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Empowering women, challenging caste? The experience of a dairy cooperative in India

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The empowerment of women in agri-food systems is essential to enhance the well-being of women and their households, reduce hunger, boost incomes and strengthen resilience. The empowerment of women in the livestock sector is key to the progress of the sector. Livestock in turn provide a unique entry point to support the empowerment of women. Yet evidence shows that in low and middle income countries (LMIC) gender discriminatory norms and practices reduce the ability of women in livestock to rear and maintain healthy and productive animals, as well as to access the markets needed to obtain income. Cooperatives are one mechanism for overcoming some of these constraints. Yet, little is known on the extent to which women's empowerment can be supported through cooperatives in the livestock sector. In this paper we studied how membership in Mulukanoor Dairy had changed gender dynamics within households. Caste was selected as a significant cross-cutting variable that affects power dynamics in interaction with gender. The study therefore also analyzed how Mulukanoor Dairy improved caste relations between members, and whether gender relations have changed in similar ways across households belonging to different castes. We framed our study in a conceptual framework structured around six concepts of power; power with, power over, power within, power to act, power to empower, power through, and a related concept termed a gender norms façade. Focus group discussions and Key informant interviews were held with women members of Mulukanoor in caste-based groups. The findings show that gender norms are quite fluid while caste norms are less so thereby differentially affecting the ability of Mulukanoor as an organization, and women members in different castes, to achieve various forms of empowerment. Despite these differentials, Mulukanoor has radically shifted gender relations in dairy.

KEYWORDS

gender norms facade, caste norms, power through, agricultural technologies, Mulukanoor Women's Dairy Cooperative, India

Introduction

The empowerment of women in agri-food systems has been on the development agenda for many years (FAO, ILRI, IFAD, & the World Bank, 2023). Women's empowerment and closing gender gaps in agrifood systems are essential to enhance the well-being of women and their households, reduce hunger, boost incomes and strengthen resilience. The empowerment of women in the livestock sector is key to the progress of the sector given that women are the majority of poor livestock keepers. Livestock in turn provide a unique entry point to support

the empowerment of women. This is because women are already heavily engaged in the sector; because livestock can be owned, accumulated, taken as an asset in case of separation, or sold by women in case of need (FAO, 2023). These qualities of livestock are critical given women's generalized weak access to and control over productive resources and access to financial services. Livestock are also a source of daily food and income which is essential for women who normatively are in charge of the nutrition security of their families (Galiè et al., 2022). Yet evidence shows that in low and middle income countries (LMIC) gender discriminatory norms and practices reduce the ability of women in livestock to access the assets (e.g., land, machinery) and inputs (e.g., information, good forage seed and animal breeds) required to rear and maintain healthy and productive animals, as well as the markets needed to obtain income (*ibid*). Cooperatives are one mechanism for overcoming some of these constraints. They deliver important economic benefits to livestock keepers through providing them with input and output services such as information, agricultural inputs, and product transportation arrangements. While it is widely understood that cooperatives can benefit women by providing the inputs and services that they generally lack less is known on the extent to which women's empowerment can be supported through cooperatives in the livestock sector.

Mulukanoor Women's Dairy Cooperative (henceforth Mulukanoor Dairy) is based in Warrangal Urban District, Telangana, Hyderabad. It was founded in 2002 when women from diverse self-help groups (SHG) came together to invest the substantial funds that had been accumulating in SHGs over the years. Since then, Mulukanoor Dairy has provided its women members with dairy inputs (e.g., animal medication, feeds). In 2017, for example, Mulukanoor introduced to its members, in cooperation with ILRI, CoFS-29 an improved multi-cut perennial sorghum forage variety to boost milk production (Ravichandran et al., 2019). Importantly, Mulukanoor Dairy has also provided its women members with a market for their milk. Mulukanoor Dairy currently pays 2 rupees per liter more than competing dairy co-operatives or the private sector. Payments for milk are made fortnightly in cash in women's names. Husbands may collect these payments and must provide them to their wives. The amount received depends on how much milk the members of their village dairy society have collectively provided. By 31st March 2020, Mulukanoor Dairy was operating in 192 member villages with 22,605 women members. Eighty percent of the co-operative staff are women, with men employed to conduct a variety of technical tasks including some acting as secretaries in Mulukanoor village dairy societies¹.

