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The power of numbers in gender dynamics: illustrations from community forestry groups

Bina Agarwal

Is solidarity and a collective articulation of interests a necessary condition for the socially disadvantaged to have a voice in institutions of local governance, as some commentators argue? Or can their inclusion in sufficient numbers equally serve this purpose, as implied in the global lobbying for quotas? Also, by what process can numbers transform into solidarity? And how can the impact of inclusion in local institutions move beyond the local? Answers to these questions would be relevant in many contexts, not least in emerging global debates on the social and solidarity economy (SSE). This paper argues that the power of numbers and implicitly shared interests can, in themselves, go a long way towards improving outcomes for the disadvantaged, although a conscious recognition and collective articulation of shared interests can further enhance effectiveness. The shift from implicitly shared interests to their collective expression, however, will require a concerted engagement with intra-group dynamics and processes of group formation and democratic deliberation. These aspects have been relatively neglected in existing SSE debates, which have focused mainly on a group's interaction with outside-group agencies rather than on intra-group interaction. The paper examines within-group dynamics through the prism of gender and class. Drawing on the author's empirical results relating to community forestry groups in South Asia, it demonstrates that a critical mass of 'women-in-themselves' can make a notable difference even without a 'women-for-themselves' social consciousness. It also explores how horizontal linkages across local groups and their vertical representation via federations can enhance impact beyond the local.

Keywords: critical mass; social and solidarity economy; group dynamics; gender; community forestry; federations; South Asia

1. Introduction

The social inclusion of the disadvantaged, especially their inclusion in substantial numbers, has long been seen as a means of giving them voice within institutions of governance, so that they can call attention to the issues that deeply affect their lives. The power of numbers thus becomes a means of enhancing social equity and empowerment, and is implicit in the global lobbying for quotas on grounds of gender, caste, race, and so on. Some scholars have argued, however, that for effectiveness, political consciousness

This is a significantly revised version of a paper presented at a conference on Social and Solidarity Economy, organized by the United Nations Research Institute for Social Development (UNRISD), Geneva, 6–8 May 2013. I am grateful to Peter Utting and to the journal's anonymous referees for their comments on the earlier version.

among the disadvantaged is of central importance. Sapiro (1981, 704), for instance, stresses that:

[P]olitical systems are not likely to represent previously un-represented groups until those groups develop a sense of their own interests and place demands on the system. This requires the development of political consciousness and political activism based on this new group consciousness.

More recently, another concept has been gaining prominence, namely that of social and solidarity economy (SSE), which too places emphasis on group cohesiveness and a conscious recognition of shared interests by the disadvantaged, but *assumes* (by default) that these groups already possess these attributes rather than needing to develop them. Although the concept of SSE is still evolving and contentious, there is a convergence in conceptualizing it as constituted of various forms of citizens' associations (social movements, self-help groups, and so on) which cooperate for production and exchange in inclusive ways, and interact with outside institutions, such as the state and markets, on behalf of citizens.¹ Indeed, much is being claimed on its behalf. Some scholars even present the SSE as an alternative to capitalist forms of development (Dash 2013).

By inserting the word 'solidarity' into the existing concept of 'social economy', the proponents of SSE have, in a sense, energized the latter concept. And embedded in their idea of solidarity itself – although rather little theorized – is the notion of group cohesiveness, connectivity and mutual support among the members in dealing with the state or markets. But the implicit assumption that solidarity already exists, rather than needing to be brought about, is a lacuna in SSE discussions. Moreover, SSE is depicted for the most part in terms of groups interacting with institutions and organizations *outside* the groups, to the neglect of *intra*-group dynamics and of inequalities and exclusions within groups. That intra-group dynamics can impinge centrally on successful cooperation within the group – as well as on the group's effectiveness in dealing with extra-group institutions – is relatively little explored within this emerging debate. Questions of how local groups can expand their outreach to the national level and beyond also remain nascent and underdeveloped. All these aspects have relevance not only in relation to the SSE but also in relation to social movements, including the food sovereignty movement which has gained mileage in recent years (see e.g. Agarwal 2014).

This paper seeks to address several aspects of the above debates. First, it brings into the discussion on the SSE the neglected dimension of within-group dynamics as predicated on structural inequalities such as gender and class. Both gender and class inequalities can affect the way group members engage with one another, take decisions, affect outcomes and interact beyond the group. In other words, a group's social composition becomes important not only on grounds of equity and inclusion but also for the group's effective functioning and sustainability.

Secondly, the paper seeks to demonstrate that simply increasing the numbers of the disadvantaged to raise their proportions within public institutions can, in given contexts, make a significant difference to outcomes, even without an explicit recognition or group articulation of individual interests by the disadvantaged. For this purpose, I use quantitative and qualitative data from my detailed primary survey conducted in 2000–2001 on community

¹See the range of articles presented at the conference on Social and Solidarity Economy, UNRISD, Geneva, 6–8 May 2013.

forestry institutions (CFIs) in India and Nepal, to explore the effect of their gender and class composition on the ability of women (especially the poor) to participate effectively, and the impact of their participation.

Thirdly, the paper outlines some of the ways in which women's numbers in local institutions can be increased and the groups scaled up (such as by forming federations) to strengthen their reach beyond the local and their bargaining power with the state. In this context, the paper also reflects on the mechanisms by which greater cohesion and solidarity could be promoted among rural women, to enable them to present a more collective (and hence more effective) articulation of their interests.

2. Some conceptual issues

The question of the proportion of women in community decision-making groups raises at least three conceptual issues – that of critical mass; of heterogeneity between women; and of the commonality (or otherwise) of women's interests across socio-economic difference.

First, on critical mass, we know from studies of women's participation in legislatures and corporations, especially in the context of western countries, that women's numbers matter in enabling them to overcome conservative social norms and personal reticence.² Even in the USA, women in public office were found to be more vocal in the presence of other women (Flammang 1985; Thomas 1994). In non-western cultures where social norms are usually much more restrictive and gender-hierarchical, numbers can matter to even greater extent. But what proportion of women would make a difference?

