the domain of women.) The self-censorship lowered monetary payoffs in the experimental game. It occurred despite the absence of scope for social sanctions for behavior in the game.

treatment participants were more likely to have interviewed for a job outside their home (a 5-percentage-point increase from a baseline of 1 percent).

Theater of the Oppressed seeks to change beliefs, shared concepts, and the social norms embedded in them. We evaluate its ability to do this by assessing the impact of *Jana Sanskriti* (hereafter *JS*; in translation, “People’s Culture”), a community-based, non-governmental organization that has performed in villages in West Bengal, India for almost 30 years. In 1997, it had 12 satellite teams based in different villages; in 2017, it had 30 such teams. Like street theater, *JS* performs in outdoor spaces without a paying audience. But unlike other forms of theater, it is participatory. After an uninterrupted performance of a play, a person called the Joker comes onstage and asks the audience: “Do you agree with the way the victims behaved?” If a member of the audience says no, the Joker encourages him or her to take the part of the protagonist-victim to correct the mistake. The volunteer, called the ‘spect-actor’, goes onstage. The actor that he or she replaces takes off his or her costume, and the spect-actor puts it on. The spect-actor tries to change the outcome of the fictional event. The other actors, at least initially, resist. As the founder and artistic director of *JS*, Sanjoy Ganguly (2010), writes,

Nobody is reduced to just watching....everybody can speak, act and suggest [and], become analytical about the society she/he lives in ...[The objective is] to establish dialogue in society at all levelsFor [women], *the act of standing up on stage with a huge audience in front and acting in a full-fledged performance imparts immense confidence....[It] makes their world bigger and inspires them to try to reconstruct a humane society with the men around them.* (emphasis added)

Cognitive scientists believe that the building blocks of thinking are mental models (equivalently, cognitive schemas), which include narratives (Axelrod 1973, Schank 1995). Individuals do not approach a situation *tabula rasa*, but bring to it categories, stereotypes, narratives, identities, and taken-for-granted assumptions about how the world works. A mental model that is activated affects attention and construal. It enables the individual to encode the situation in a way that makes it meaningful. It is difficult to attend to and understand things

that are not interpretable through our mental models (Schank 1995, 57). Faced with the same stimuli, people in different cultures may see different things and assign them different meanings because they interpret what happens in terms of the ‘skeleton stories’ of their culture (e.g., Schank 1995, 149; Ross and Nisbett 1991; DiMaggio 1997; Fang and Loury 2005; Hoff and Stiglitz 2010, 2016; Akerlof and Snower 2016; Collier 2016; Bicchieri and McNally 2018; Brooks, Hoff, and Pandey 2018). A strong link exists between decision-making and the ‘skeleton stories’ of our culture because we tend to see our own lives in terms of them: “if what we do fits into a well-known story skeleton, then we can believe that we have acted properly” (Schank 1995, 160). This paper applies the idea to domestic violence. We ask: Will village exposure to Theater of the Oppressed change how people conceptualize masculinity and domestic violence? Will it reduce the violence?

In rural north India, many men opine, “‘What kind of a man is he who does not hit?’” (Chowdhry 2015, 13; see also Jejeebhoy 1998 and Rani and Bonu 2009). In rural Ethiopia, a woman, expressing a common belief in her community, asserted that “[i]t is sometimes necessary for husbands to beat their wives when they commit mistakes to correct them...[It] improves love to be beaten and reconcile...it is also a sign of strong manhood” (Narayan *et al.* 2000, 122). The following incident suggests the potential of *JS* to change this conceptualization. After a performance, the actors (who were waiting for a bus) asked a young man from the audience to talk to them. The man expressed remorse to the actress who had played the part of an oppressed wife. “*Didi* (sister),” he said to her, “I will not beat my wife again. I beat her quite often. When you were crying after being beaten by your husband in the play, I remembered my wife. She cries exactly like that when I beat her” (Ganguly 2010, 30).

To change a social norm, it does not suffice to change how individuals feel and how in a Robinson Crusoe economy they would want to behave. Even dysfunctional social norms may be very durable, requiring coordination among many people to change it. When people

have seen only one social pattern, they may confuse an arbitrary, socially constructed ideal with what is natural or normal or desirable and therefore adopt behaviors that in aggregate reproduce injurious social practices and patterns. To consider one case, foot binding was practiced in China for 1,000 years. Mothers bound their young daughters' feet, bending the toes under the foot to slowly break the four smaller toes and the arch in conformity with an ideal of feminine beauty. Such feet were also a symbol of virtue (Mao 2008). Christian missionaries in China convinced many people that foot binding was a very bad thing, but neither missionaries nor legal prohibition could stop it. In all but the poorest social classes (where a reduction in women's physical mobility would put a family's survival at risk), most parents in China bound their daughters' feet. Parents believed they could not marry off a daughter if she did not have tiny feet. People continued this practice until the meaning and social consequences of foot binding changed in the early 20th century with a flood of new ideas from the West and the formation of natural-foot societies, whose members pledged not to bind their daughters' feet or allow their sons to marry women with bound feet (Mackie 1996). In a rural area studied by Gamble (1943), the percentage of young daughters whose feet were bound declined from 99 percent in 1889, to 94 percent in 1899, to zero in 1919. The norm, which had caused great suffering, disappeared in a generation.

Theater of the Oppressed seeks to transcend the feedback loop in which a prevailing social pattern makes people think oppression is normal and leads them to behave in ways that reproduce the social patterns. Theater of the Oppressed tries to change at least four things: information and empathy regarding the suffering of others that a social norm causes, preferences, mental models, and agency. The last two factors are omitted from standard economics, which assumes that individuals process information objectively and have complete agency.

To assess the impact of *JS*, we designed a survey that in many sections is similar to the National Family Health Surveys of India (International Institute for Population Sciences and ICF 2017). We used stratified random sampling to choose households from 32 villages exposed to *JS* and from 68 villages not exposed to *JS*. Trained female field investigators interviewed, in private, more than 3,500 married women; in most cases, male field investigators interviewed, at about the same time, their husbands.

The central empirical challenge is to deal with the selection of the villages where *JS* performs. Each of the *JS* satellite teams over the years has chosen 12 to 19 villages where it performs regularly (Ganguly 2019, 371). The selection process may not be random. There might be something special about the villages where the satellite teams are based. Further, a satellite team might have chosen to perform in a village because it seemed to have a large potential for change or to be especially receptive to *JS*; the estimated impact would then be biased upward. It is also possible that a satellite team selected a village because it had an extreme problem of domestic violence; the estimated impact of *JS* would then be biased downward.

Once a village has been selected by a *JS* team, the team has continued performing there. Although there have been some unruly disruptions (primarily by men) during a *JS* performance, in no case was a *JS* team intimidated into stopping future performances in a village.

Following Wooldridge (2010, chapter 13; 2014), we use an econometric strategy that allows for possibly endogenous selection of the villages. We draw on village data from the Census of India for 1991 (covering years that precede the period when *JS* performed Theater of the Oppressed). We use an endogenous treatment model with binary outcomes to evaluate the impact of *JS*.

We estimate that *JS* reduced spousal abuse of all kinds—physical, emotional, and sexual. In villages not exposed to *JS*, 47 percent of married women have had an abuse-free marriage. In villages exposed to *JS*, the proportion increased to 58 percent. Village exposure to *JS* significantly reduced the number of situations in which men and women believed that domestic violence was justified.

The findings predict that in villages exposed to *JS*, wives would be allowed a greater decisionmaking role in the household than in villages never exposed to *JS*. Our results bear this out. Exposure reduced by about half (according to the women’s responses, from 21 percent to 11 percent) the proportion of married women who have no voice in making any of six major household decisions that our survey asked about, including how many children to have and whether the wife can visit her parents.

To investigate whether *JS* changed the social norms of villages in which it performed, we assessed spillovers within the villages. Since watching a *JS* play is a choice that would likely be correlated with an individual’s openness to change in gender norms, a simple comparison of behavior of viewers and non-viewers cannot establish cause and effect. We instead use a difference-in-difference method. We compare between two sets of villages—villages with low exposure to *JS* plays and those with high exposure—the impact on couples that did, and on couples that did not, watch any *JS* performances. We use the median number of village performances of *JS* plays on domestic violence and alcohol (an important contributing factor to domestic violence) as the cutoff between low- and high-exposure villages.⁶

We find that with *low* village exposure to *JS*, the impact on all kinds of abuse of a wife and on her decisionmaking role is always larger and more significant in households where the

⁶ *JS* also performs plays on corruption, worker exploitation, and education (*e.g.*, teacher absenteeism).

wife or husband (or both) have seen a performance than in households where neither has. But with *high* village exposure, this pattern is not observed. However, in neither of the two groups of villages — low or high exposure — is the reduction in abuse between households watching and not watching a play statistically significant. This suggests that new ideas have spread through village networks and changed village norms.

In two additional ways, exposure of a village to *JS* changed the social climate of domestic violence. First, it increased awareness of the law against domestic violence. Second, exposure made people more willing to take actions to reduce domestic violence in their communities, for example, by helping destroy an illegal local liquor shop.

Before presenting the results, we give background information on the power of narratives and the methods of Theater of the Oppressed. Then we discuss the data, sampling methods, econometric methodology, and results. To illustrate channels through which Theater of the Oppressed can change equilibrium norms, we present a simple model.

Background

A. The Power of Narratives

Many psychologists and cognitive scientists believe that humans have a “story-based understanding of the world” (Schank 1995, *xi*). We interpret reality through stories. We open up our reality to others when we tell them our stories. Immersion in a narrative, whether non-fiction or fiction, enables us to experience our experiences in a new way (Green and Brock 2000).

Metaphors that capture the power of narratives are mental templates, frames, maps, and filters. Narratives give us templates for interpreting ongoing experience (Bruner 1991) and

frames that suggest causal pathways (Bruner 1990, 56). Narratives also provide “a [mental] map of possible roles and of possible worlds in which action, thought, and self-definition are permissible (or desirable). As we enter more actively into the life of culture around us, ...we come increasingly to play parts defined by the ‘dramas’ of that culture” (Bruner 1986, 66-67, emphasis added).

Narratives can also be filters, blocking us from seeing things before our very eyes. For example, when we rely on a skeleton story of betrayal around which to construct our version of the truth, we filter out things that do not fit the standard story (Schank 1995, 152). In the US, belief in the American Dream causes disadvantaged people who do not succeed to blame themselves and deflects their attention from discrimination and biased structures of opportunity, which collective action could reduce (Frye 2019).

Collective narratives can have a macro-influence on society. Some narratives spread like viruses and influence economic downturns and upturns by causing individuals to frame current events in the context of stories they have heard about a depression or a boom (Shiller 2017).

In the 1990s, nearly 3,000 municipalities in Brazil gained access through cable television to *Globo* soap operas, where heroines had few or no children, in sharp contrast to the high fertility rate, especially at that time, in Brazil. Because *Globo* soap operas were widely viewed, there was the potential for collective negotiation about culture. Exploiting the variability in the year of entry of *Globo* in different municipalities to assess the impact of exposure on fertility, La Ferrara *et al.* (2012) find that fertility declined a year after exposure to *Globo* soap operas. The effect was larger if the soap operas had a theme of upward social mobility. It was also larger for women within 4 years of age of a female protagonist of a soap opera aired in the past year, suggesting a role model effect. As Bruner (1986), cited above,

suggested, in some ways viewers came to play parts defined by the fictional dramas in their culture.

Information conveyed by narratives is often easier to remember and act on than bare facts, in part because memory and emotion are strongly connected. In an experiment that compared the effects of content-equivalent narrative and informational breast cancer videos on the use of mammography, the narrative video led to greater use among women with less than a high school education (Kreuter *et al.* 2010).

Narrative persuasion can evade our defenses against learning things that we don't want to know or that relate to problems we think we already understand well. Narrative can break through barriers of resistance by transporting individuals to a state in which they are not thinking about their interests (Green and Brock 2000). In village India, men of the martial cases and those influenced by them are "obsessed" with 'male honor', the preservation of which requires that women who are not subservient to men be punished (Drèze and Gazdar 1997, 104). Their obsession can blind a man to the suffering he causes his wife. Recall the remorse of the young man, a frequent wife beater, who after immersion in a *JS* scene of wife beating, recognized for the first time that he treated his wife cruelly.