The authors of this article wondered whether the innovative opportunity space created by Mulukanoor Dairy (reported on in Ravichandran (2018); Ravichandran et al. (2021)) have been seized upon by women members of the cooperative to change gender relations within their household. We hypothesized that the institutional (e.g., women only membership and payment made to women only) and technological innovations (e.g., CoFS-29) introduced by Mulukanoor Dairy over two decades has empowered women and helped them to move toward mobilizing transformative

agency. Transformative agency goes beyond being able to take a decision and act upon it as in the classic definition of agency associated to empowerment (Kabeer, 1999). It entails being able to identify and address the sources of gender inequality and unequal power relations, and then challenging and transforming these to create more equitable gender relations (Wong et al., 2019).

When analyzing changes in gender relations our study also explored the influence of caste. Gender relations of power are strongly affected by other intersecting social markers (e.g., age, ethnicity, religion etc) that shape the positionality of individuals in society (Crenshaw, 1989; Kabeer, 2016; Tavenner et al., 2019). Previous research conducted in India which compared two women-only dairy cooperatives (including Mulukanoor Dairy) and two mixed gender dairy cooperatives had established that, alongside gender, caste is a significant social marker affecting the ability of women to participate effectively in cooperative governance structures and to benefit (Ravichandran, 2018; Christie and Chebrolu, 2020; Dohmworth and Liu, 2020; Ravichandran et al., 2021; see also Stuart, 2007 for research on non-dairy cooperatives).

Caste identity is vested with great significance in India and provides a primary means of social differentiation. Caste is transferred intergenerationally with marriage expected within a specific caste or subcaste. Following Independence, the government introduced a categorization scheme whereby the most marginalized castes were categorized as Scheduled Castes (SC) (Dalits, previously known as untouchables). The Other Backward Castes (OBC) generally represent a middle-income caste category. The use of the word "backward" refers to the socio-economic state of these castes which is considered inferior to that of higher castes, and therefore entitles them to special progressive measures to help promote their leveling up (Kumar, 2021). Non-socially marginalized castes are known as the 'General Caste' (GC). Indigenous (Adivasi) people are categorized as Scheduled Tribes (ST) and are generally understood to stand outside the caste system. Hundreds of sub-castes, jatis, exist within each caste. Every jati has its own social norms. These inform the performance of everyday life, including women's roles and responsibilities (Bidner and Eswaran, 2015).²

The authors therefore selected caste as a significant cross-cutting variable to study in interaction with gender. They wondered whether membership in Mulukanoor Dairy had changed gender dynamics within households (as mentioned above) and also, improved caste relations between members, and whether gender relations have changed in similar ways across households belonging to different castes. Mulukanoor Dairy offers the potential for particularly interesting insights into gender and caste dynamics because, for almost 20 years, it has been run by women for women of various castes.

Given that empowerment is self-evidently rooted in power dynamics, the authors developed a conceptual framework, with

¹ Information obtained through interviews with Mulukanoor staff, October 2021.

² In some jatis, for example, daughters-in-laws are not permitted to (even accidentally) touch the food of mothers-in-law, or a wife touch her husband's food (Sedlander et al., 2021). Caste norms are based on notions of purity and impurity and they frequently preclude mixing between castes – particularly regarding the SC to whom norms of untouchability continue to apply, including eating together, sharing water, etc. (Kurian and Dietz, 2004; Mudliar and Koontz, 2018).

associated research and fieldwork questions, structured around the key concepts of power used in the literature - *power with*, *power over*, *power to*, *power within*, and *power to empower*. The conceptual framework includes a recently introduced concept of power, *power through*, and a related concept termed *gender norms façade* (Galiè and Farnworth, 2019). We used these six forms of power (power within, power with, power to act, power over, power to empower, and power through) to assess how the management of the dairy enterprise had changed in the households of the Mulukanoor members and across castes. Because of the novelty of both the concept of ‘power through’ and of ‘gender norms façade’ and the need to substantiate and further explore these concepts with more evidence, the authors paid particular attention to the ways in which both manifested in the changing gender and caste dynamics studied. We operationalized changes in gender and caste dynamics by focusing on two assets that are key for the dairy enterprise: milk and forage (using the improved forage variety CoFS-29 as a proxy for all forage-based interventions). The evidence provided in the study is based on fieldwork conducted in October 2021 in six villages in Mulukanoor Dairy’s catchment.