In the context of industrial corporations in the 1970s, Kanter (1977a, 1977b) argued that 40–50 percent would provide a balanced and effective presence while 15 percent or less would provide only a token presence. Some others mention a range of percentages – varying from 15 to 50 – as constituting a critical mass for women in western legislatures.³ Women's groups in most countries have been pushing for one-third reservation in diverse institutions – from parliaments to village councils.⁴ Neither in the context of developed countries nor in that of developing ones, however, has there been much statistical testing for a threshold effect.⁵ Such testing is essential to assess what percentage of women can make for an *effective* presence. Moreover, this percentage could vary by cultural norms. In Nordic countries, which have a strong ideology of equality, a low proportion of women might still be effective, while countries with conservative social norms are likely to need a high proportion of women.

Apart from numbers, socio-economic heterogeneity among women could also impact on the effectiveness of their presence. It could, for instance, create conflicts of interest between poor and well-off women, leading them to favour divergent decisions. It is

²See, for example, Kanter (1977), Flammang (1985), Dahlerup (1988), Thomas (1994), Studlar and McAllister (2002) and Bratton (2005). See Agarwal (2010) for additional references.

³See, for example, Dahlerup (1988), Carroll and Taylor (1989), Saint-Germain (1989), Thomas (1994), Lovenduski (1997), Wängnerud (2000), Swers (2001), Bratton and Ray (2002), Studlar McAllister (2002) and Bratton (2005).

⁴In 2007, 19 countries had one-third or more women in their national parliaments (Goetz 2009), and India and Pakistan have one-third reservations in village councils. In other countries, women's groups have been demanding one-third quotas in their legislatures (see Norris and Inglehart 2001; Goetz 2009).

⁵I have used the terms 'threshold effect' and 'critical mass' interchangeably. Among the few who have empirically tested critical mass using cross-country analysis are Bratton and Ray (2002) and Studlar and McAllister (2002).

equally possible, though, for such conflict of interest to be weak where women face similar constraints despite socio-economic difference. For example, village women across classes are subject to a gender division of labour which holds them responsible, in greater or lesser degree, for tasks such as firewood collection and care work.⁶ They also face conservative social norms that restrict their mobility. And most women (including those from better-off households) own few productive assets (Agarwal 1994, 2013). Conceptually, therefore, there can be arguments both for and against the likelihood of women having common interests across economic and social difference (Agarwal 1994; Phillips 1995).

Moreover, not all heterogeneity need be hierarchical. A community may, for instance, be constituted of several ethnic groups who differ from one another culturally but not socio-economically. In assessing potential conflicts of interest, it is hierarchical heterogeneity that will matter (see also Agarwal 2010). But even with hierarchy, women could benefit from clubbing together strategically for a common purpose. Alliances constituted for strategic purposes can also help build bridges across other types of divisiveness, such as women divided by loyalties to their families, castes or ethnic groups. In practice, therefore, implicit commonalities and conflicts could play out in diverse ways, depending on context.

A third issue is whether women are likely to promote their interests through collective action. Implicitly having interests in common may not lead to an automatic recognition of that commonality, or an ability to forge alliances. To develop a sense of collective identity for promoting their shared interests, women would need to move from being 'women-in-themselves' (a biological description) to 'women-for-themselves' (as a collective entity). Although this formulation evokes the Marxist distinction between 'class-in-itself' and 'class-for-itself', unlike the Marxist formulation where it is implied that to move from 'in-itself' to 'for-itself' requires overcoming false consciousness, it is not being suggested here that women suffer from false consciousness.⁷ Quite the contrary, since there are many ways in which women covertly and individually resist the gender inequalities they face at home and in the community (Agarwal 1994, 1997).⁸ What they often lack is the ability to move from covert to overt resistance, and from individual to a group articulation of their interests. A shift to women-for-themselves would depend on whether women can overcome the structural constraints they face, and what outside support they have to facilitate this.

Some scholars have argued that such a shift is essential for women to make an impact in public forums. This paper seeks to demonstrate, however, that in given contexts, simply the inclusion of larger numbers of women to raise their proportions within mixed gender groups – 'women-in-themselves' – can go a long way towards improving outcomes for women, even without a thrust to create a 'women-for-themselves' social consciousness, although a shift towards the latter could be additionally beneficial, especially for creating alliances across difference. How this shift could be brought about poses an additional challenge.

⁶See for example the results of a time-use survey of 12,750 households for six Indian states (Government of India 2000). On women's participation in the care economy globally, see Folbre (2011).

⁷See especially Lukács (1971) for an elaboration of the term 'false consciousness'. However, the view that the oppressed have a false perception of their real economic interests – and raising their consciousness about their true interests is necessary for change – can be found in many writings within social and political theory. See, for instance, Sen (1990), who makes this type of argument in relation to women in 'traditional societies', and Agarwal's (1997) critique of Sen's thesis.

⁸See also Scott (1985) and Agarwal (1994) on covert resistance by the disadvantaged, which indicates that they are well aware of their situation but lack the ability to overcome the material constraints they face. The challenge of moving from individual self-interest to a collective articulation of that interest remains.

To illustrate how simply numbers can make a difference, and how the conceptual issues discussed above can play out in practice, consider the example of CFIs.

3. The impact of numbers: data and findings

What is the impact of increasing women's proportions in CFIs on institutional functioning and outcomes? Community forestry institutions are groups managing degraded forest land owned by the government but transferred to local communities/user groups to protect and manage, with a sharing of responsibilities and benefits. In India, most CFIs have emerged under the Joint Forest Management (JFM) programme initiated by the Government of India in 1990. Nepal began a somewhat similar programme in 1993. Prior to the launching of community forestry, forests in both countries were largely government-managed, with some exceptions, such as the forest councils established in the 1930s in the hills of Uttarakhand in northwest India, or forest tracts managed by village councils elsewhere. However, allowing communities to manage substantial proportions of government-owned forest land followed a widespread recognition in the late 1980s and 1990s, across many parts of the world, of state failure in forest protection and the potential for success if communities themselves managed the forests on which they depended for daily needs.⁹ In 1999, over 50 countries were working on partnerships with local communities for improving forest protection (Agrawal and Gibson 2001).