Leaders through history have used the power of narratives to change perceptions and motivate behavior. Lenin used narratives of a future Communist paradise to enhance support for the Russian revolution (Akerlof and Snower 2016). The narratives that Mao Zedong created of himself as a "cosmocratic" figure who would modernize China and lead it to safety from foreign incursions are believed to have played a crucial role in the consolidation of his power (Apter 1993, 211).

Ethnographic studies in the Philippines provide a quantitative measure of the impact of local storytellers on cooperative behavior (Smith *et al.* 2017). Stories told by a Filipino hunger-

gatherer population, the Agta, convey messages about cooperation that are relevant to coordinating behavior in foraging. Individuals from camps with a greater proportion of skilled storytellers (as judged by the Agta who live in the camp) behaved more cooperatively in an experimental game. The authors' interpretation is that storytelling 'broadcast' cooperative norms and increased empathy and perspective-taking.

B. Jana Sanskriti and the Methods of Theater of the Oppressed

A performance of Theater of the Oppressed has two parts. Part 1 is a drama of oppression that would be broadly familiar to the audience.⁷ Oppressive forces always win at the end. The ending is so brutal that it is unacceptable to most of the spectators. But it is never presented as hopeless; no one suffers an irreversible fate, such as death. There are many actors in a scene and the potential exists to change their behavior. As Ganguly (2010, 4) notes, the purpose of Part 1 is "to motivate the audience to [take apart scenes and] find out ways of ending the oppression." The central constraint is not wealth or nature or the number of oppressors. Instead, it is a social construction. In many plays, it is the belief that a woman should not make important decisions in her life and that in any conflict between a man and a woman, the woman is in the wrong and the man rightly exercises power over her.⁸

⁷ Many of the plays are written with people from the community, including agricultural laborers and daily-wage earners, in response to specific local issues (Yarrow 2009). Sometimes a composite script is produced that is based on the participants' own experiences (Ganguly 2017, xv). Nearly all JS performers are agricultural laborers who are also social or political activists. Since many are illiterate, the plays are in a language that makes sense to the actors and is easy to remember. JS in 2017 had a total of 500-600 actors, most of whom work part-time and are unpaid (Ganguly 2017, 86). Many of the scenes in the first part of a JS play begin and end with sculptures made up of 2-5 actors who hold still for a brief period to convey a startling image of power relationships between the characters (Ganguly 2017, 92). To break the emotional and narrative tension, between most of the scenes there is dancing and singing by the actors (Yarrow 2009, 7). A video of one such scene is in the online Appendix.

⁸ *The Brick Factory* (Ganguly 2009, 111-123) is a JS play that provides a good illustration. At the end of an extended workday at a brick factory, Phulmoni demands the promised overtime pay. The owner refuses to pay her or any of the other workers for overtime, despite his promise. Late in the evening, the owner comes to Phulmoni's home to demand sex. When she refuses to continue the sexual relationship they had had earlier, he threatens to invoke sanctions against her, including jailing her husband if he does not repay his debt to him that very evening. She gives in to the owner's demand for sex. Her husband comes home and discovers her in the arms of the brick factory owner. In the next scene, a court of the village finds her guilty of dishonoring the village by adultery. The court punishes her husband, too. The court shaved his head for allegedly helping her in

At the end of Part 1 a neutral facilitator, called the Joker, comes onstage and asks if the audience agrees with the solutions advanced by the oppressor-protagonist; many will probably say no. The Joker explains that the play will begin again, and this time a spectator can at any point shout ‘freeze.’ The spectator goes onstage, takes the role of the victim, and says from which point in the play he or she wants the scene to be taken forward. The actors start the scene again from the prescribed point. The spectator-actor (the *spect-actor*) tries to move the scene in a new direction.

From the moment at which the spect-actor replaces the protagonist and begins to put forward a new solution, all the other actors transform themselves into agents of oppression, or, if they already were agents of oppression, they intensify their oppression, to show the spect-actor how difficult it is to change reality. The game is spect-actors—trying to find a new solution, trying to change the world—against actors—trying to hold them back, to force them to accept the world as it is. But of course the aim of the forum is not to win, but to learn and to train [the spect-actors]...for ‘real life’ action...[The actors and audience] learn the arsenal of the oppressors and the possible tactics and strategies of the oppressed. (Boal 1992, 244)

A spect-actor may also discover logical inconsistencies in his own life, for example, between the injustice he condemns in his workplace and the oppressive home situation he imposes on his wife.

The JS play *The Golden Girl* is the first play that JS performs when it becomes active in a new village. The play presents rural women’s lives in three stages—the natal family, the wedding arrangements, and the joint household with in-laws. In no stage is there a haven of peace for a female. In one scene (videotaped in the online Appendix), a husband has just learned that the dowry he had received was smaller than what his neighbor had received. On arriving home, he shows his anger to his wife. She expresses her love. He doesn’t accept it.

her adultery. Two of the actors, who had made no moves so far to oppose the owner or the judges, kneel on the floor and direct their thoughts to the spectators:

First Person: Hunger caused Phulmoni to go to work to the city. Taking advantage of her poverty, the owner forced himself on her. Phulmoni was judged guilty.
Second Person: But actually the owner is the guilty one. Who will punish him?

He beats her. In each corner of the stage are bystanders, who pay no attention to the beating, suggesting that it is not unusual or a personal failing of the husband.

A scene with a spect-actor that is available in the on-line appendix illustrates the new direction in which a spect-actor reframes a scene in *The Golden Girl*. In this scene, a married couple is interviewing a young woman as a possible bride for their son. The couple orders her to walk so that they can inspect her stride and examines her hands and hair. The spect-actor plays the part of the potential young bride. She angrily declares, “I will not get married this way!” The parents of the prospective bride in this scene tell her that this is how a bride is always chosen; her own mother was chosen this way to marry her father. As in the dowry scene, the actions are rooted in mindsets and social structures bigger than the individual. The spect-actor suggests an alternative way to behave: she should be asked about her education and meet the son to see if they like each other.

Theater of the Oppressed seeks to provoke people to break away from behavior patterns they may have internalized and accepted as moral and natural. In Part 1, the actors play a script of oppression; in Part 2, spect-actors and actors together try to script a new ending to the play. In doing so, they broaden the ‘cultural repertoire’ of roles and strategies accessible to the community (a concept emphasized in Swidler 2001, 7 and 37). They also may change the meaning of well-known scripts (*e.g.*, inspecting a bride as an object may be recognized as wrong). Few women in a village would be accustomed to speaking up in front of men, especially on the subject of gender roles. By doing so as a spect-actor in a fictional story, they may gain confidence in new roles they could play in their own households. Ganguly (2010, 25) writes that “no institution is more undemocratic than a rural family...the relationship between men and women is regulated by feudal values. There is no scope for any dialogue either at home or outside.” After a *JS* performance, “sometimes men actually realize what role they could play in their family. . . [and] women feel freer to speak and participate in their

situation”; they are touched, at least for a few minutes, by a different kind of consciousness (Ganguly 2010, 32). As the inventor of Theater of the Oppressed wrote, “A spect-actor tries out solutions, discusses plans for change—in short, trains himself for real action...” (Boal 1985, 122).

When *JS* performs for the first time in a village, the Joker calls men first to replace a female protagonist. He might say, ““You have sisters, you have to arrange your daughter’s marriage, if you were the daughter... [or] the mother, what would you do?””

The moment the men come to replace the woman, that allows women to come on stage, [and] the ice breaks. So then they come, and we hardly have any problem. I cannot even remember a single instance where we went to the women and had no interventions from them even in the new villages. (Ganguly 2017, 101-102)

The core team holds workshops to promote the critical thinking of the actors before they go into a performance so that they can better challenge the strategies used by the spect-actors: “Theater workshops become a sociology class, where actors prepare for the dialogue they will have to invent when the spect-actors come onto the stage” (Ganguly 2017, 91). In repeat performances, a play may be adapted to take account of intervening action in the village or with the authorities. “The atmosphere of these events thus becomes more ‘risky’ and ‘energized’ and engaging for the audience” (Ganguly 2017, 31, 35).

I. Empirical Strategy

A. Sampling of Villages

For over 10 years, *JS* has regularly performed Theater of the Oppressed in villages in three blocks of West Bengal—Kakdweep, Kulpi and Patharpratima in the district of South 24 Parganas.⁹ These are our “treatment” blocks. Our sample of villages exposed to *JS* (“treatment villages”) draws on all three blocks. Our sample of villages that were never exposed to *JS*

⁹ India demarcates a state into districts, a district into blocks, and a block into census villages and municipal regions.

(“control villages) draws on blocks where *JS* has never performed —Mathurapur I and II and Joynagar II. See Fig. 1A and 1B. We chose these blocks because of their similarity in the 1991 Census in demographics and access to public services to the treatment blocks.

Table 1 compares the demographics and access to services in treatment and control villages in 1991. Both sets of villages showed son preference (the proportion of females in the population was between 48 and 49 percent). Most villages (almost 85 percent) in both sets had a primary school. In both sets of villages, 31 percent had a middle school and 16 percent had a secondary school. Treatment villages compared to control villages had more limited access to the outside world (66 percent compared to 75 percent of the villages were accessible from a paved or metaled road), but almost one-fifth of both sets of villages had a bus stop.

To select the married couples who would respond to our survey, we used stratified random sampling in four stages:

- (i) From each of the six blocks, we randomly sampled *Gram Panchayats* (*GPs*). We sampled control villages from each *GP* in blocks where *JS* was not active with probabilities proportional to the 1991 population, and sampled treatment villages from a list, provided by *JS*, of the villages in which it regularly performs. Fig. 1C shows that there are no contiguous treatment and control villages.
- (ii) From each census village, we randomly sampled either one or two electoral polling booths from the 2014 electoral list. We used the electoral list because a voting card is an important proof of identity that most residents at or above age 18 (the minimum voting age) have. Our target population was married female village residents between 18 and 49 years of age and their husbands.
- (iii) For each electoral polling booth, we randomly sampled in the control villages 15-35 households (nuclear or joint households). In the treatment villages, using data provided by *JS*, we identified the electoral polling booth where *JS* performances were held and sampled 20 households from this “active” area and 15 households from the “inactive” area (where plays were not performed).

Our sample is 1,749 households from 32 treatment villages and 1,903 households from 68 control villages; see Table 2A.

Field investigators were charged with the task of interviewing one married couple in each household. We gave the field investigators details (name, gender, age, and father's or husband's name) of each member of the sampled households and a list of possible replacement households to draw on if no eligible married woman was present and willing to participate in the survey. With the help of a family member, on arrival at the household the investigators determined whether an eligible married woman was present. If there were more than one such women present, the investigator-team randomly chose one. The team sought to interview the husband of the selected female respondent in his home, field, or workplace. The team achieved this goal in 99 percent of the cases. For the remaining one percent, another married man of the same or neighboring household was interviewed.¹⁰ In only rare cases did an eligible household member refuse to cooperate.

The average age of respondents by gender was nearly the same in treatment and control villages: for the women, 30.5 compared to 29.9 years, and for the men, 36.9 compared to 35.9 years.

The structured survey had questions on spousal abuse and women's role in decisionmaking that are similar to questions in the National Family Health Surveys of India. The questions for men and women about their relationships were the same, except that men were not asked whether they abused their wives.

The male respondents were asked about the household demographics. Table 2B summarizes the data. We expect the impact of *JS* to produce differences between treatment and control villages. A comparison of Table 1, which reports the literacy rate, and Table 2B, which reports the literacy only of the head of household, suggests an increase in the gap in

¹⁰ Seventy percent of the sample in both control and treatment villages were from the "first" list of sampled households. The remaining 30 percent were from the replacement households. The latter were used primarily because no one was present who satisfied the eligibility criteria. Below we explain why we could not schedule a revisit to the household on the following day.

literacy between treatment and control villages: the proportion of household heads that are illiterate was only 11 percent in the treatment villages, compared to 15 percent in the control villages, whereas the literacy rate between the two groups of villages differed by only 2.7 percentage points in 1991. The average number of children in a household was 1.9 in the treatment villages and 2.1 in the control villages, whereas in 1991, the gap between the two sets of villages in persons under 6 years of age (the most comparable statistic available) shows a very slightly larger proportion of persons under 6 in the treatment villages (15.40 percent) than in the control villages (15.33 percent).