The remainder of this article is constructed as follows. The Conceptual Framework discusses in more depth the concepts of power introduced above and the research questions. The Methods section presents the sampling procedures and research methods. This is followed by the results. This section presents descriptive statistics regarding the respondents before moving to presenting findings – nuanced by caste - in relation to intra-household decision-making around forage and around milk allocation, income and expenditure. Sufficient contextual information is provided to help readers understand the findings clearly. The Discussion interprets the findings using the conceptual framework. This is followed by the Conclusion.

Conceptual framework

In this section, the authors discuss the key concepts that are the building blocks of this study. We start by introducing concepts of power that are foundational for discourses on empowerment. We also explore the concept of gender norms and gender transformative change. We discuss why we operationalize our analysis of change in gender and caste dynamics through a forage technology (i.e., CoFS-29). These concepts collectively provide the framing of the fieldwork research instruments, and the analysis and interpretation of fieldwork data. We use the term “woman” as a normative term throughout this section. We recognize that gender norms affect everyone, that gender is relational, and that men also need to be empowered in many ways. We provide a visual that shows how these building blocks come together and relate to our study research questions.

Discourses on empowerment are rooted in six concepts of power: *power within*, *power with*, *power to*, *power over*, *power to empower*, and *power through* – that we explain below. Attempts to strengthen women’s empowerment are frequently individualistic. They aim to facilitate the ability of an individual to achieve empowerment on her own terms (Bhattarai and Pant, 2013), thereby enabling the woman to achieve a life she has reason to value in contexts where this ability was previously denied (Sen, 1990). The focus is upon the exercise of agency, defined as the ability of a woman to set goals, select from a range of meaningful choices (such as who to marry, what kind of work to take up), and to act to achieve desired outcomes (Kabeer, 1999). A

precondition for the effective use of agency is *power within* (Rowlands, 1997). This describes a transformation in individual consciousness which leads to a sense of dignity, self-esteem, and self-confidence. A woman becomes aware of her situation and wants to change it (VeneKlasen and Miller, 2002). *Power to act* refers to the actual exercise of agency. It describes the power to do something to bring about a desired outcome (Allen, 1999; VeneKlasen and Miller, 2002).

Nevertheless, the environment within which any woman lives sets limits upon the free expression of her agency. The concept of *power over* indicates a social relation of domination and subordination (Pansardi, 2012). Visible, negative forms of *power over* include gender-based violence. Other examples include situations whereby men determine which household resources a woman may use, such as land or machinery, or how she is to spend income she generates (Sen, 1990). Nussbaum (2001) argues that women may fail to pursue preferences that could be considered indispensable to quality of life, one reason being that these have historically been denied to women through the tradition of “male power” and have therefore been assimilated as unavailable. Such assimilation or ‘normalization’ of expected behaviors is associated to the concept of adaptive preferences which suggests that people may internalize external constraints and gender normative behaviors (or gender norms) such that they do not desire that which they can never expect to achieve and may indeed value their life as it is, though observers using external metrics may consider it quite deprived (Sen, 1995). These examples of adaptive preferences shaped by gender norms can be considered hidden forms of *power over*.

The concept of gender norms is critical to our conceptual framework. Gender norms express shared beliefs about behaviors which are considered appropriate and typical for a gender group (Heise and Manji, 2016). They shape what a given community considers acceptable roles, behaviors, and responsibilities associated to male and female identities (FAO, IFAD and WFP, 2022). Gender norms are maintained by social sanctions which signal approval or disapproval for engaging in a particular behavior (Cislaghi and Heise, 2018). Gender norms thus directly, and differentially, affect the choices, freedoms and capabilities of women and men in the various arenas in which they live their lives –at home, in the field, in organizations and community settings, the market place, and others. Gender norms lie beyond the immediate control of individuals and can play a strong role in influencing a person’s choice (Stewart, 2013). In some cases, gender norms become unquestioned truths that people live by Bourdieu (1977) and Risseuw (2005). Gender norms ultimately affect both the potential opportunities for empowerment an individual might have, and their ability to achieve their empowerment goals.