In India and Nepal, the CFIs thus created have a fair degree of autonomy in making rules for the extraction of non-timber products, and have agreements with the forest department for the sharing of any mature timber harvested. By the early 2000s, India had around 84,000 JFM groups involving 8.4 million households and 22.5 percent of its forest land, and Nepal had around 10,000 groups involving about 1 million households and 11.4 percent of its forest land.¹⁰ This is apart from a variety of informal groups initiated by village elders or youth clubs, especially in eastern India and parts of Nepal. Some of these self-initiated groups later applied for formal recognition as JFM groups in India and community forestry groups in Nepal, while others continued to operate informally.

My data relates to 135 formal CFIs, 65 of which were located in three districts of Gujarat (Narmada/Bharuch, Panchmahals and Sabarkantha) in western India, and 70 were located in three districts (Baglung, Parbat and Gorkha) of Nepal's middle hills.¹¹ In both countries, the CFIs have a two-tier organizational structure: a general body (GB) with members drawn from the whole village and an executive committee (EC) of 9–15 members. The EC is the core decision-making body. In interaction with the GB (and in varying degree with the forest department), it defines the rules for forest use, product extraction and benefit sharing, the penalties for breaking the rules and the methods by which the forest should be protected. It also helps resolve conflicts among users within the village, or across neighbouring villages. The members who constitute the EC thus play a crucial role in institutional management, and a focus on women's strength in the EC can reveal a great deal about the impact of numbers on institutional functioning and outcomes.

⁹For a more detailed discussion on the background to this shift, including the property rights debate, see Agarwal (2010, Chapter 4).

¹⁰For India, see Bahuguna (2004). Nepal's figures are computed from its forest department database (Government of Nepal 2000).

¹¹Some of the groups in my sample, especially those in Panchmahals district of Gujarat, originated as informal self-initiated groups before the JFM programme was launched.

I therefore used the gender composition of the EC as the main criterion in selecting the sample for the study. The universe was stratified into three mutually exclusive categories: ECs with up to two EC women, those with more than two women (but not all women), and all women. The two-woman marker was used since including at least two women in the EC is required in Gujarat (as in some other Indian states), even if not always followed in practice. Gujarat had very few all-women CFIs; its sample thus included mainly two categories of CFIs. Nepal had enough all-women CFIs to provide comparable numbers in all three categories.

The reasons for some ECs having a large number of women were diverse and context-specific, rather than systematic. In some cases there was a prior history of women's groups being formed by a nongovernmental organization (NGO) for another purpose, some were promoted by dynamic NGO staff or village leaders who were gender sensitive, some stemmed from the forest's location and settlement pattern (with one woman being included from each settlement), and so on. EC members were usually nominated and accepted by broad consensus rather than inducted through formal election. The men who encouraged women's inclusion were typically driven by an interest in gender balance or by tokenism, rather than by the idea that women might differ from men in the decisions they make, or might know more than men about aspects of the local ecology. Nor was there any discussion on whose interests the women would represent. It was assumed that EC women would represent village women's interests, but there was no in-built institutional mechanism to arrive at an understanding of what village women's concerns were. Hence, EC members, including women, tended to raise issues they personally saw as important rather than issues arrived at through prior consultation with others, except in so far as those issues emerged in GB meetings.

Given that most rural women depend on forests for basic needs such as firewood, it can be presumed to an extent that their personal interests overlap,¹² but this commonality of interest can also be overstated, and potential differences and conflicts across socio-economic classes papered over. In the Gujarat sample, for instance, there was rather little social hierarchy, since 85 percent of the population in the villages studied was tribal (as were 88 percent of EC members), but there was an economic hierarchy among them as indicated by inequalities in land ownership. In contrast, in the Nepal sample, hierarchical heterogeneity was less in economic terms (most families owned some land) than in social (caste) terms, with 42 percent of the sampled communities being dominated by Brahmins (upper-most caste) and 50 percent of CFI members being Brahmins as well, followed by ethnic groups. The effects of these differences were assessed in my analysis, and for the most part conflicts arising from these differences were rather few, given the noted overlap of interest in forest products among all women. But in some other contexts, conflicts could well be greater, and for resolving them in practice we would need, at the least, some process of deliberation (as discussed in the concluding section of this paper).

To protect a forest, communities restrict the entry of people and animals, and monitor entry by employing a guard, forming patrol groups, keeping an informal lookout for intruders or using some combination of these methods. Some CFIs completely ban extraction of any kind while others allow regulated and limited extraction of specified products. Since rural women are the main collectors of non-timber items, especially firewood and fodder, they are particularly affected by forest protection rules and procedures. These can

¹²For instance, even better-off rural households are usually highly dependent on the collection of firewood as fuel: see Narain et al. (2005) for India, Government of Nepal (2004) for Nepal and Chaudhuri and Pfaff (2003) for Pakistan.

impinge on EC women’s responses to forest management in terms of the rules framed and the efforts they make towards forest protection and conservation.

Overall, as the following section establishes, women’s greater presence in local environmental governance makes a significant difference on all these fronts (Agarwal 2010). It enhances women’s effective participation in decision-making, influences the nature of decisions made, especially the rules of forest use and their implementation, curbs rule violations, increases the likelihood of an improvement in forest condition and reduces the likelihood of women facing firewood and fodder shortages. There is also a critical mass effect in relation to women’s participation.

Given the ad hoc ways in which women tend to get inducted into the CFIs, and the absence of institutional mechanisms for helping them define common interests, the forms of impact mentioned above can be attributed to women’s numbers/proportions rather than to social solidarity among them. The salient features of the main results are given below (for detailed statistical evidence, see Agarwal 2010).

3.1. Participation in CFI decision-making

The higher the proportion of women in mixed-gender CFIs, the greater was found to be the likelihood of women attending EC meetings, speaking up at them and holding office (i.e. becoming president, vice-president, secretary or treasurer). To begin with, increasing women’s numbers on a typical EC of 11–13 members ensured at least some female presence in most meetings (Table 1). Overall, in 26 percent of the EC meetings in Gujarat and 18 percent in Nepal, no women attended. But in the case of ECs with more than two women in Gujarat, there was female presence in 87 percent of the meetings held, compared with 59 percent in the case of ECs with two women or less. Similarly in Nepal, in ECs with over two women, 94 percent of the meetings had some female presence, compared with 64 percent of meetings in the case of ECs with two women or less. Men, however, were present in greater or lesser degree in all the meetings, in both regions.