The field investigators asked about women's participation in household decisionmaking, attitude towards violence, and incidents of violence (women only) only after the respondents had already answered questions on the state of primary school education in the village, the public works program, the Integrated Child Development Services scheme, and the Public Distribution Scheme in their village. This ordering of the questions makes it more likely that respondents would have become comfortable enough with the field investigators to respond without hesitation to questions on domestic violence and attitudes to domestic violence. Only at the end of the survey were respondents in the treatment villages about *JS*: had they heard of it; had they watched a *JS* play; if so, when was the last time and how many *JS* performances had they watched?

B. Measures of Exposure to JS

In the 11-year period 2002-2013 that immediately precedes our survey, the number of performances across treatment villages varied widely.¹¹ The range is 1 to 136. For the subset of performances of plays on domestic violence and alcohol abuse, the range is 0 to 94, with a

¹¹ We use this period because before 2002 there was no systematic collection of data on the number of *JS* performances, and after 2013 we began implementing our survey.

median of 25. We will use the median as the cutoff to categorize treatment villages into low- and high- exposure villages.

Field studies of media programs typically suffer from poor measures of individual exposure, but the questions in our survey permit us to provide such measures. Figure 3 shows the distribution of the number of performances that survey respondents in treatment villages reported that they had seen. In almost 70 percent of the interviewed couples, either the wife or the husband or both had seen at least one performance of *JS*. Among those individuals who had seen at least one play, the mean number of plays seen by men and women was two.

C. Implementation of the Survey

The survey was implemented in the period January 2014 to March 2015. We took great care in designing the logistics and training the field investigators to minimize the risk of prompting respondents to give what they believed were the “correct” answers. We conducted two pilot surveys in neighboring blocks and substantially revised the questionnaire and logistics after the first pilot.

An outsider who visits a village in India becomes an important topic of discussion among the villagers. If asked about the nature of the survey, the field investigators were trained to keep their responses vague. Since some of the questions were sensitive, interviews in a village were completed in a single day. To achieve this, teams started the survey early in the morning of each day, and we used larger survey teams in the larger villages. Villages in our sample that were within walking distance were visited on the same day in order to reduce the chance that people exchanged information about the survey before taking it. In almost all households, the husband-wife pair were interviewed at approximately the same time¹² by a

¹²Male respondents were more often than not interviewed outside the home— mostly in their workplace, which could be the field, shop, or somewhere else.

male and a female field investigator, respectively. This ensured that a person who had taken the survey could not brief the spouse who had not yet taken it. It also made it more likely that a victim of spousal abuse would speak about it without fear. To maintain privacy, the field investigators conducted interviews sometimes in a side-room, the kitchen, even the field.

JS and its associates were not involved in the design or implementation of the survey in any way. They had no knowledge of the schedule of village visits. *JS* workers did not accompany the field survey teams. We did not share or discuss with them the survey instruments. *JS*'s involvement with the survey was limited to providing information on the villages and booths where a *JS* team had performed.

We asked *JS* not to perform in each of our sampled villages in the 4-5 months preceding our implementation of the survey in the village. From our field visits, we verified that *JS* had complied in almost all cases. We also verified this from the respondents' answers to the survey question, "When did you last watch a *JS* play?" The median period that had elapsed since a respondent had watched a play is 10 months.

D. Econometric Strategy

The processes of selecting the villages where *JS* is active may not be random. Over the years, the core team has invited a few villagers to form satellite teams. Sometimes *JS* identified future team leaders from individuals who had volunteered to be spect-actors at performances by the core team. The number of satellite teams, as noted above, has grown from 12 in 1997 to 30 in 2017, and each satellite team has selected 12-19 villages near them in which it regularly performs.

Two methods that address the problem of selection on unobservables are instrumental variables (IV) and the control function approach (CF). In the CF approach, treatment assignment is considered an omitted variable problem; the assignment rule is modelled in a

way analogous to what is generally done in structural models (see, *e.g.*, Heckman 1979 and 1980, Heckman and Robb 1985, Blundell and Costa Dias 2002, and Wooldridge 2015). Our method is a variant of the CF approach that uses the assignment rule together with at least one excluded “instrument” to derive a control function. When included in the outcome equation, the control function fully controls for possible unobserved endogenous selection. In essence, we are using a ‘constructed’ IV method. Using this method, we derive a robust regression-based Hausman test, reported in the online Appendix, of whether the treatment indicator is endogenous. For the majority of the outcome indicators discussed in the paper, the correlation between the errors of the structural equation and the assignment equation was not significantly different from zero. This suggests that endogeneity of treatment may not be an issue.

Our econometric model is of triangular form:

$$\text{Structural equation: } y_{ibv} = 1 [\mathbf{x}_{ibv}\beta_1 + \mathbf{x}_{bv}\beta_2 + \gamma JS_v + u_{ibv} \geq 0] \quad (1)$$

$$i = 1, \dots, n; \quad b = 1, \dots, B; \quad v = 1, \dots, V$$

$$\text{Assignment equation: } JS_v = 1 [\mathbf{x}_{ibv}\widetilde{\beta}_1 + \mathbf{x}_{bv}\widetilde{\beta}_2 + \mathbf{x}_v\widetilde{\beta}_3 + \vartheta_{ibv} \geq 0] \quad (2)$$

The equations use indicator functions, denoted by $1[.]$, which take a value 1 if the inequality in brackets is satisfied and 0 otherwise. In equation (1), the dependent variable y_{ibv} is binary. An example is whether or not a husband has physically abused his wife, where y_{ibv} takes a value 1 if respondent i in electoral booth b in village v indicates that her husband has physically abused her; y_{ibv} takes a value of 0 otherwise. (We present the definitions of abuse below.) In equation (2), JS_v takes a value 1 if JS has performed plays in village v , and takes a value 0 otherwise.

Next we explain the right-hand side variables. \mathbf{x}_{ibv} is a vector of individual controls that include age and literacy of household head; a dummy for Hindus; the male-female ratio of household members 15-49 years old; and three dummy variables: if the respondent (a) reads a

newspaper, (b) listens to the radio, and (c) watches TV. \mathbf{x}_{bv} is a vector of electoral booth controls that include distance to the district headquarters, block headquarters, and *Gram Panchayat* office; male to female ratio at the block level; and population proportions of Hindus and Scheduled Castes and Tribes.

The vector \mathbf{x}_v is a vector of village-level variables from the 1991 Census of India. They include population density, proportion of cultivator households, proportion of agricultural workers, distance to the nearest town, availability of electricity and irrigation, the male to female ratio, and the population proportion of Scheduled Castes and Scheduled Tribes.¹³ Since this vector appears in the assignment equation but not in the outcome equation, it affects outcomes only through the selection of the village by *JS*. The village variables are the “exclusion” variables that appear in equation (2) but not in equation (1).

Denote the right-hand side variables in (1) by $\mathbf{x}_1 \equiv (x_{ibv}, x_{bv})$. Its elements are the exogenous variables, where $E(u_{ibv}|\mathbf{x}_1) = 0$ and $E(\vartheta_{ibv}|\mathbf{x}_1) = 0$.

We assume that the rank condition for identification in the assignment equation holds: *i.e.*, $x_v \neq 0$. In words, we assume that at least one exogenous variable not included in equation (1) is at least partially correlated with JS_v .

It would be tempting to use the standard two-stage least squares method, as follows: (i) Use a probit model of JS_v on x_{ibv} , x_{bv} , and x_v to estimate the fitted probabilities, denoted $\widehat{\Phi}_2 = \Phi(\widehat{\delta x})$, and (ii) use a probit of y_{ibv} on x_{ibv} , x_{bv} , and $\widehat{\Phi}_2$ to estimate the impact of *JS*. (That is, replace JS_v with $\widehat{\Phi}_2$.) However, this is not valid unless the expected value passes through nonlinear functions; in particular, it is not valid for discrete functions. As noted above, both JS_v and the outcome variables y_{ibv} are discrete. To estimate the model, we therefore

¹³ *JS* started its operations in Theater of the Oppressed from the mid-1990’s. The selection of villages where *JS* performs plays may therefore depend on socio-economic variables prior to the mid-1990’s. The source for variables in the assignment equation on demographics and access to public services is Census 1991.

use joint maximum likelihood methods with bootstrapped standard errors (Wooldridge 2010, chapter 13; 2014).

III. Results

The tables in this section report estimated impacts of exposure of a village to *JS* (γ in equation (1)). These are “average treatment effects” in the parlance of impact evaluation literature. The tables also report the estimated mean outcomes when not exposed to *JS*, *i.e.*, the expected outcome if the villages were not exposed to *JS*. All estimates take into account the full set of controls.

A. *Husbands’ Abuse of their Wives*

The field investigators asked each female respondent about three types of abuse—emotional, physical, and sexual.¹⁴ Table 3 shows that village exposure to *JS* significantly reduced the incidence of all three types. The probability that a wife has suffered no abuse from her husband increased by 11 percentage points ($p < .01$)—from 47 percent in the control villages to 58 percent in the treatment villages.

B. *Attitudes Towards Domestic Violence*

The field investigators asked both husbands and wives whether they believed that a husband was justified to hit or beat his wife under seven circumstances: she (*i*) goes out without telling her husband, (*ii*) neglects the children and household work, (*iii*) argues with her

¹⁴ **Emotional abuse** is defined as: say or do something to humiliate wife in front of others, insult or make her feel bad about yourself, threaten to hurt or harm her or someone close to her

Physical abuse is defined as push, shake, or throw something at her, twist her arm or pull her hair, slap, punch with his fist or with something that could hurt, kick, drag or beat, try to choke or burn on purpose, threaten or attack with a knife, gun, or any other weapon

Sexual abuse is defined as physically force to have sexual intercourse even if wife is unwilling, perform any other unwanted sexual acts, threaten or in any other way to perform sexual acts wife does not want to

husband, (iv) refuses to have sex with him, (v) disrespects her in-laws, (vi) is suspected of having an illicit relationship, and (vii) has borne no children.

In Table 4, the first row of columns 1 and 2 reports the impact of *JS* estimated from a Poisson model in which the outcome is a count of the situations that the respondent believes justify domestic violence. On average, women in the control group believe that there are only .08 reasons that justify hitting a wife. For both women and men, village exposure to *JS* reduced the number of reasons that justify violence. The decline for women is small and marginally significant (at $p < .07$); for men it is much larger and significant ($p < .01$). To assess the magnitude of the effect, we can construct the incidence rate ratio (IRR), which is the ratio of the expected count of the treated group to the expected count of the control group, holding other controls constant. The IRR associated with the estimated coefficient for female respondents reported in column 1 is 0.60. That is, *ceteris paribus*, for females in villages exposed to *JS*, the number of reasons justifying wife beating is approximately three-fifths of that of respondents in villages not exposed to *JS*. For male respondents in villages exposed to *JS*, the number of reasons justifying wife beating is less than half of that of male respondents not exposed to *JS*.

The last two columns of Table 4 show the estimated impact of village exposure to *JS* on the belief that domestic violence can be justified in *at least one* situation. Column (3) shows that less than 9 percent of women said that beating was acceptable in any of these seven situations. For men, the comparable number is 19 percent. The impact of *JS* is weakly statistically significant for women, and for men it is large and highly significant. The probability that a man believes domestic violence can be justified is 28 percentage points lower ($p < .01$) than the mean in the control group of 55 percent – a reduction of approximately 50 percent.

JS had a larger impact on attitudes towards domestic violence than edutainment, based on the two evaluations of experiments that exist to date, discussed briefly in the introduction. We consider here the more successful of the two interventions in changing attitudes towards domestic violence, *MTV Shuga*. Among women, the number of situations that justify wife beating significantly decreased as a result of village exposure to *JS* but did not decrease as a result of an individual's exposure to *Shuga*; and the impact on the count variables for men and women of situations that justify wife beating was larger in absolute value for *JS* than for *Shuga*. This is despite the fact that direct exposure of an individual to the dramas was smaller for *JS* than *Shuga*: in the villages exposed to *JS*, women and men saw on average 1.5 and 2 plays of *JS*, respectively, and in one-third (32 percent) of households neither the husband nor wife had watched a *JS* play. In the experiment with *Shuga*, every participant in the treatment group saw eight 22-minute episodes of the drama.