Society is not unchanging. While many drivers of change lie beyond immediate personal manipulation, people can, and do, come together to try and force change in their favor. The concept of *power with* (Cornwall, 2016; Gammage et al., 2016) refers to power that is created when individuals consciously mobilize and act as a group to address shared concerns, resulting in a form of solidarity. *Power with* helps to build an understanding of empowerment as a social, collective process involving the creation of relationships between individuals, community members, and institutions such as the Mulukanoor Dairy. This interpretation suggests that meaningful expressions of *power to act* can only ever be achieved on a large scale, and achieve critical mass, through alliances between

individual women and institutional actors aiming for women's empowerment. Even so, *power within* and *power to act* can occur without *power with*. Women can consciously take advantage of broader processes of societal change, such as universal education, that open new potential spaces to act, and they can also experience gender-equitable norms in their own households (Scott et al., 2021; Sharma and Subramanyam, 2021).

Galiè and Farnworth (2019) consider that these rich definitions of power nevertheless "can fail to capture something important in the way empowerment can be experienced" (*ibid.* 14). They coin the concept of *power through* to describe a dimension of power that exists without personal agency. *Power through* suggests that an individual's power can be lost, or won, through a change in the empowerment status of others closely associated with that individual. In this process, the individual herself may not have acted – her empowerment or disempowerment is involuntary. An individual may become empowered through their association with significant others, for instance through being born into a wealthy family in the community. This places them in the position of potentially (but not necessarily) becoming agentic – for example by having more choices in their lives as a consequence of experiencing a better education in childhood – through no effort of their own.

The concept of a *gender norms façade* (Galiè and Farnworth, 2019) represents an agentic subversion of *power through*. Women and men household members may strategically portray their household as abiding by locally accepted gender norms which privilege male decision-making in order to avoid sanctions that may be imposed by the community in the case of apparent norm-breaking (Ball Cooper and Fletcher, 2012). Yet planned or unplanned processes of change may result in the household actually living by different gender norms, whereby – for instance – the spouse and young adults help determine how household income is to be spent. In such cases, household members may seek to demonstrate to the community that they are following locally accepted norms whereas in fact they are not. Maintaining the *gender norms façade* may be particularly important in societies where norms frown upon the open expression of women's agency. In this way, women stay, or become, empowered out of public view. Given the novelty of the last two concepts (*power through* and *gender norms façade*) we specifically focused on how these two forms of power manifested in the lived experiences of our respondents.

Finally, the concept of *gender transformative change* describes the understanding that women's empowerment is continually frustrated by discriminatory gender norms and associated institutions that embed and (re)produce unequal power relations between women and men through continual negative feedback loops (Cerise and Francavilla, 2012; Morgan, 2014). Gender transformative change aims to transform inequitable gender norms and institutions to foster cooperative forms of power and relationships, and to affirm people's capabilities, aspirations, critical awareness and dignity (Hillenbrand et al., 2015). Gender transformative change is a process which involves building agency, challenging unequal power relations, and ensuring that social institutions become more gender equitable.

We operationalized changes in gender relations in the household by focusing on management of milk, milk revenues and

forage crops, in particular. This is because the provision of agricultural technologies (like CoFS-29) by Mulukanoor Dairy can be used as entry point to help analyze how gendered power dynamics (for example around forage management and benefit sharing) may change in the household and in the community. Technologies are not neutral; they become suffused with the norms of the cultures within which they are introduced (Philip, 2018). Technologies interact with local gender dynamics and norms in ways which influence who accesses, utilizes and benefits from them (Theis et al., 2018). Gender norms and dynamics influence technology adoption and in turn, they are influenced by newly adopted technologies (O'Donnell and Sweetman, 2018: 218). Novel technologies inevitably influence gender roles, relations, and benefits – and changes in these elements can lead to changes in gender norms. New technologies may succeed in providing women and men with, for instance, new business opportunities, or they can be used to strengthen processes which exclude women, or people living in a certain intersectionality, from accessing and benefiting from such opportunities. Hussain and Amin (2018) argue in favor of interrogating power dynamics around the introduction of new technologies, and associated empowerment processes, rather than merely researching gendered access or benefits.