The regression analysis (which controls for other variables that could also affect women’s participation) further established the importance of women’s numbers. In both

Table 1. Gujarat and Nepal: percentage of EC meetings with women attending (mixed-gender CFIs).

Percentage attendees who are women	Gujarat			Nepal		
	≤ 2 EC women (136)	> 2 EC women (167)	All CFIs (303)	≤ 2 EC women (139)	> 2 EC women (196)	All CFIs (335)
	% EC meetings					
0	41.2	13.2	25.7	36.0	6.1	18.5
> 0	58.8	86.8	74.3	64.0	93.9	81.5
Detailed breakdown						
> 0–< 15	25.7	16.2	20.5	38.1	17.3	26.0
≥ 15–< 25	16.9	21.6	19.5	15.1	14.3	14.6
≥ 25–< 33	8.1	27.5	18.8	9.4	17.9	14.3
≥ 33	8.1	21.6	15.5	1.4	44.4	26.6

Note: figures in brackets give the number of meetings. EC = executive committee; CFIs = community forestry institutions.

Source: Agarwal (2010, 190).

Gujarat and Nepal, the likelihood of meetings with no women was significantly less if ECs had between 25–33 percent or more women than if they had less than 25 percent. In both regions, there was a 36-point difference in the percentage of meetings with no women between ECs with 23–33 percent female members and those with less.

Women's attendance rate at EC meetings (calculated as given in the [appendix](#)) also rose with an increase in the proportion of EC women. As seen from the cross-tabulations in [Table 2](#), the rate was notably higher among ECs with more than two women relative to those with two or fewer women, and much higher for ECs with 25–33 percent women relative to those with less than 25 percent women. After reaching 33 percent, the rate declined in Gujarat and levelled off in Nepal. Basically, 3–4 women in a typical EC of 11–13 members made the most difference.

In addition, I tested for critical mass through regression analysis (see Agarwal 2010, 201–3). The results showed a verifiable critical mass effect for Nepal and an indicative effect for Gujarat. In both regions, after controlling for other factors, the rate was significantly higher in groups with 25–33 percent EC women, compared with less than 25 percent women. In Nepal, for example, a shift from ECs with under 25 percent women to ECs with 25–33 percent women increased the attendance rate by 0.23, after which the effect tapered off, giving a clear threshold effect. In Gujarat, there was a decline after 33 percent, possibly because some women assume that others will attend anyway when there are about four women in the EC, or because the effect is not visible given the rather few CFIs with more than 33 percent women. In both Gujarat and Nepal, however, the results underline the importance of having at least one-quarter to one-third women in decision-making bodies, and are in keeping with the proportions that women's organizations have been lobbying for in many countries.

EC women themselves recognized the importance of numbers in increasing their attendance, as they said during focus group discussions in several CFIs in Gujarat:

If more women attend ... then we can go to meetings regularly.

More women in the *mandli* [CFI] would be good. That would encourage women to attend meetings and speak up.

The presence of more women will give us support and confidence. It makes a difference when there are other women in meetings.

Table 2. Gujarat and Nepal: female attendance rate (mixed-gender CFIs: means).

	Gujarat (32)	Nepal (38)
CFIs with given number of women in the EC		
≤ 2 women	0.43	0.45
> 2 women	0.54	0.58
CFIs with given % of women in the EC		
< 25% women	0.39	0.43
≥ 25–<33% women	0.74	0.56
≥ 33% women	0.42	0.59
<i>All CFIs</i>	0.50	0.53

Note: figures in brackets give the number of CFIs.

EC = executive committee; CFIs = community forestry institutions.

Source: Agarwal (2010, 190).

Similarly, the likelihood of at least some women speaking up was found to be greater among ECs with a third or more women members. In Gujarat, for instance, the probability of at least one woman speaking up was 48 percent higher in ECs where women constituted a third or more of the members compared with ECs where they constituted less than a quarter. For Nepal, the probability was 27 percent higher with a similar move from less than a quarter women to one-third or more women. Including more women ensured that at least some women voiced their views. As the following quotes from both the Gujarat and Nepal surveys indicate, village women themselves maintain that they derive strength from numbers in expressing their views:

It helps to have more women because then women will not be dominated or feel shy. After all, if there is only one woman and ten men, how will she speak? Women need each other to be able to speak up. (Gujarat sample)

It helps women share their concerns in public if there are more women in meetings. If there are very few women they get tongue-tied and can't speak out about their concerns (Gujarat sample)

If there are more women in the EC we can support each other. We can share our problems and raise our voice in front of men. (Nepal sample)

Men do not listen to us. Sometimes they insult us. Sometimes they ask us to keep quiet. Therefore, if there is a majority of women, we will feel more confident in speaking up. (Nepal sample)

Interestingly, including *landless* women in the EC made an important difference. If present in sufficient numbers, landless women (compared with those from landed households) were found to be much more likely to attend EC meetings and voice their views, since they were less restricted by social norms and more compelled by their needs to speak up. For instance, most of them faced severe firewood shortages and had a stake in getting the committee to allow greater extraction of firewood. This led them to speak up more. It is therefore especially important to include in local institutions of governance women who are economically and socially disadvantaged, not only for equity but also for their interests to be better represented. Indeed, given that they are more willing to speak, landless EC women could even represent the interests of other village women better than EC women from well-off households.

In addition, a larger proportion of women on the EC improved the chances of women becoming office bearers, but the effect was complex. On the one hand, higher proportions alone cannot ensure that a woman will hold office. In Gujarat, for instance, almost no CFIs had female office bearers, whatever the EC's gender composition. On the other hand, where the glass ceiling had been cracked, as in Nepal, the likelihood of EC women holding an official position increased significantly among ECs with more women. As [Figure 1](#) shows, there is a threshold effect around 25 percent. Until that percentage is reached, increasing women's proportions on the EC has very little effect on the probability of a woman holding office. After 25 percent, there is an increasingly larger impact till we reach 50 percent, when the size of the effect, while still positive, begins to decline. Twenty-five percent is thus the minimum needed to make a difference, although clearly women's chances of holding office increase further with a move to gender parity.