C. Joint Decisionmaking by Husband and Wife and Marital Control

A goal of *JS* is to increase individuals' sense of agency—the feeling of control over actions and their consequences. The plays are dramas of pivotal events; they are not about day-to-day decisionmaking. The finding that village exposure to *JS* reduced domestic abuse and its acceptability suggests that wives would be allowed a greater role in making decisions about their lives and about running their household in villages exposed to *JS*. Our results bear this out.

In each household, the field investigator asked the wife and, separately, the husband if the wife had a role in decisionmaking in six domains: education of the children, family health care, major household purchases, her visits to her relatives, use of contraception, number of children to bear, and the children's marriages. Table 5 reports two summary measures – (i) whether the wife jointly participated in decisionmaking in *all* six domains, and (ii) whether she participated

in *none* of them. We will characterize a wife in the second category as “voiceless.” The online Appendix reports the individual components of the summary measures.

Table 5 shows that exposure of a village to *JS* significantly increased the wife’s participation with her husband in household decisionmaking. Consider first the responses of a wife. The probability that a wife reported that she participated in decisionmaking over all issues covered by the survey doubled ($p < .01$)—it rose from 5.8 percent in the control villages to 12 percent in the treatment villages. The probability that she was voiceless declined by more than half ($p < .01$) —it declined from 21 percent in the control villages to 10 percent in the treatment villages.

The husbands’ responses also show a strong impact of *JS* on the wife’s participation in household decisionmaking. Based on the husbands’ responses, the probability of joint decisionmaking on all issues covered in the survey increased by 9.4 percentage points ($p < .01$) from the proportion in the control villages of 25 percent. The probability that the wife was voiceless declined by 2.3 percentage points ($p = .07$) from the proportion in the control villages of 4.6 percent.

Not surprisingly, most husbands had a larger view of his wife’s role in decisionmaking than the wives did. The correlation between a wife’s and her husband’s beliefs that they share in decisionmaking on *all* issues covered in the survey is only .10. The correlation in their beliefs that they share in decisionmaking on *no* issues covered in the survey is zero (it is $-.0001$).

We define marital control to include any of the following: the husband does not permit his wife to meet her female friends, he limits her contact with her family, he insists on knowing where she is at all times, and/or he does not trust her with any money. Under this definition, Table 6 shows that almost 99 percent of women in control villages are under the control of

their husbands. Exposure of a village to *JS* reduced this proportion by only 3.8 percentage points ($p < .01$) to 95 percent.

D. Alcohol Abuse

Alcohol abuse in India has high social costs. The World Health Organization (2014) estimates that among all countries for which it has data, India has the highest number of years of life lost due to alcohol consumption. Excessive alcohol consumption is a factor in wife beating. Luca, Owens, and Sharma (2015) estimate that the prohibition of alcohol sales, which has occurred during some periods in the last 30 years in six Indian states, but not in West Bengal, is associated with a 50 percent reduction in the likelihood that a husband beats his wife. The burdens of excessive alcohol consumption on the family and its budget are a theme of some of *JS* plays (e.g., *Haran's Family*, summarized in the on-line Appendix).

Both wives and their husbands answered the question, “Were there episodes of verbal and/or physical abuse because of the husband’s consumption of alcohol?” Table 7 shows that based on the wives’ responses, *JS* nearly halved the proportion of couples with alcohol-related episodes of verbal and physical abuse: the proportion was reduced by 14 percentage points ($p < .01$) from the control group level of 30 percent. The results based on the husbands’ responses in the survey are in the same direction but are even larger: a reduction of 33 percentage points from the level of 51 percent in the control group. The correlation between spouses’ responses with respect to the question of whether the husband’s drinking leads him to abuse his wife is high—it is 0.30.

In each household, we asked the wife whether her husband was consuming alcohol at the time of the survey. The proportion was 33 percent in the control villages. Village exposure to *JS* reduced it by 4.5 percentage points ($p = 0.07$). By this measure, *JS* has slightly reduced the husbands’ alcohol consumption, but the statistical significance is weak.

E. Knowledge of the Law Against Domestic Violence

India prohibited domestic violence for the first time in the Protection Against Domestic Violence Act, which went into effect in 2006. It gives a victim of domestic violence the right to file a police report, protects her from eviction by her husband or in-laws from her marital home, and gives her the right to compensation for health expenses incurred on account of the abuse. Many *JS* plays refer to women's rights under the law. The core *JS* team instructs the satellite teams to mention the rights whenever relevant in the interactive sessions with the audience.

Table 8 reports that in villages exposed to *JS*, the proportion of women not aware of their new rights declined by 15 percentage points ($p < .01$) from a baseline of 52 percent. Ignorance of the law against domestic violence also decreased among male respondents by 8 percentage points ($p < .01$) from a baseline of 51 percent. Yet ignorance in the treatment villages remains high—37 percent of women and 43 percent of men are unaware of the new rules protecting a woman from eviction from her marital home and compensating her for medical costs.

F. Willingness to Take Actions to Reduce Domestic Violence in the Community

Many rules, whether or not enacted into law, depend on informal enforcement. Our survey asked respondents if they would report acts of domestic violence that they witnessed to family members, members of the immediate community, or someone in a position of public authority (*viz.* the police). In the control villages, 87 percent of women and 91 percent of men said they would report acts of domestic violence to someone—for instance, a neighbor, the victim's parents, her in-laws, or the police (see Table 9). Village exposure to *JS* made individuals almost universally willing to report abuse to someone: it increased women's willingness by 8.7 percentage points ($p < .01$) from a level of 87 percent in the control group, and increased men's willingness by 7.3 percentage points ($p < .01$) from a level of 91 percent in the control group.

However, very few (less than 3 percent) of women and men said that they would file a report in the local police station.

Wives and husbands were asked a second question on informal enforcement: “If there was an illegal liquor shop in your community, would you participate in destroying it?” For women, the proportion increased by 19 percentage points ($p < .01$) compared to the mean of 49 percent in the control villages. For men, it increased by 18 percentage points ($p < .01$) from 73 percent in control villages. Thus, 68 percent of women and 91 percent of men said that they would be willing to help close down an illegal local liquor shop.

G. Interaction Effects with Head of Household’s Education

Does the impact of *JS* depend on the level of education of the head of household? In an Indian household, especially in rural areas, lines of hierarchy and authority are clearly drawn. The social norm is that family members accept the authority of those ranked above them. Typically, the person demanding such authority is the head of the household.

Table 10 reports the estimated impact on behavior of living in a treatment village disaggregated by the household head’s level of education.¹⁵ For the most educated group—couples where the household head has education beyond primary school—village exposure to *JS* significantly reduced all three types of domestic abuse—emotional, physical, and sexual. In contrast, *JS* had no significant impact on households whose head did not have education beyond primary school. The impact of *JS* on the number of abuse-free households is significant across all categories of education of the head of household. However, the impact doubles from 6 percent among households where the head has no formal education to 13 percent when the

¹⁵ The distribution of education of household head in the treatment villages is the following: 21 percent have no formal education, 31 percent have education up to primary school, and 48 percent have education beyond primary school.

household head has education beyond primary school. The result supports the idea that *JS* has a greater impact on undermining the cognitive foundation of norms that endorse domestic violence in households with heads educated beyond primary school.

Whereas the results suggest that education magnifies the impact of *JS* in reducing violence, there is no clear pattern of complementarity with respect to impact of *JS* on a wife's voice. According to the women's responses, the impact of *JS* is greater in households with heads with *no* formal education compared to *some* formal education (whether up to primary school, ($p = .002$) or beyond primary school ($p = .042$)).

Men's responses, however, do not have this pattern. They believe that their wives have more voice than the wives believe they have, and the impact of *JS* on a wife's participation in all major household decisions does not significantly differ by household head level of education.

To summarize, there is evidence for the complementarity between *JS* and the household head's level of education on spousal abuse, but not between *JS* and a wife's role in household decisionmaking.

H. Village Norms

An overarching goal of *JS* and of many interventions that use education entertainment is to change social norms. To assess whether *JS* was successful in changing village norms, we investigate spillover effects. We ask, does village exposure to *JS* change behavior and attitudes among couples in treatment villages who have never watched a performance? If so, it would suggest a change in social norms.

Since watching a *JS* play is endogenous and would likely be correlated with openness to change in gender roles, a simple comparison of the behavior of viewers and non-viewers

cannot establish cause and effect. We instead use a difference-in-difference method. We compare in villages with high versus low exposure to *JS* the impact of *JS* on couples that watched at least one performance and those that did not.

JS performed plays in specific areas of the treatment villages. These areas can be mapped to electoral polling booths. We use information on whether a person resides in an “active” or an “inactive” area within a treatment village to control for the endogenous choice of watching a play. The rationale is that a person is more likely to go to a performance if it is in his neighborhood.

There is no difference in the results when we subdivide the category of “either husband or wife has watched a play” to “husband has watched a play, but not wife” and “wife has watched a play, but not husband.” Therefore, we choose the more parsimonious model. In the estimation model, the assignment equation (equation (2)) now has an additional instrument—it is whether the respondent lives in an “active” area or not.

We disaggregate villages between high- and low-exposure to *JS* by using as the cut-off the median number of performances of *JS* plays on domestic violence and alcohol. For the high- and low-exposure villages, Table 11 reports the impact of watching a *JS* play on domestic abuse and on the wife’s voice. In both *low*- and *high*-exposure villages (rows 1-3 and rows 4-6, respectively), the *reduction* in abuse is never significantly greater in couples that have seen a performance than in those that have not (see rows 3 and 6). The only exception to this pattern occurs in *low*-exposure villages, where the impact of *JS* on a wife’s participation in household decisionmaking is significantly larger if a household member has watched a play: in row 3, cols. 6 and 7, $p = .08$ and $p = .03$. The pattern suggests that, particularly in high-exposure villages, the new ideas expressed, and the new gender roles rehearsed, in *JS* performances have spread through village networks and changed village norms.

I. Summary

Figure 4 summarizes the impact of village exposure to *JS*. It significantly reduced the level (top panel) and acceptability (middle panel) of spousal abuse and reduced the proportion of households in which the wife has no voice in decisionmaking (bottom panel).

The effect of village exposure to *JS* on spousal abuse and the wife's voice is *twice* as large as the differences between households with a head with no formal education and with a head educated beyond primary school. The results for education are correlational and so could reflect extremes of poverty and other omitted variables. Nonetheless, the results suggest that the impact on women's empowerment of *JS*—through narrative, the rehearsal of new gender roles, and changes in common knowledge about attitudes—is at least of the same order of magnitude as the impact of increasing from zero to post-primary school the level of education on the household head.

IV. A Simple Model of Social Norm Change

This section presents a model to investigate some of the mechanisms through which *JS* can change village norms. The model demonstrates the power of common knowledge of a change in community attitudes and impulses.

Much anthropological research in India emphasizes that “[t]he primary concern [of Hindu men] is with bowing to social pressures, not with following standards of behavior that have been internalized” (Derné 1994, 17). In interviews with Derné, Hindu men expressed a need to be tough on a wife in order to maintain their honor: “Whatever the social restrictions are, if [a woman] does not live according to them, the honor [*izzat*] of her family [*ghar*] is finished” (p. 265). The loss of family honor has material consequences. It influences the alliances a family can enter into and the prospects of marriage for the children. Fear of social

devaluation and sanctions may lead a married couple to disguise the nature of their relationship if it runs counter to the social norm, as the next example shows. The paragraph below describes a couple in the 1980s in one of the most socially advanced states of India (Maharashtra), and so may describe social pressures that still exists in parts of India today.

[Yusef and Habiba, a married couple who have lived for many years in the village] relate to each other in ways that are at odds with the normal pattern of interaction between the two sexes in the village. Yusef can be seen at times helping with household chores or chatting with Habiba in the evening as if she were his friend. . . . Yusef is careful not to flaunt their relationship in the village. When Yusef is helping to clean the house or doing other ‘women’s work,’ they close the shutters and lock the door. (Dandekar 1986, 94)

We present a model in which the husbands of a village are the agents and choose whether or not to publicly conform to the village norm of patriarchy. Payoffs have two parts—personal motivation and social sanctions. Let v_j^P denote the j^{th} husband’s personal motivation to represent his relationship with his wife as *patriarchal*. Let v_j^A denote his personal motivation to represent his wife as having some *autonomy*. Let Δ_j denote the difference, $v_j^A - v_j^P$. Husbands make up a continuum on the unit interval such that the difference in their personal motivations can be represented according to a strictly monotonically increasing cumulative distribution function, $F(\cdot)$.