Figure 1 sets out these concepts of power visually in the context of Mulukanoor Dairy. The underlying assumption, based on earlier research into its governance structures (Ravichandran, 2018; Ravichandran et al., 2021) is that Mulukanoor Dairy has created a clearly discernible opportunity space (Sumberg and Okali, 2013) for its women members to be empowered through the six forms of power described above. We hypothesized that women leveraged their gained empowerment to improve gender relations outside of the Mulukanoor space and into their households. We expected this change to manifest through more equitable management of milk, milk revenues and forage crops; and better relations among women of different castes – the outcomes we studied. Finally, we expected the *gender norms façade* to be employed by women to cover the new gender and caste dynamics that they adopted thereby breaking the local gender norms. We keenly studied manifestations of both the *gender norms façade* and *power through* (see above).

Our overall research question was: 'Has membership of Mulukanoor Dairy translated into new gender dynamics at the household level, and across households belonging to different castes?'. This was addressed through 4 research questions:

1. Did Mulukanoor Dairy empower women and mobilize their *transformative agency* to the extent of:
 - a. Bringing more gender equitable management of milk, milk revenues and forage crops, in the household?
 - b. Improving caste relations between members?
2. Did such change vary across households of different castes?

Our keen focus on manifestations of *power through* and *gender norms façade*:

3. Do women privileged through association with powerful others agentially exploit their power to benefit themselves – and others?
4. Do women deploy the *gender norms façade* strategically to exercise decision-making in their households?