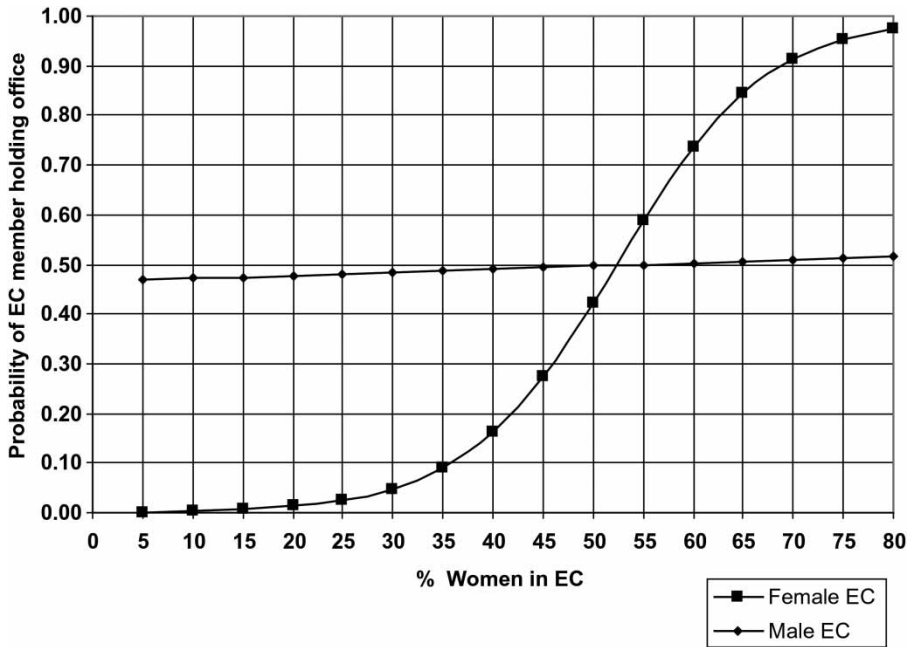


Figure 1. Nepal: locating a threshold point in the probability of an EC member holding office (mixed-gender CFIs).

Notes: The figure gives predicted probabilities of an EC member holding office, for specified values of the percentage of women in the EC, holding all other explanatory variables at their mean values. EC = executive committee.

Source: Agarwal (2010, 211).

Basically, in the company of other women, women can bypass conservative social norms upheld by families and communities, and overcome personal diffidence to attend meetings, speak up at them and become office bearers.

3.2. Formulating forest use rules

The power of numbers is also apparent in the rules that CFIs make for forest use. These rules determine what can be extracted from the forest, in what quantity and how often during a year. The stricter the rules, the less is extracted. Strictness can vary widely across products and between CFIs for the same product. To test if the proportion of women on the EC affects strictness, I formulated a strictness index which aggregated the rules across products. The sampled CFIs showed considerable diversity in their extent of strictness.

ECs with higher proportions of women differed notably from other ECs in the rules they framed for forest use, but the direction of the effect was unexpected. Given the pressures on women, especially for procuring firewood and fodder on a daily basis, we would have expected CFIs with more women to make relatively lenient rules, namely to have allowed greater extraction of these products. I found, however, that in Gujarat, ECs with more than two women relative to two or fewer women tended to make stricter rules of forest use; that is, they extracted less from the forest. The same was true in Nepal for all-women ECs relative to other ECs. The only exception was Panchmahals district in Gujarat.

Several factors explain these unexpected results. In Nepal, all-women groups had less freedom to make lenient rules due to serious resource constraints – they received forest plots that were twice as degraded and half the average size of the plots managed by groups with men. They also faced greater difficulty in organizing supervision for regulated extraction. Both factors restricted women's ability to extract more. Importantly, though, despite their needs and the pressure from the women of their constituency, the EC women resisted the temptation of making lenient rules for immediate gains at the cost of long-term forest regeneration. Moreover, almost all the EC members in Nepal's CFIs came from landowning families. This reduced the personal cost they incurred from framing strict rules. Landless women lack this choice.

What made Panchmahals district an exception? Here, ECs with a greater female presence made less strict rules. An important reason for this was that a substantial proportion of these women came from landless families, and they argued successfully for greater extraction of forest products of daily use, especially firewood. Even these women, however, did not favour open access; rather, they favoured regulated procurement, but for more days in the year. Hence, although women's class affected the strictness of rules framed, women of all classes gave primacy to community interest – rather than being guided mainly by self-interest – when placed in decision-making positions.

Rule violations were also affected by women's participation. In Nepal's CFIs, for example, ECs with more women had a lower incidence of rule breaking. In Gujarat, violations by women and for firewood declined over time, while violations by men and for timber rose as the years of protection (and hence the quantum of timber) increased.

3.3. *Forest conservation outcomes*

Most importantly, conservation outcomes improved substantially with women's greater involvement in green governance. Forest condition was measured through a range of indicators to capture a complexity of effects, but particularly changes in canopy cover and regeneration. Assessments by villagers, foresters and researchers were separately tested.

The majority of CFIs, irrespective of their gender composition, registered an improvement in forest condition by most indicators. But the presence of women brought additional benefits. In Gujarat, CFIs with more than two women in the EC compared with two women or less, and in Nepal all-women CFIs relative to other CFIs, were linked with significantly greater improvement in forest condition. In Nepal, there was found to be a 51 percent greater likelihood of an improvement in forest condition with all-women ECs compared with ECs with men. This was despite the fact that all-women groups, as noted, controlled smaller and more degraded forests than male-dominated groups.