Next consider the second part of the payoff to a husband—social devaluation and sanctions for norm violations. Folk Theorem results show that social norms can create incentives to punish norm violators, thereby sustaining the norm under a local information system regardless of personal preferences (Kandori 1992). Following the Folk Theorem, we assume that in equilibrium, the fraction of husbands who sanction norm violators, denoted by m , is equal to the fraction of husbands who follow the norm (the dynamics are discussed below). The cost to a husband of violating the norm is given by cm , where $c > 0$ and c is assumed, for simplicity, to be a constant.

Agent j will choose to violate publicly the patriarchy norm if and only if his personal motivation exceeds the cost from devaluation and sanctions: $v_j^A - cm > v_j^P$. Thus, an agent at equilibrium will violate the norm if $\Delta_j > cm$ or, in words, if his personal motivation strictly exceeds the cost from sanctions. Denote as agent S the husband who has the highest value of Δ in the set of agents who represent their marriages as patriarchal.¹⁶

Next consider the dynamics of the model in response to changes in personal motivations. We assume that it takes some time for a man to switch between the two possible ways he can represent his marriage. We also assume that individuals' switches take place sequentially: between two agents i and k , agent k switches before agent i from representing his marriage as patriarchal only if $\Delta_k \geq \Delta_i$. Likewise, it takes some time for a husband to switch between sanctioning a norm violator and refraining from doing so. The switches by husbands also take place sequentially: agent i sanctions norm violators only if every individual j with $\Delta_j < \Delta_i$ sanctions the norm violators.

With these assumptions, we propose the following intertemporal dynamics to model responses to any change in preferences or perspective-taking brought about by JS :

$$\dot{\Delta}_S = h(F(cm), F(\Delta_S)) \quad (3)$$

$$\dot{m} = g(F(\Delta_S), m) \quad (4)$$

where functions $h(\cdot)$ and $g(\cdot)$ have the properties $h(x, y) \leq 0 \quad \forall x \leq y$ and $g(x, y) \leq 0 \quad \forall x \leq y$.

Given any value of m , $F(cm)$ gives the proportion of husbands for whom $\Delta \leq cm$. Similarly, $F(\Delta_S)$ gives the proportion of husbands for whom $\Delta \leq \Delta_S$. If these two quantities

¹⁶ Analytically, $\Delta_S \equiv \sup_{j \text{ in patriarchal relationship}} \{\Delta_j\}$.

are not equal, then (given the definition of agent S) there is a fraction of husbands with Δ strictly within cm and Δ_S who find it profitable to switch away from representing their marriage as patriarchal if $\Delta_S > cm$ and *vice versa* if $\Delta_S < cm$. Thus Δ_S changes accordingly. This idea is captured in equation (3).

The intuition behind equation (4) is that, for any value of Δ_S , $F(\Delta_S)$ gives the proportion of husbands who represent their marriage as patriarchal and m is the proportion of husbands who sanction norm violators. Since husbands in a patriarchal relationship eventually start sanctioning norm violators, and husbands who publicly give some autonomy to their wives eventually stop sanctioning norm violators, if $F(\Delta_S) > m$, then m rises, and if $F(\Delta_S) < m$ then m falls.

In what follows, without loss of generality, we normalize payoffs so that $c = 1$. Given equations (3) and (4), the conditions for a fixed point and equilibrium are $\dot{\Delta} = 0$ and $\dot{m} = 0$, which imply

$$\Delta_S = F(\Delta_S) \tag{5}$$

or in words, the personal motivation to publicly violate the norm of patriarchy of the threshold patriarch is equal to the proportion of husbands who devalue or sanction norm violators.

Figure 5 depicts the case for a possible parametrization of equations (3) and (4) such that there are multiple equilibria (which is a possibility since $F(\cdot)$ is an arbitrary increasing function). The two circles in Figure 5 are stable equilibria, and between them there is an unstable equilibrium. Any point in the figure defines the threshold patriarch and the level of social sanctions/devaluation for violating the norm of patriarchy. The figure divides the entire area into four zones of transition: the region in blue, where some husbands switch from being patriarchal (Δ_S falls) while some others stop sanctioning norm violators (m falls), the region in orange, where some husbands switch from granting their wives some autonomy (Δ_S rises) while

some others start sanctioning norm violators (m rises); the region in grey, where some husbands switch away from publicly observing the patriarchy norm (Δ_S falls) while some others commence sanctioning norm violators (m rises); and the region in yellow, where some husbands switch away from granting their wives some autonomy (Δ_S rises) while some others stop sanctioning norm violators (m falls).

We can use the figure to show how community-based Theater of the Oppressed can influence social norms. It may have a persistent effect on empathy and the social constructs of ‘a real man’ and a good woman. It may also affect in the short run people’s impulses. Most individuals feel empathy for the suffering of others they view as like themselves in some way, but a husband’s thinking about the threat to his family’s honor from a disobedient wife could overwhelm feelings of empathy. Through the fog of his obsession with his honor, he may not see the cruelty of beating his wife. Theater of the Oppressed exposes people to plays about *others* who are like them. They will likely respond with empathy to the suffering of a fictional character—and perhaps have the impulse not to punish a man for violating the patriarchy norm. Having seen with greater clarity, they may feel differently. Viewers of a performance would experience this most strongly, but in the tight social networks of a village, the feelings are likely to be shared with non-viewers.

We distinguish two channels through which Theater of the Oppressed may change behavior: changing payoffs, which depend on how a community conceptualizes masculinity and a good marriage, and equilibrium selection.

Channel 1: Shift in preferences. Perceptions of a relationship and what one wants to achieve from it are shaped by the social constructs through which it is viewed (DiMaggio 1997, Zerubavel 1997). A wife who has been exposed to Theater of the Oppressed may be more able to imagine exercising more control over her life and may gain the self-confidence to demand

it. A husband in a village that has been exposed to Theater of the Oppressed may feel more empathy for his wife; he may become more responsive to her wishes and feel more natural in showing his empathy in public, may also be more tolerant of other husbands who show empathy for their wives. By increasing $v_j^A - v_j^P$, both these factors shift down the cumulative distribution function $F(\cdot)$.¹⁷ As shown in Figure 6, a small shift down in the distribution leads to a small reduction in the equilibrium proportion of husbands who publicly follow the norm of patriarchy. Only in cases where one of the equilibria disappears (because the distribution falls below the 45° line) could there be a large shift in behavior as a result of a small shift in $F(\cdot)$.

Channel 2: New impulses

In plays on the theme of patriarchy, *JS* shows dramas with loving wives who try to help their husbands in every way, and yet whose husbands beat them. Viewing their suffering is likely to change the villagers' impulsive responses to cruelty by *other* husbands. Kets and Sandroni (2019) introduce the notion of *introspective equilibrium*, in which such an impulse becomes an anchor from which an equilibrium is reached. Following Schelling (1960), they assume that when facing strategic uncertainty, players in a game make contact with each other through an imaginative process of introspection. An individual uses the observation of his own impulses to form an initial belief about the perspectives of others. “[I]ntrospective equilibrium is the outcome of a reasoning process,” where individuals reason myopically that players will move to the stable equilibrium that is nearest to the initial shock (p. 30). This is the equilibrium in the basin of attraction of the shock. Players go through this reasoning process in their minds

¹⁷ Note that since we have normalized c to unity, without loss of generality, both a rise in $v_j^A - v_j^P$, or a fall in c , can be modeled as a secular fall in $v_j^A - v_j^P$.

before they take a decision. If all do this, the introspective equilibrium is a Nash equilibrium reached from the anchor that would occur if all individuals had acted on their impulses.

To illustrate, we consider first the impact of a small impulse and then the impact of a large impulse. In the first case, exposure to the Theater of the Oppressed leads to impulses that lower the proportion of husbands who are expected to sanction norm violators. We model this as a transient parametric shift in $h(\cdot)$ and/or $g(\cdot)$ and depict it in Figure 7 such that the society initially at the bad equilibrium (the light-shaded circle) moves to \tilde{p} .¹⁸ This is not an equilibrium. Starting from this anchor after the shock is removed, the agents will reach again the bad equilibrium.

In contrast, starting from the bad equilibrium, an impulse that corresponds to a large shift to \hat{p} will lead the community to select a new equilibrium where the fraction of patriarchal husbands is low (depicted by the dark-shaded circle). It can do this even if it causes no change in the personal motivations of any husband, v_j^A and v_j^P . The mechanism is a snowballing effect from initial impulses.

V. Conclusion

Widespread patterns of spousal abuse of women in low- and middle-income countries lead many individuals to see it as natural and normal. No sure means to end patterns of spousal abuse is known. This paper presents the first large-scale evidence that community-based Theater of the Oppressed can weaken norms of domestic violence and empower women.

¹⁸ An example of *introspective equilibrium* is where in response to JS plays, the husbands impulsively feel empathy for their wives and become more tolerant of others who violate the patriarchy norm. *Introspectively*, they imagine that others feel the same way. This decreases the proportion of husbands who they believe will sanction norm violators. We model the impulses as transient parametric shifts in the $h(\cdot)$ and $g(\cdot)$ functions of equations (3) and (4) respectively. The governing equations during the transitory period are $\dot{\Delta}_S = h(F(m - U), F(\Delta_S))$ and/or $\dot{m} = g(F(\Delta_S), m - V)$, where the parameters U and/or V summarize the effect of JS. After the transitory period, the original equations (3) and (4) come back into operation, *i.e.* U and V revert to zero.

Estimating an endogenous treatment model, we found that village exposure to Theater of the Oppressed increased the proportion of women in abuse-free marriages and reduced the acceptability to both women and men of domestic violence. Consistent with these changes, village exposure increased women's role in decisionmaking over their lives.

We interpret these results as evidence that narratives can change perceptions and construals, and that playing new roles and rehearsing social change can increase agency. Individuals use the stories of a culture to interpret what happens to them (Schank 1995, especially 149, 158). As Schank emphasizes, if a standard story for a certain kind of event exists in a culture, nearly all community members may select it to describe an ambiguous event, for example, domestic violence. In some cases, individuals have no choice of alternative stories. Schank gives evidence that individuals will generally come to believe the story they find themselves telling. This can explain the example cited above of the rural Ethiopian woman who declared, "It is sometimes necessary for husbands to beat their wives when they commit mistakes to correct them...[and it is] a sign of strong manhood."

When individuals collectively create a new story and recognizes a change from traditional attitudes, it may lead them to see things differently and behave differently. A suggestive example we gave was of a young man who cried out to an actress after a *JS* performance that her cries as she was being beaten were like his wife's cries when he beat her; he saw for the first time the cruelty of his action and resolved never to beat her again.

A stripped-down version of a story is a script. Many of the roles we play in life are scripted. (A common example is the script of a patron of a restaurant: you sit down in a room full of strangers and ask a stranger to bring you food.) Many scripts in domestic violence have to do with how a husband and wife respond to domestic conflict: Is it the role of the man to dominate his wife, even violently? Is it a wife's role to accept the domination?

Sociologists and leading economic historians have argued that ‘cognitive rules’—what people believe to be true and reasonable—are “the ‘scaffolds’ on which institutional structures rest” (Greif and Mokyr 2017, 26). A necessary condition to change an institution is to change its cognitive foundations (DiMaggio and Powell 1991; Denzau and North 1994). Theater of the Oppressed seeks to undermine the cognitive foundations of patriarchy. The first part of a performance presents a drama of familiar acts of oppression, with some elements that are scripts (recall the example above of the interview of a prospective daughter-in-law). The second part gives members of the audience the opportunity to change the drama’s ending in order to prevent, or put a stop to, the oppression. The actors are trained to suggest obstacles to whatever strategies are proposed. Collectively, the actors, audience, sequence of spect-actors, and the Joker (the neutral facilitator) revise the story. If the revised stories are widely shared, the community may change. Individuals may experience and interpret their experiences differently, perceive things they had not perceived before, have new common knowledge of what is and is not acceptable in their community, and behave in ways that they would not have behaved before. The results of our empirical analysis of women and their husbands in 100 villages suggest that Theater of the Oppressed in West Bengal changed mind-sets and the norms embedded in them. In future work we hope to isolate the impact that is due to the active rehearsal of social change, and to consider the impact of Theater of the Oppressed in other domains, such as corruption.