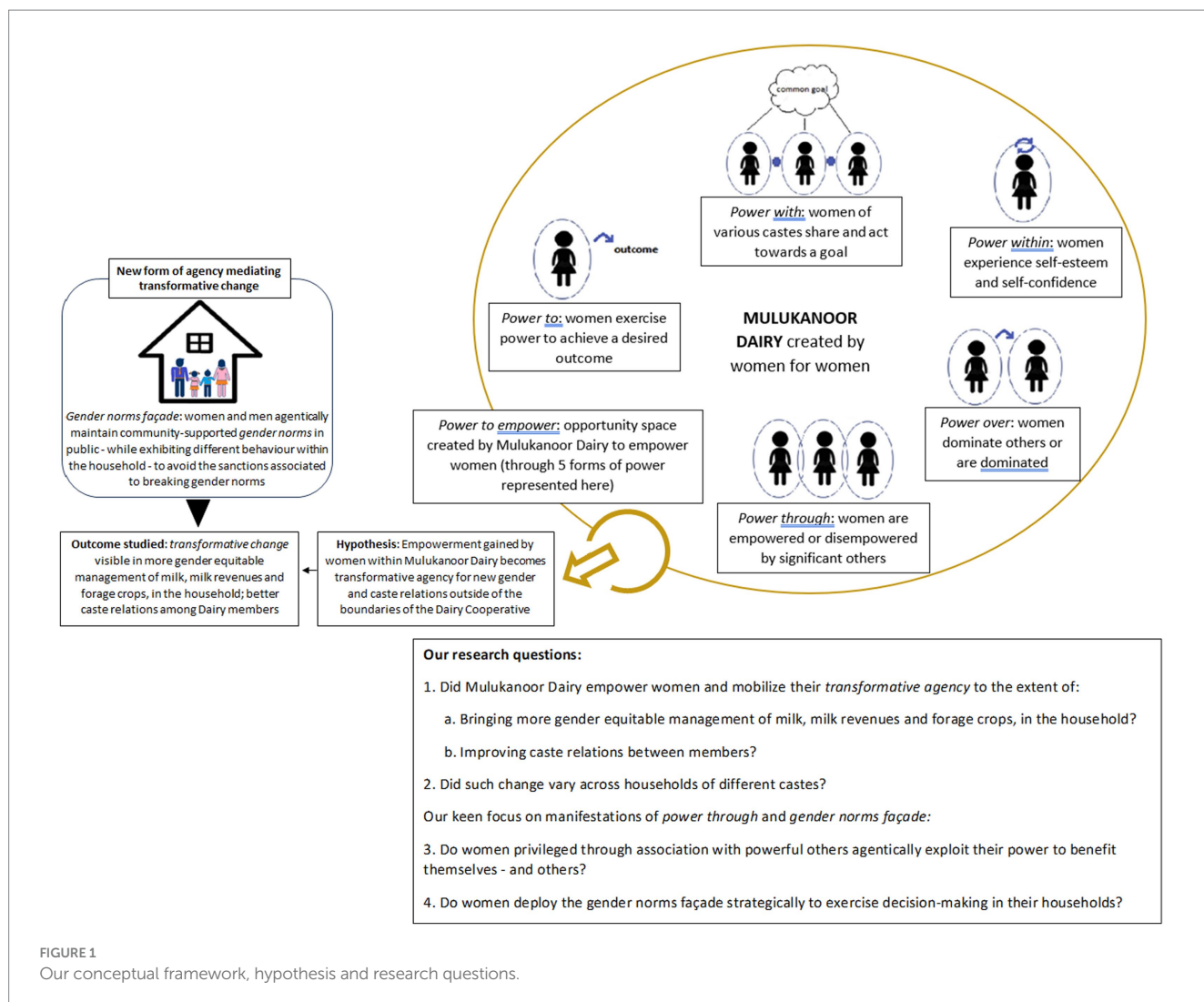


FIGURE 1 Our conceptual framework, hypothesis and research questions.

Materials and methods

This study is a qualitative exploration focused on changes in the empowerment of women members of Mulukanoor Dairy. This is assessed through the proxies of intra-household management of milk, milk income and expenditures, and forage among different castes. These areas of enquiry were broken down into simple questions in the form of semi-structured questionnaire which were used as guides for focus group discussions (FGDs) with women in caste-based groups, and for key informant interviews (KIIs) with women and men Mulukanoor Dairy staff. We chose FGDs as the main format for our interviews believing that a group setting would create an interactive and vibrant space where the respondent women would share their experiences. We made sure that the group composition would limit power hierarchies that could silence the opinions of some (e.g., among individuals of various castes). We were ready to engage selected individuals in a private space (through individual interviews (II)) in case we felt that some were uncomfortable sharing their experience in a group. We, however, did not conduct any II.

The research hypotheses and research questions were prepared by a national and international team of gender researchers and then approved by the ILRI Institutional Research Ethics Committee (IREC

(Ref ILRI-IREC2021-46). Sampling frames and fieldwork logistics were implemented with the assistance of the Mulukanoor management board. The actual fieldwork was carried out in 2021 by a team comprising one of the national research team members, and a local translator (from Telugu) who provided two way translation from English.

Five criteria guided village selection for research purposes: (i) to avoid respondent fatigue, the community must not have been part of any research study in the past 3 years, (ii) the community must have potential respondents from different castes who have adopted CoFS-29, (iii) potential respondents growing CoFS-29 must have been members of Mulukanoor Dairy for at least 5 years, (iv), the community should have balanced populations of GC, OBC and SC, and (v) the villages should be within 15 km of Mulukanoor Dairy headquarters to facilitate research logistics.

In sampling step 1, 90 Mulukanoor Dairy villages (from 191) were selected using the sampling criteria. Then, six villages were selected using random sampling. Taken together, these six villages represent 10% of Mulukanoor Dairy's membership. Table 1 shows membership by caste. Of the overall female population in the six selected villages about 18% of the women are members of Mulukanoor Dairy. It shows that the highest variation is among the GC category and least among

the OBC caste across the sampled communities insofar as their membership of Mulukanoor Dairy is concerned.

We then selected the individuals to involve in our study FGDs by randomly sampling respondents among Mulukanoor Dairy women members to include all castes (including ST) and, also, members who buy (and do not grow) and those who grow CoFS-29. To this aim, we used Mulukanoor Dairy lists of its membership which report caste and adoption of CoFS-29.

Table 2 shows the total numbers of respondents interviewed for this study. It was not possible to include ST members for two reasons. First, their numbers in each village were low making it difficult to pull together an FGD. Second, when consulted ST members declined participation due to lack of financial compensation. They rely on daily paid work for their livelihoods.