Several factors underlie the better conservation outcomes of groups with more women on the EC. One is the ability of EC women to disseminate information about rules more widely within the community, since due to prevailing social norms women can communicate with other women more easily than can men. This increases awareness about forest closure rules and reduces inadvertent rule breaking. In addition, by including more women, the pool of people protecting a forest gets enlarged, and women can be especially effective in apprehending female intruders. The knowledge women have of plants and species and ecologically sound extraction practices is also better used when they are on the EC. And they can convey village women's preferences for plants when plans for forest development are drawn up. Moreover, even if the eventual rules framed by the EC bring hardships for women, they are more likely to follow the rules and persuade other women to do so if they are part of the rule-making process than if they are excluded. Older women make an additional difference,

due to the experience and authority they bring to the decision-making and monitoring process of the EC.

Women's greater involvement in decision-making can also help CFIs better fulfil many of the 'design principles' that Elinor Ostrom (1990) and other scholars have identified as important for building sustainable institutions for managing common pool resources. These principles place particular emphasis on the participation of users in the making and enforcement of rules and in resolving conflicts. The existing literature has largely failed to apply these principles to women's participation in CFIs. If applied, many CFIs would be found wanting, with adverse implications for institutional sustainability.

But, apart from the satisfaction derived from participating in decision-making, what material benefits do the women themselves gain through inclusion? The impact on firewood shortages provides a pointer.

3.4. Firewood availability

The availability of firewood is an important marker of gender inequality since firewood, as noted, is the most important cooking fuel used in rural India and Nepal, and is gathered mainly by women and girl children. A reduction in shortages can thus be seen as indicative of a reduction in gender inequality due to forest closure.

Women in ECs with a better gender balance were able to argue for an increase in firewood extraction. The extent of extraction depends not only on whether the forest is opened for this purpose, but also for what period it is opened and the forms of distribution (equal bundles, lottery, etc.). A good deal of negotiation takes place between village women and the EC on these counts. Where there is a critical mass of women within a mixed-gender EC, they are able to speak on behalf of village women with whom their personal interests also overlap. They are also better able to keep out intruders from neighbouring villages, thus increasing the overall availability of firewood for the village itself. Hence, in Gujarat, I found that villages where CFIs had a larger percentage of female EC members were less likely to report firewood shortages. In Nepal, however, even all-women groups reported persistent shortages, since they could not extract much from the small, degraded forests they received. The persistence of cooking energy poverty also points to the limits of what can be achieved simply through participation in local bodies, and to the need to influence policy at higher levels (a point to which I will return).

Overall, these results demonstrate that even numbers, in themselves, have considerable power in enhancing women's ability to influence institutions of forest governance. This raises additional questions:

- How do we enhance women's presence in all CFIs?
- Can we move beyond numbers towards a 'solidarity' type of cohesiveness? In particular, can women forge a collective voice instead of simply intervening individually? Can we establish institutional mechanisms wherein they can strategize and carve out collective goals? In other words, can they move from being 'women-in-themselves' to 'women-for-themselves'?
- How can the voices of women reach beyond the local to influence higher levels of decision-making?

These objectives, including that of increasing women's numbers, are interlinked, and the next section provides some reflections on the directions in which answers may lie.

4. Enhancing women's presence, voice and influence

For increasing women's numbers and voice, and especially *poor* women's numbers and voice in CFIs, we need innovative institutional solutions. We also need scaling up in order to enhance the impact of women's presence beyond the local level. Building horizontal linkages between local institutions and establishing vertical linkages via federations could be potential ways of achieving both goals. In addition, forums of deliberative democracy could provide a means of resolving some of the intra-group differences and conflicts that may arise and of promoting group consciousness and solidarity.

4.1. Promoting horizontal linkages

A substantial potential lies in building strategic linkages between CFIs and other local collectivities of women, such as village self-help groups (SHGs) in India and similar types of groups (such as *amma samuhs*) in Nepal. Although SHGs need not be composed only of women, most are all-women groups (in the early 2000s, 85–90 percent of the over 2.2 million SHGs in India were constituted only of women: see, among others, Tankha 2002, 20).

In fact, some NGOs in India have been experimenting with linking SHGs and CFIs to ensure a critical mass of female presence in mixed-gender CFIs. In rural Karnataka, for instance, the India Development Services (IDS) encouraged women's savings groups to join the CFIs in its sites. Some women went from door to door to persuade others to join. As a result, in several of the villages where IDS worked, 80–90 percent of the women in the savings groups, and some outside these groups, joined the general bodies of CFIs, and were quite vocal in mixed-gender meetings.¹³ As women in one of the villages told me, 'Without SHG membership we would have received no information about village forest committees. We are now united as women as well'.

The Mysore Resettlement and Development Agency (MYRADA), another NGO, went a step further. It formed SHGs of poor women in forest communities in Karnataka's Uttara Kannada region, specifically to increase women's involvement in CFIs. In 2009, over 500 of these SHGs participated in forest protection and decision-making, thus energizing the forest protection committees and enhancing their bargaining power with the forest department.¹⁴

4.2. Beyond numbers: toward group identity and solidarity

The women who were included in the CFIs were fairly heterogeneous by class, age and (in Nepal) caste of household. What they had in common was an individual interest in the resource, especially an interest in accessing firewood and fodder. Sometimes there were internal conflicts among the women which could be observed, especially in Nepal where caste differences were greater than in Gujarat. But, overall, shared stakes vis-à-vis external factors (such as in keeping non-villagers out of the forest they were guarding.) were more important to the women than internal differences amongst themselves.

Nevertheless, beyond numbers, effectiveness would increase if women could forge a group identity by overcoming divisions arising from social or economic difference, by getting to know each other's constraints better, and by creating trust and empathy. Several mechanisms could further this process. One is the noted linking of women's

¹³Information gathered by the author during a field visit to IDS sites in 1998.

¹⁴Personal communication to the author by a project officer of the organization.

SHGs with CFI women. Since SHGs are typically formed around credit disbursement, and the women constituting SHGs are interdependent, they already bring elements of solidarity with them, unlike women in the CFIs who are inducted into the EC as individuals.