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Table 1. Characteristics of treatment and control villages in 1991

	<i>Treatment</i>	<i>Control</i>
<i>Demographic variables</i> (percent of population)		
Female	48.63	48.04
Persons under 6 years of age	15.40	15.33
Literacy rate	56.10	53.37
Female literacy rate	44.42	39.86
<i>Percentage of villages with:</i>		
Primary school	84.90	82.63
Middle school	30.54	30.51
Secondary school	16.44	16.10
Health Centre	2.01	2.97
Pharmacy	5.37	2.54
Access to village is by paved or metaled ro	66.44	75.43
Bus Stop	18.46	16.95
Commercial bank	5.03	5.51

Source: Census of India, 1991

Table 2A. Number of administrative regions and households in the primary survey

	<i>Treatment</i>	<i>Control</i>
Blocks	3	3
<i>Gram panchayats</i>	8	18
Census villages	33	61
Electoral polling booths	92	79
Households	1,749	1,903
	In active areas: 939	
	In inactive areas: 810	

Source: Primary survey, 2014-15

Note: Eligible voters are assigned to a polling booth according to where they live. We distinguish polling booths in the treatment villages that correspond to areas in which JS regularly performs (“active areas”) and in which it does not (“inactive areas”).

Table 2B. Characteristics of respondents in the primary survey

	Treatment	Control
Age of female respondents	30.54 (6.89)	29.87 (6.91)
Age of male respondents	36.86 (7.11)	35.94 (7.37)
Number of children	1.86 (0.03)	2.06 (0.03)
Age of household head	42.66 (0.28)	40.80 (0.26)
Household head is illiterate	0.11 (0.01)	0.15 (0.01)
Male female ratio (15-49 years)	1.18 (0.015)	1.17 (0.013)
Household size	5.07 (2.02)	5.11 (1.93)
Respondent’s family is nuclear (proportion)	0.56 (0.50)	0.59 (0.49)

Source: Primary survey, 2014-15

Note. The columns report the mean values except where otherwise noted. Standard errors reported in parentheses.

Table 3. Husband's abuse of his wife—The wife's responses

<i>Dependent variable</i>	<i>Emotional abuse</i> (1)	<i>Physical abuse</i> (2)	<i>Sexual abuse</i> (3)	<i>Abuse free</i> (4)
Living in a village exposed to <i>JS</i>	-0.0561* (0.032)	-0.0666** (0.028)	-0.0468* (0.028)	0.1068*** (0.035)
Controls	Yes	Yes	Yes	Yes
Log-likelihood	-2408	-2240	-1860	-2581
Mean of control group	0.3474 (0.019)	0.3090 (0.020)	0.1879 (0.017)	0.4731 (0.022)
<i>N</i>	3,074	3,074	3,072	3,074

Notes. The dependent variable in cols 1-5 takes a value 1 if a wife faces the abuse mentioned in the column heading. The different types of abuse are defined as follows: **Emotional abuse (Col 1)**: say or do something to humiliate you in front of others; threaten to hurt or harm you or someone close to you; insult you or make you feel bad about yourself;. **Physical abuse (Col 2)**: push you, shake you, or throw something at you; slap you; twist your arm or pull your hair; punch you with his fist or with something that could hurt you; kick you, drag you, or beat you up; try to choke you or burn you on purpose; or threaten or attack you with a knife, gun, or any other weapon. **Sexual abuse (Col 3)**: physically force you to have sexual intercourse with him even when you did not want to; physically force you to perform any other sexual acts you did not want to; force you with threats or in any other way to perform sexual acts you did not want to. **Abuse free (Col 4)**: none of the above forms of abuse occurs. Bootstrapped standard errors are in parentheses. Controls used in the estimations are those reported in the paper.

Table 4. Wife's and husband's attitudes toward wife-beating

<i>Dependent variable</i>	<i>Number of situations justifying beating</i>		<i>Beating can be justified (dummy)</i>	
	<i>Female</i> (1)	<i>Male</i> (2)	<i>Female</i> (3)	<i>Male</i> (4)
Living in a village exposed to <i>JS</i>	-0.0322* (0.016)	-0.4387*** (0.096)	-0.0271* (0.012)	-0.2780*** (0.0324)
Controls	Yes	Yes	Yes	Yes
Log-likelihood	-1233	-3278	-1276	-2287
Mean dep var in control group	0.0805 (0.008)	0.7791 (0.0206)	0.0857 (0.011)	0.5523 (0.022)
<i>N</i>	3,074	2,961	3,074	2,961

Notes. The dependent variable in cols 1-2 is the number the following seven situations that the respondent believes justify wife beating: the wife (i) goes out without telling husband (ii) neglects children and household work (iii) argues with him (iv) refuses to have physical intimacy (v) disrespects his family members (vi) is suspected of having an illicit relationship (vii) has borne no children. The dependent variable in cols. 3-4 takes a value 1 if the respondent believes that wife beating is justified in at least one of the seven situations.

Cols 1-2 report the average treatment effects from a Poisson model with endogenous treatment effects. Cols 3-4 report the average treatment effects from an endogenous binary treatment model with binary outcomes; Bootstrapped standard errors are in parentheses. Controls used in the estimations are those reported in the paper.

Table 5. The wife's participation in making major household decisions

<i>Dependent variable</i>	<i>Participates in <u>all</u> major household decisions</i>		<i>Participates in no major household decisions</i>	
	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>
<i>Response by:</i>	(1)	(2)	(3)	(4)
Living in a village exposed to JS	0.0633*** (0.023)	0.0941*** (0.035)	-0.1086*** (0.023)	-0.0228* (0.012)
Controls	Yes	Yes	Yes	Yes
Log-likelihood	-1140	-1634	-1489	-649
Mean of control group	0.0583 (0.008)	0.2474 (0.020)	0.2050 (0.017)	0.0460 (0.0084)
<i>N</i>	2,599	2,254	2,599	2,254

Notes. Household decisions considered are needs of children and household health, major purchases by the household, the wife's visit to relatives, number of children to have, use of contraception and children's marriage. The dependent variable takes a value 1 if the wife participates in all decision-making (columns 1 & 2) and if the wife does not participate in even one of the concerned decisions (columns 3 & 4). Average treatment effects from an endogenous binary treatment model with binary outcomes are reported. Bootstrapped standard errors are reported in parentheses. Controls used in the estimations are those reported in the paper.

Table 6. Freedom from marital control—The wife's responses

<i>Dependent variable</i>	<i>Freedom from marital control (dummy)</i>
Living in a village exposed to <i>JS</i>	0.0382*** (0.011)
Controls	Yes
Log-likelihood	-879
Mean dep var in control group	0.0127 (0.003)
<i>N</i>	3,017

Notes. Marital control is defined as the husband refusing to let his wife meet her female friends, limiting her contact with her family, insisting on knowing where she is at all times, and not trusting her with any money. Average treatment effects from an endogenous binary treatment model with binary outcomes are reported. Bootstrapped standard errors are in parentheses. Controls used in the estimations are those reported in the paper.

Table 7. Abuse due to husband's drinking, and is the husband drinking currently?

<i>Dependent variable</i>	<i>Verbal or physical abuse due to husband's drinking</i>		<i>Whether husband is drinking?</i>
	<i>Female</i> (1)	<i>Male</i> (2)	<i>Female</i> (3)
Living in a village exposed to JS	-0.1413*** (0.049)	-0.3286*** (0.046)	-0.0453* (0.026)
Controls	Yes	Yes	Yes
Log-likelihood	-952	-1093	-2185
Mean dep var in control group	0.3031 (0.043)	0.5054 (0.041)	0.3309 (0.019)
<i>N</i>	1,483	1,673	3,024

Notes. The dependent variable in cols 1-2 takes a value 1 if the respondent states that there is verbal/physical abuse in the couple's relationship due to drinking of the husband in the last year. The dependent variable in col 3 takes a value 1 if the respondent states that her husband is drinking alcohol at the time of survey. Average treatment effects from an endogenous binary treatment model with binary outcomes are reported. Bootstrapped standard errors are in parentheses. Controls used in the estimations are those reported in the paper.

Table 8. Lack of awareness of laws to protect victims of domestic violence

<i>Dependent variable</i> <i>Response by:</i>	<i>No awareness of laws</i>	
	<i>Wife's responses</i> (1)	<i>Husband's responses</i> (2)
Living in a village exposed to JS	-0.1446*** (0.035)	-0.0815** (0.038)
Controls	Yes	Yes
Log-likelihood	-2380	-2466
Mean dep var in control group	0.5172 (0.0213)	0.5120 (0.021)
<i>N</i>	2,885	2,987

Notes. The dependent variable in cols 1-2 takes a value 1 if the respondent has **no awareness** of laws to protect victims of domestic violence (can file a police report, cannot be evicted by her in-laws, assailants have to cover medical costs arising from domestic violence). Average treatment effects from an endogenous binary treatment model with binary outcomes are reported. Bootstrapped standard errors are in parentheses. Controls used in the estimations are those reported in the paper.

Table 9. Willingness to report domestic violence and to participate in the destruction of illegal liquor shops

<i>Dependent variable</i>	<i>Would report to someone acts of domestic violence he/she witnesses</i>		<i>Would help destroy an illegal liquor shop</i>	
	<i>Female</i> (1)	<i>Male</i> (2)	<i>Female</i> (3)	<i>Male</i> (4)
Living in a village exposed to JS	0.0868*** (0.014)	0.0729*** (0.019)	0.1868*** (0.033)	0.1767*** (0.021)
Controls	Yes	Yes	Yes	Yes
Log-likelihood	-1289	-953	-2402	-1740
Mean dep var in control group	0.8746 (0.011)	0.9114 (0.0164)	0.4920 (0.0193)	0.7311 (0.015)
<i>N</i>	3,044	2,957	3,008	2,927

Notes. The dependent variable in cols 1-2 takes a value 1 if the respondent believes that he/she should report to authorities (police station, women's group, *panchayat*, women's family, husband's family, community members etc.) if they witness an act of domestic violence. The dependent variable in cols 3-4 takes a value 1 if the respondent is willing to participate in movement(s) to destroy illegal liquor shops in their community. Average treatment effects from an endogenous binary treatment model with binary outcomes are reported. Bootstrapped standard errors are in parentheses. Controls used in the estimations are those reported in the paper.

Table 10. Impact of JS on behavior and attitudes, disaggregated by household head's level of education

<i>Dependent variable</i>	<i>Emotional abuse</i>	<i>Physical abuse</i>	<i>Sexual abuse</i>	<i>Abuse free</i>	<i>Wife participates in all major decisions</i>	
<i>Response by:</i>	<i>Wife's response</i>	<i>Wife's response</i>	<i>Wife's response</i>	<i>Wife's response</i>	<i>Wife's response</i>	<i>Husband's response</i>
	(1)	(2)	(3)	(4)	(5)	(6)
Household head has no formal education (A)	-0.0310 (0.039)	-0.0311 (0.031)	-0.0099 (0.030)	0.0645** (0.031)	0.1066*** (0.029)	0.0470 (0.034)
Household head has education upto primary school (B)	-0.0309 (0.035)	-0.0338 (0.037)	-0.0298 (0.028)	0.0708** (0.031)	0.0106 (0.018)	0.1133*** (0.038)
Household head has education beyond primary school (C)	-0.0786** (0.038)	-0.0851** (0.041)	-0.0810** (0.032)	0.1264*** (0.046)	0.0223 (0.030)	0.0980* (0.054)
Difference between (A) & (B) (<i>p</i> - values)	0.9978	0.9332	0.5365	0.8574	0.0015**	0.1472
Difference between (A) & (C) (<i>p</i> - values)	0.2663	0.1629	0.0513*	0.1560	0.0419**	0.3757
Difference between (B) & (C) (<i>p</i> - values)	0.1564	0.0678*	0.0570*	0.0884*	0.5924	0.7702
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Log-likelihood	-4689	-4524	-4141	-4863	-2901	-3254
<i>N</i>	3,072	3,072	3,070	3,072	2,596	2,254
Mean of control group by education level of household head						
No formal education	0.3776 (0.027)	0.3535 (0.026)	0.1964 (0.022)	0.4381 (0.027)	0.0523 (0.013)	0.2885 (0.028)
Not more than primary school	0.3310 (0.023)	0.2719 (0.022)	0.1726 (0.019)	0.5201 (0.024)	(0.0734) (0.013)	0.2250 (0.023)
Beyond primary school	0.3072 (0.021)	0.2515 (0.020)	0.1736 (0.017)	0.5402 (0.023)	0.0824 (0.0130)	0.2717 (0.023)

Notes. The dependent variable in cols. 1, 2 and 3 takes a value 1 if the wife faces emotional abuse, physical abuse or sexual abuse respectively. The dependent variable in col 4 takes a value 1 if the wife faces no abuse. The dependent variable in cols 5 and 6 take a value 1 if the wife (husband) responds that the wife participates in all major decisions in the household as defined in Table 5. Average treatment effects from an endogenous binary treatment model with binary outcomes are reported. Bootstrapped standard errors are in parentheses. Controls used in the estimations are those reported in the paper.

Table 11. Impact of watching at least one JS play for villagers in low-exposure villages and high-exposure villages

<i>Dependent variable</i>	<i>Emotional abuse</i>	<i>Physical abuse</i>	<i>Sexual abuse</i>	<i>Abuse free</i>	<i>Wife participates in all major household decisions</i>	
<i>Response by:</i>	<i>Wife's response</i>	<i>Wife's response</i>	<i>Wife's response</i>	<i>Wife's response</i>	<i>Wife's response</i>	<i>Husband's response</i>
	(1)	(2)	(3)	(4)	(7)	(8)
Low-exposure villages						
Neither husband nor wife has watched a play	-0.0614 (0.042)	-0.0083 (0.045)	-0.0392 (0.032)	0.0990** (0.047)	0.0484 (0.037)	-0.0072 (0.038)
At least one of the spouses has watched a JS play	-0.1054*** (0.026)	-0.0655* (0.036)	-0.0629*** (0.019)	0.1450*** (0.037)	0.1354*** (0.030)	0.0562** (0.028)
Difference in impact between not watching & at least one person watching (<i>p</i> -value)	0.3089	0.3188	0.4495	0.3041	0.0798*	0.0336**
High-exposure villages						
Neither husband nor wife has watched a play	-0.0770* (0.040)	-0.1613*** (0.032)	-0.0601* (0.026)	0.1535*** (0.048)	0.0901** (0.044)	0.1364*** (0.042)
At least one of the spouses (or both) has watched a JS	-0.0061 (0.046)	-0.0344 (0.037)	-0.0249 (0.036)	0.0881* (0.053)	0.1434*** (0.042)	0.1313** (0.053)
Difference in impacts between not watching & at least one person watching (<i>p</i> - value)	0.2497	0.0026***	0.4156	0.3155	0.4317	0.9405
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Log-likelihood	-3382	-3238	-2877	-3531	-2812	-3044
<i>N</i>	2,672	2,672	2,670	2,672	2,646	2,449
Mean of control group	0.3416 (0.017)	0.3010 (0.016)	0.1757 (0.011)	0.4789 (0.020)	0.1290 (0.009)	0.2490 (0.017)

Notes. Treatment villages are categorized into low and high exposure to JS depending on whether less than or greater than median number of plays on domestic violence and abuse due to alcohol consumption have been shown. The dependent variable in cols. 1, 2 and 3 takes a value 1 if the wife faces emotional abuse, physical abuse or sexual abuse respectively. The dependent variable in col 4 takes a value 1 if the wife faces no abuse. The dependent variable in cols 5 and 6 take a value 1 if the wife (husband) responds that the wife participates in all major decisions in the household as defined in Table 5. Average treatment effects from an endogenous binary treatment model with binary outcomes are reported. Bootstrapped standard errors are in parentheses. Controls used in the estimations are those reported in the paper.

Figure 1: Administrative areas of the survey. The highlighted areas show (A) district of South 24 Parganas, (B) control and treatment blocks of South 24 Parganas, and (C) control and treatment villages.

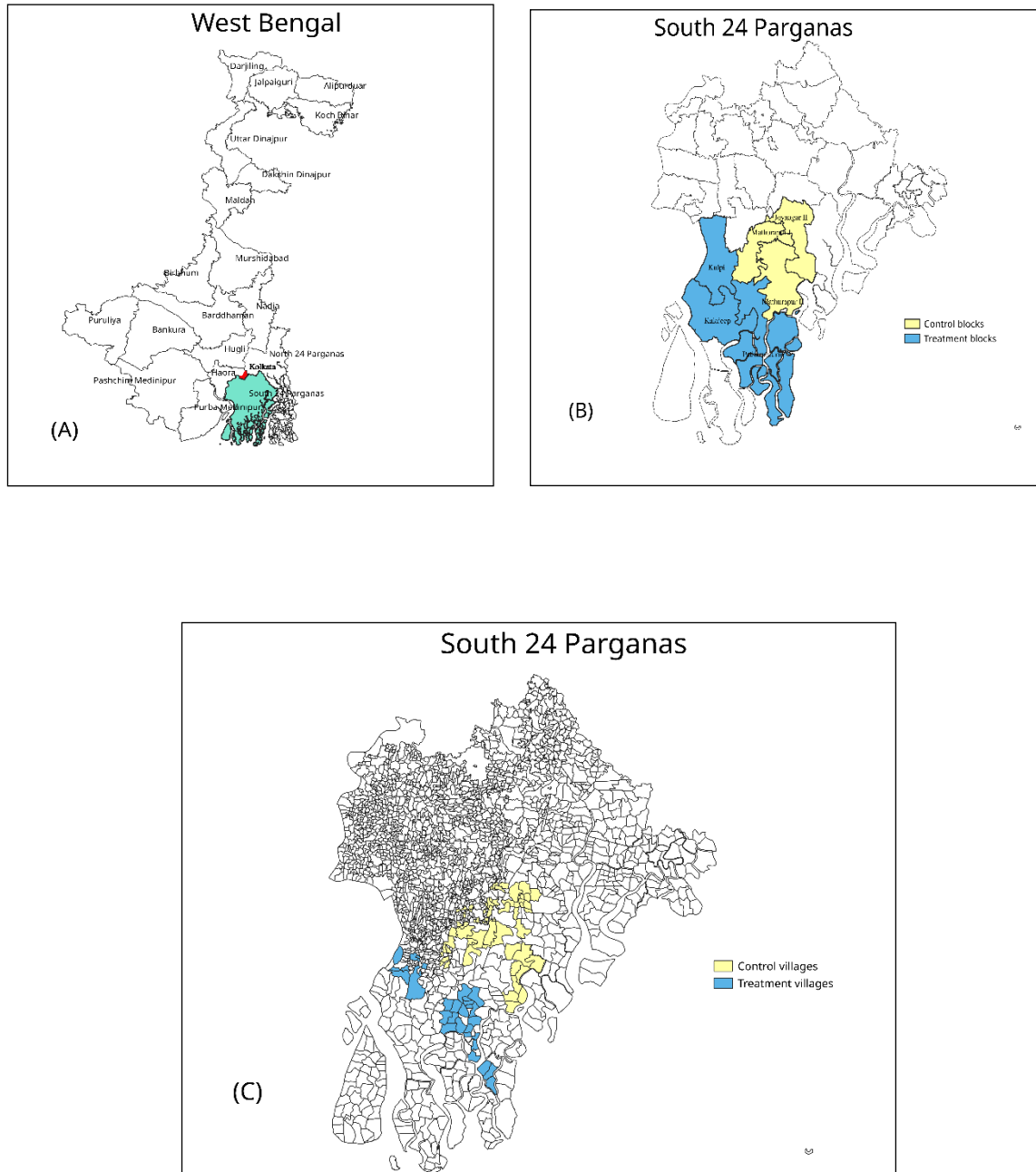
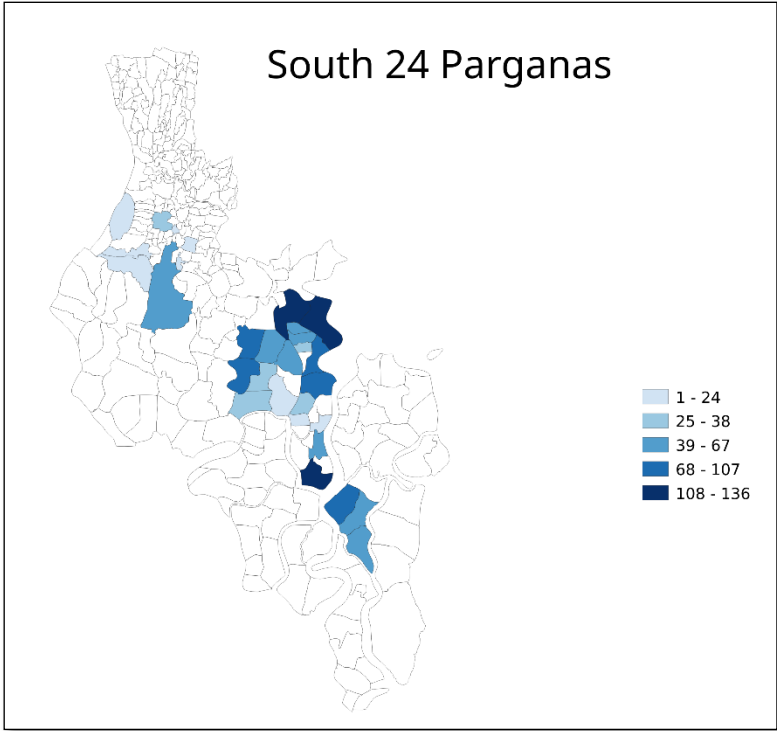


Figure 2. Distribution of *Jana Sanskriti* performances in treatment villages (2002-2013).

A. Total Performances



B. Performances of plays on domestic violence and alcohol abuse

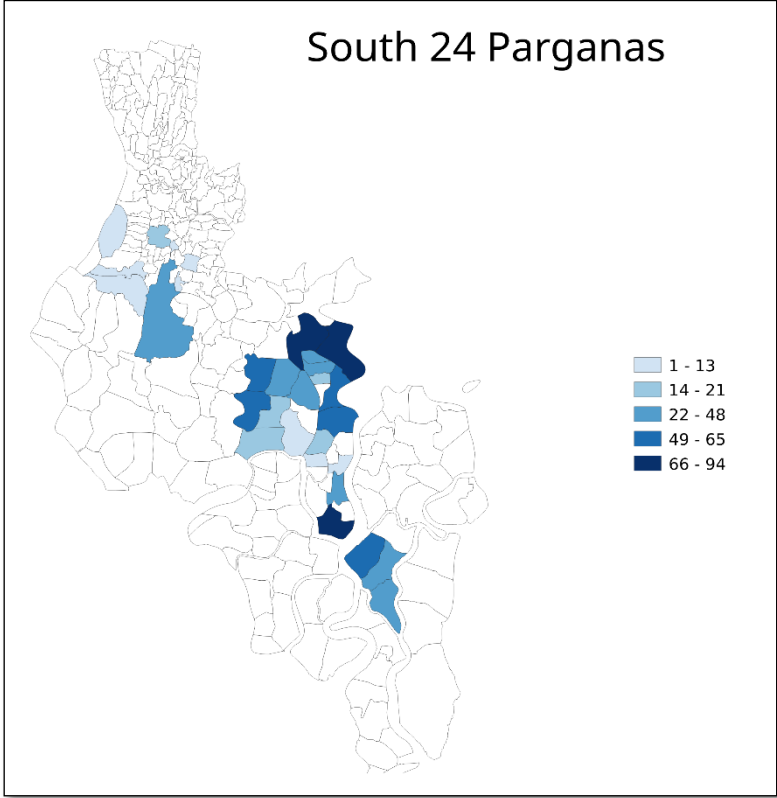


Figure 3. Proportion of couples in active and inactive areas of a village who have watched at least one JS performance.