In fact, before forming SHGs, MYRADA first catalyzes what it terms 'self-help affinity groups', constituted of those who have some common bonds on which to build trust, such as belonging to the same ancestral village, or having the same livelihood source, or sharing similar social and economic backgrounds (a substantial proportion of SHG members are poor and from backward castes: Nirantar 2007; NCAER 2008). Many SHGs have also played advocacy roles. About 30 percent of the 241 SHGs across four states surveyed by EDA (2006) had worked for community betterment (improving the availability of water, schools, health care and roads, and protecting natural resources), especially by putting pressure on village councils to complete longstanding projects. Some SHGs when constituted into federations (discussed below) also transcended class and caste divides, and reached out to non-members and the poor (Nair and Shah 2007; TARU 2007; NCAER 2008). In other words, they moved from being not only 'women-in-themselves' to 'women-for-themselves', but further to 'women for the larger public good'.

In addition, building on existing bonds and origins, democratic deliberation can provide a means by which women can identify their common interests and sort out their differences arising from heterogeneity, as a number of feminist political theorists have argued (Mansbridge 1990; Young 1997, 2000; Fraser 2005). This will of course need forums for deliberation in which women can get to know each other, share information, discuss differences and resolve conflicts, identify priorities, strategize, and forge a sense of solidarity which can make them more effective in promoting their collective interests.

A forum of this kind could take various forms. It could be set up by SHGs linked to CFIs, or constituted of a sub-group of women EC members within mixed-CFIs who could strategize among themselves (just as women's caucuses do in Parliament). They could also consult female non-members on what issues to take to the CFI. These forums would be conducive to a two-way sharing – EC women could share with village women what transpires in EC meetings, and village women could share the problems they wanted EC women to take up in meetings.

Such sharing, or 'communication across difference', as Young (2000, 108) calls it, could also help EC women sort out differences among themselves and lead to greater 'understanding across difference' (Young 1997, 52), especially where women across socio-economic classes have an interest in a natural resource. This is well illustrated by what two CFI women who were also members of a woman's SHG in Malwadi village, Karnataka, told me in 1998:

We discussed how benefits should be shared, whether we should differentiate between rich, poor, and middle-income households. We are poor. The poor often have no employment, so they need other sources of income, such as forest products for making leaf plates, and pickle. They also extract gum. We have enough firewood and agricultural wage employment for now, but what about later? We have to discuss all this, and seek to resolve our differences.

In this way, a forum for deliberation could help women representatives take a collective view and arrive at *group* priorities about what forest products they want extracted, when and for how long the forest should be opened for extraction, which species to plant, and related matters. EC women would be more effective in mixed-gender CFIs if they spoke in a unified voice than as individuals speaking without prior consultation.

Even if the outcome of deliberation favours some views over others, being able to express one's views could, in itself, make it easier for those who disagree to reconcile with the decisions taken. Moreover, decisions arrived at through open discussion are likely to enjoy more legitimacy and lead to greater overall compliance and institutional sustainability. Over time, forums of deliberation could help the women build group consciousness and solidarity that would also equip them better to deal with government institutions.

Some authors, such as Fraser (1990, 65), argue that equality is a necessary condition for deliberative (or communicative) democracy to work. My research indicates, however, that poor, low-caste rural women in South Asia are often less bound by tradition, and (especially if they are present in adequate numbers) are able to overcome the bounds of social norms that tend to restrict middle-class, upper-caste rural women. Hence, while socio-economic equality can help, it need not be a *necessary* condition for meaningful deliberation to take place. Individual vulnerabilities could be overcome even within hierarchical contexts, if poor women form a group and act collectively in their own interest.

Nevertheless, the process by which poor women can begin to act collectively as 'women-for-themselves' is unlikely to begin automatically or be an easy one to initiate. It is likely to need catalysts and support structures for dealing with other power formations within the economy. Potentially, such support could come from gender-progressive political parties (say through their women's wings), or autonomous women's groups, or NGOs concerned with women's empowerment. In practice, too, examples of organizations that have played a role in promoting solidarity among poor women can be found across South Asia (and elsewhere),¹⁵ but few to my knowledge have done so around environmental governance or issues such as cooking energy that affects women's work burden, health and family nutrition on a daily basis. Also, to judge if women are indeed acting for themselves, we would need to see if they are doing so independently of the organization that catalyzed their emergence, and if they are raising priorities that they have themselves identified, rather than those suggested to them.

4.3. *Beyond the local*

So far, we have noted several encouraging examples of associative connections and strategic alliances between local groups that could enhance women's effective numbers, voice and influence in decision-making within CFIs and in the community. But for many local problems, comprehensive solutions cannot be found locally. For instance, although a critical mass of village women could have an impact on CFI decisions – such as by persuading CFIs to extract more firewood and other products – they cannot, on their own, change the popular perception that cooking energy is mainly women's concern and not a community concern. Strategic alliances between women in CFIs and women in SHGs could well bring about some change, but do communities have the means to implement potential solutions? To plant trees that can provide firewood, for example, communities will require control over adequate land for this purpose. Similarly, providing clean fuel such as biogas at rates that the poor can afford will require technical and financial investment to design suitable models. Sophisticated technology, such as solar cookers, needs even greater investment in design, dissemination and maintenance.

Hence, although institutions of local government, such as village councils, could play an important role in the adaptation and dissemination of technology to users, research on

¹⁵See, for instance, examples in Agarwal (1994).

designing and testing on a wide scale usually requires the involvement of higher levels of government. Energy and environment related policies which affect local communities are also usually formulated at the state and national levels. Here, in addition to horizontal alliances between CFIs and women's associations, women need bargaining power and vertical reach beyond the village. A federation constituted of a network of community-based organizations, as discussed below, could provide an answer.

4.4. Extending vertical reach: federations

Defined broadly, a federation is an association of organizations. It can help realize economies of scale and provide bargaining power to its constituents, while retaining autonomy (Nair 2005). In South Asia, federations of SHGs and forestry groups have become an important way of building horizontal and vertical links across levels and regions. But these are usually single-focus federations: SHG federations connect SHGs, and forest federations connect community forestry groups. Linking these single-focus federations with each other would be an innovative step forward, and could even prove transformational.