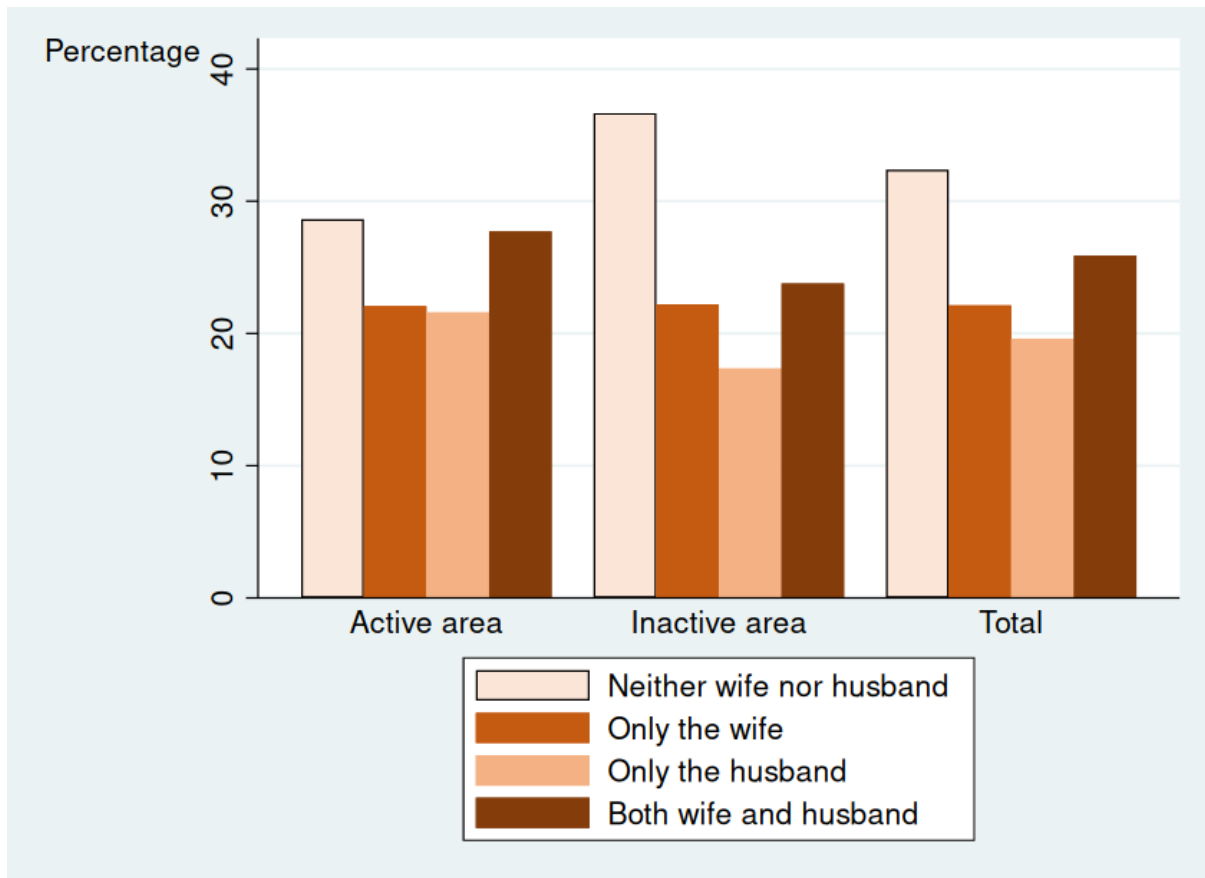


Figure 4. Impact of village exposure to *Jana Sanskriti* on spousal abuse, its acceptability, and the silencing of a wife in her household

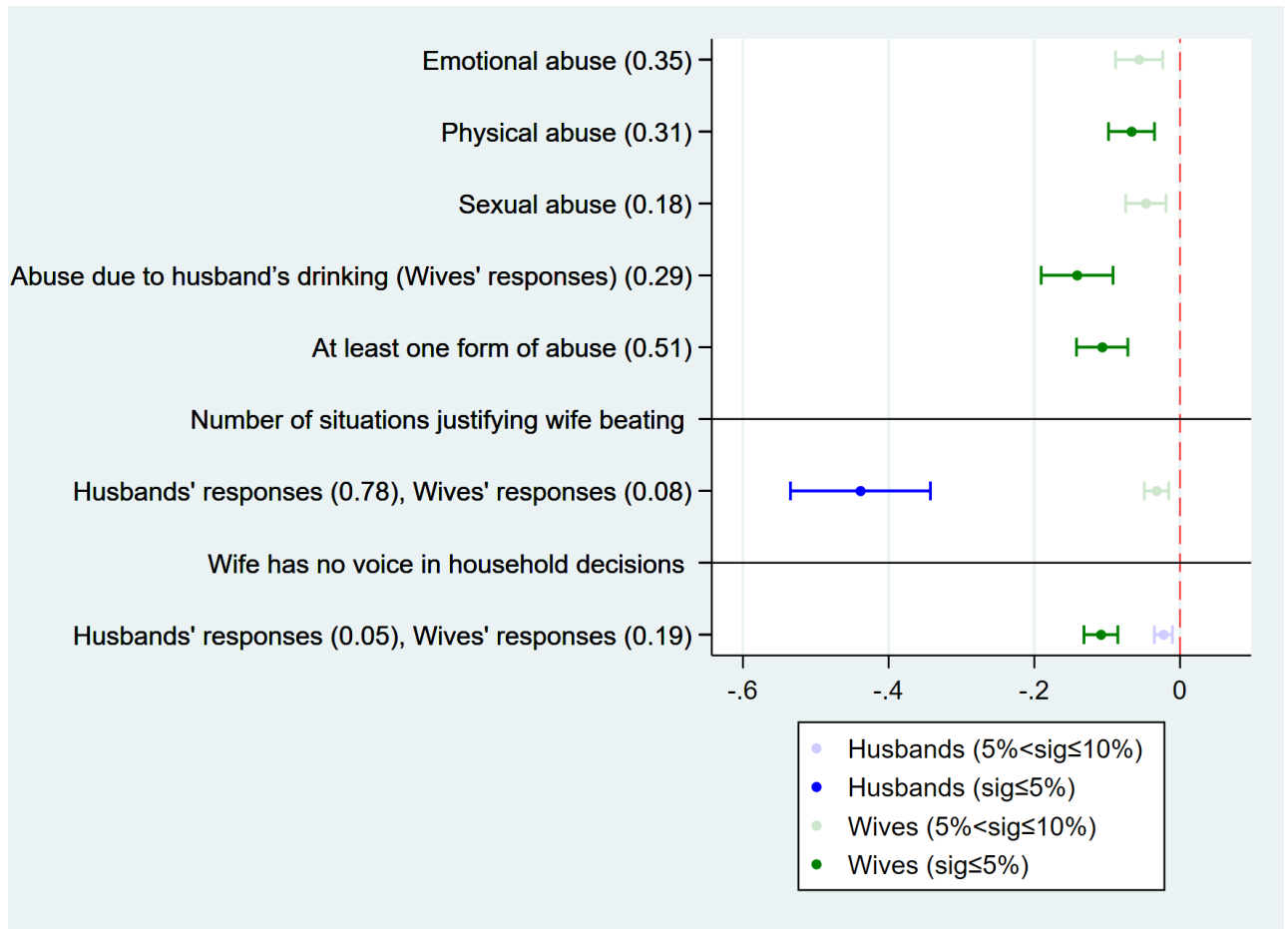


Figure 5. Multiple equilibria of the proportion of patriarchal marriages and the proportion of husbands who sanction norm violators.

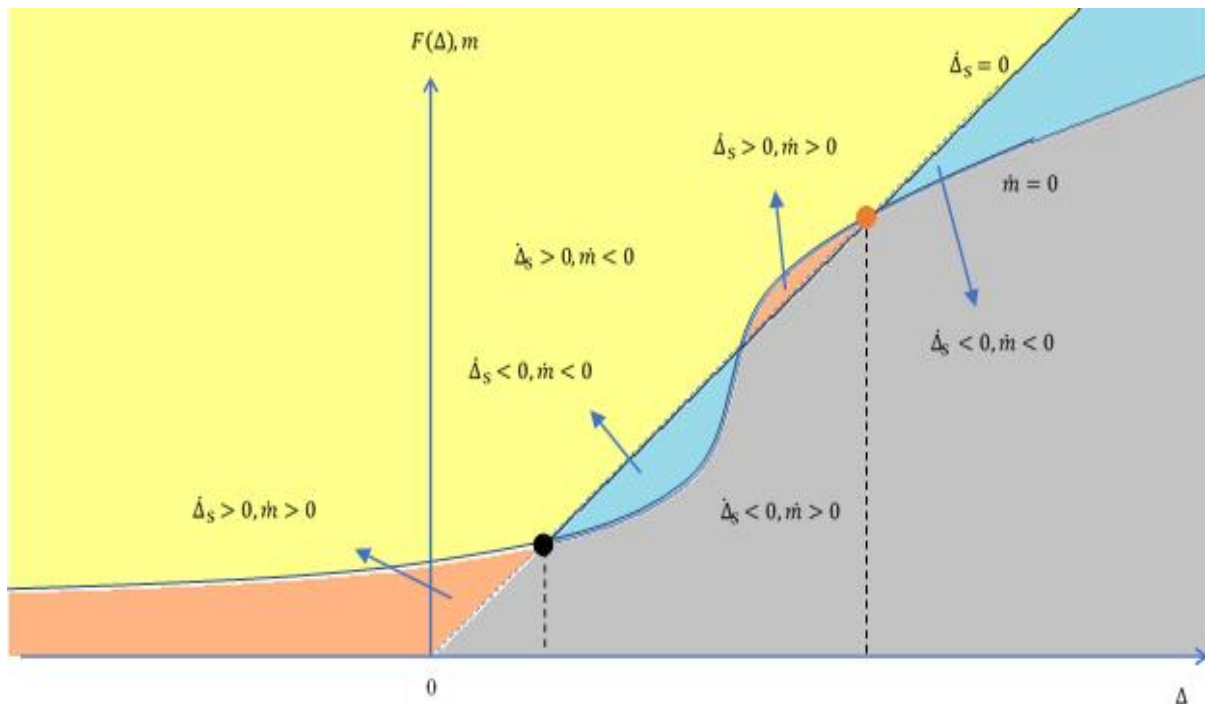


Figure 6. An increase in personal motivations to publicly give a wife some autonomy shifts down the equilibrium levels of adherence to the norm of extreme patriarchy.

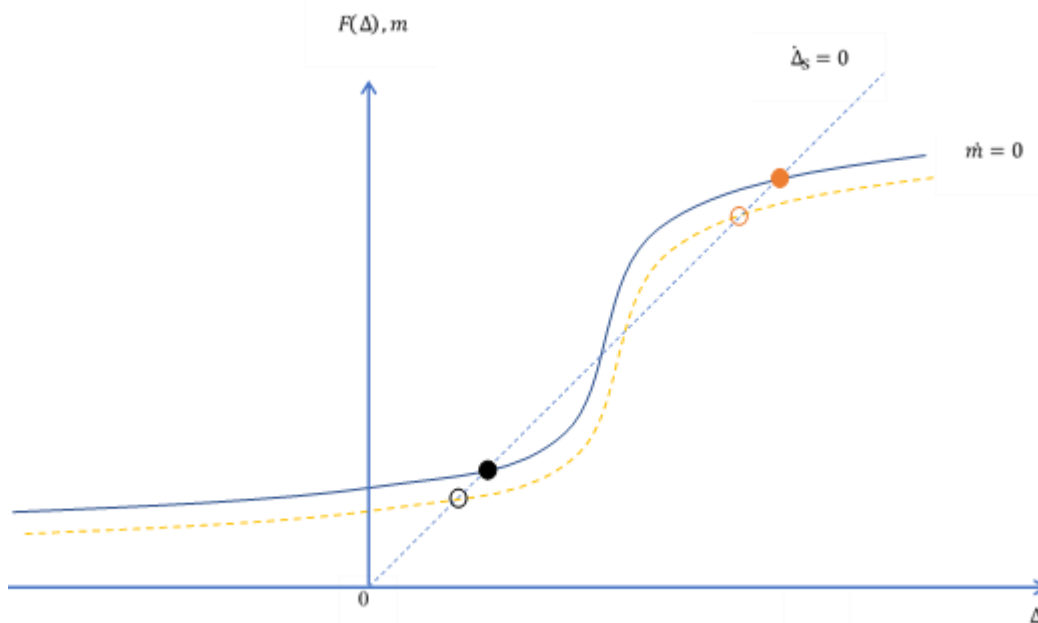


Figure 7. An impulse sufficiently large that is outside the basin of attraction of the initial equilibrium acts as an anchor that leads to the selection of a new equilibrium.