In India, SHG federations are common: for example, by the mid-2000s, there were an estimated 69,000 such federations, 89 percent of which were in southern India, most of them working at the village level but some also at the district level, and one at the state level (APMAS 2007). However, India has rather few federations of community forestry groups and most of these are far from gender equal.

In contrast, Nepal's federation of community forest users (FECOFUN), formed in 1995, is a national body with a democratic structure that has elected representatives, and a constitution that mandates gender parity in committee membership and office bearing. In the mid-2000s, 10,000 of Nepal's 14,000 CFIs were members of FECOFUN (Ojha et al. 2007) and today most CFIs are part of the federation. Within each district, individual CFIs are connected to district-level committees, and elected representatives from each district form the national council and executive body. FECOFUN not only connects forest user groups across the country but also takes up issues of forest policy with the government on their behalf (Britt 2007). On gender, however, its record is mixed. Notwithstanding FECOFUN's constitutional mandate of gender parity, even several years after its formation the women so included remained largely a nominal presence rather than an effective one (Britt 1997, 18). There have been gains over time, but there is still a long way to go.

Indeed, in both India and Nepal, women's interests need to be better incorporated within forest federations. In India, this could be done by forging alliances between women's SHG federations and forest federations to broaden the scope of both (see Figure 2). Forest federations would thus become more gender-inclusive, expand their membership and reach, and enhance their lobbying power with the forest bureaucracy. In such alliances, SHG federations which enjoy political influence in some regions could bring the benefits of that

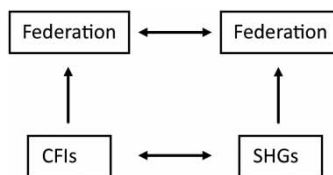


Figure 2. A schema of lateral and vertical alliances.

Notes: CFIs = community forestry institutions; SHGs = self-help groups.

clout to the CFIs. MYRADA, for instance, has built such links in a limited way, and the two types of federations have collaborated in tackling forest fires, river flooding and commercial logging. Similarly, in the Uttara Kannada district of Karnataka, the federation of voluntary organizations for rural development – a network of 21 NGOs – works closely with SHG and forest federations in the district.

If federations with different strengths worked together, they could become more effective not only institutionally but also in lobbying with the upper echelons of the government to address issues such as domestic energy poverty, the marketing of non-wood forest products, and related concerns of village communities in general and of poor women in particular.

It is of course possible that such federations would hit barriers erected by powerful economic interests running in parallel. This could happen, for instance, in the marketing of non-wood forest products which is often controlled by private merchants and intermediaries. But, equally, federations would provide the poor at least some chance of challenging the existing nexus of power.¹⁶ Of course, in extending these arguments about scaling up to contexts other than India and Nepal – which are both countries with a democratic polity that gives civil society substantial freedom to express itself, form institutions and so on – context-specific constraints will need to be tackled.

It also needs emphasis that intra-group dynamics and inclusiveness are required at all levels – within village-level CFIs, within federations of CFIs and within interlinked federations of CFIs and SHGs. This appears important both for gender equity and effectiveness of outcomes.

5. Conclusions

This paper has highlighted the importance of examining intra-group dynamics, especially as predicated on gender and class, as necessary for enhancing the effectiveness of groups in dealing with extra-group institutions. While this has particular relevance for the current debate on the social and solidarity economy, it would also have relevance for social movements more generally.

In addition, the paper has sought to demonstrate the power of numbers in empowering the disadvantaged to further their implicitly shared interests, even when they are not promoting those interests in a collective way. Using community forestry groups as an illustration, the paper reports empirical findings which show that the aims of both efficiency (more biomass regeneration and improved forest condition) and distributional equity (e.g. less firewood shortage) will be realized better with more women, and especially with poor, landless women, on the executive committees of CFIs. One-third appears to be a close approximation of the minimal presence (a critical mass) that women need to be effective, but for equality it is necessary to go beyond this proportion.

To increase women's numbers and voice across CFIs at the local level, there is notable potential for forming CFI federations as well as for forging strategic alliances between different segments of civil society, such as between CFIs and SHGs, and

¹⁶The ability of federations to function effectively may also vary by the nature of the resource. Forest federations are likely to face fewer constraints than, say, federations of water users, since collective action issues are likely to be less complex in the management and distribution of forest products than those linked with managing water bodies which require the maintenance of water channels and the distribution of water among head-enders and tail-enders, large and small farmers, and so on. (I am grateful to Peter Mollinga, SOAS, London, for brainstorming with me on this issue. Our discussion continues.)

between federations of CFIs and SHGs. These alliances and associations, as conceptualized, could be based on implicitly shared interests, even if there is no explicit forging of group identity.

Over time, however, such links between civil society groups, although initiated out of strategic considerations, have the potential of evolving into networks guided by social solidarity considerations. This would add to the effectiveness of numbers. But much more work is needed to establish common cause across difference, such that a group of individual women (or men) can become a collectivity, working not only for itself but for the larger public good. For this to happen, as discussed in this paper, a start can be made at the local level through processes of democratic deliberation. But structural support from gender-progressive agencies – whether linked with political parties or with civil society – will be needed, to catalyze and propel these processes forward. Meanwhile, numbers, even in themselves, continue to command considerable power.

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Appendix

The female attendance rate per CFI is the average proportion of EC women attending a meeting and has been calculated as below:

Female attendance rate for CFI $A = 1/n \sum_{i=1}^n w_i/w$ where w_i is the number of EC women attending the i th meeting ($i = 1, 2, \dots, n$); w is the number of EC women in CFI A; n is the number of meetings held in CFI A. As an illustration, if CFI A has 3 women in the EC and holds 4 meetings, each attended by 2, 3, 1 and 0 EC women, the female attendance rate in this CFI is $(2/3 + 3/3 + 1/3 + 0) \div 4 = 0.5$. If there is a threshold effect we would expect this attendance rate to rise as the proportion of women on the EC increases, but not in a linear way.

If the attendance rate does not rise, or rises rather little until some critical proportion of EC women is reached and then rises significantly, then we can conclude that there is a threshold effect around that proportion. It could taper off subsequently.

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