Twelve FGDs were conducted with 75 women in caste-disaggregated groups. This resulted in four FGDS per caste (Table 2). Each FGD took between 1 and 2 hours. Areas of enquiry included women’s ability to decide whether or not to adopt the

technology (*power over*). Another area focused on the ways in which improved forage affected milk quality and quantity, and from here, whether women had control over milk allocations and income from sale (*power over* and *power to act*). Women were asked whether they shared the new technology with others (*power with*), and their sense of knowledge (*power within*). We explored the concept of *power through* and *gender norms façade* to understand how these concepts manifest across caste. The implications of *power through* for expressing other forms of power was addressed through asking women to discuss a situation whereby a woman attempts to use her husband’s power to influence community affairs, including measures aiming to empower women in the community. A second situation was discussed whereby a woman decides more, the same, or less than her spouse in relation to dairy and forage in the household. These discussions focused on intra-household decision-making processes, and also on whether the women felt it was necessary to maintain a gender norms façade that men were the key decision-maker.

TABLE 1 Numbers of Mulukanoor Dairy members by caste in each community.

Total no. of Mulukanoor Dairy members by caste in each community in the sample					
Village	Caste				Total members per village
	GC	OBC	SC	ST	
V1	19	216	187	38	460
V2	120	180	156	20	476
V3	49	148	30	5	232
V4	160	200	77	19	456
V5	28	160	100	0	288
V6	50	186	140	45	421
Total members by caste (n)	426	1,090	690	127	
Total members					2,333
S.D	56.21	25.06	57.24	17.70	102.93
S.E	2.72	0.76	2.18	1.57	2.13

Source: Authors’ calculation using Census 2011 data and Mulukanoor Dairy data, October 2021.

TABLE 2 FGD Research Activities.

Field tools	Times held	Gender	Topic	Caste	No. of respondents
FGD-1	3	Women	Mulukanoor Dairy governance and benefits, technical knowledge dissemination	SC	8
				OBC	8
				GC	4
FGD-2	3	Women	Intra-household decision-making in relation to dairy allocation and income	SC	6
				OBC	7
				GC	4
FGD-3	3	Women	Gender norms façade, power through	SC	6
				OBC	6
				GC	6
FGD-4	3	Women	Changes in agency over time	SC	7
				OBC	7
				GC	6

Six KIIs were conducted, five with Mulukanoor Dairy staff and one with a former ILRI employee involved in the CoFS-29 forage project, to explore their own perception of changes in gender and caste dynamics in the villages of the members and in relation to Mulukanoor Dairy governance structures. Two men and four women key informants were met: livestock technician (man), milk dispatch (man), sales manager (woman), quality control (woman), auditor (woman), ex-ILRI forage technician (woman). In addition, Mulukanoor Dairy headquarters convened a special meeting for the purposes of this research. All 10 women members, including the president, attended. The precise content of meetings varied but the format was similar. Key informants were asked about their experience of the CoFS-29 forage project, about gender and caste relations in the villages, if they had noted any changes over time in gender and caste norms, and the reasons – in their view – behind their observations. Anonymised emerging findings arising from FGDs were built in opportunistically to allow triangulation and comment. The Mulukanoor Dairy Board was asked similar questions. Further queries focused on the relationships, if any, between their governance structures, their strategies for gender and caste empowerment, and community level changes in caste and gender norms. In this paper, we do not explore Mulukanoor's governance structures in detail. This has already been conducted by [Ravichandran \(2018\)](#) and [Ravichandran et al. \(2021\)](#).

Across FGDs and KIIs the national research team member took extensive notes and recorded all sessions with the permission of respondents. She transcribed and checked these every evening with the Telugu-English translator. Following transcription and checking, fieldwork notes were finalized together with visual materials prepared by respondents. These were shared with the international team. Data was not coded through a software program like Nvivo, but rather analyzed using a deductive process between national and international team members in several iterations. This process aimed to bring out the main storylines between and within castes in relation to the hypothesis and research questions. The research team also triangulated a number of findings with colleagues at Mulukanoor.

Results

The findings are structured according to the following areas of exploration. We start by providing an overview of the FGD respondent characteristics. We show the findings on changes in intra-household farm management overall; we then show the findings on this same topic but with a caste disaggregation. Finally, we present how the respondents utilized and perceived instances of power through and gender norms façade across castes.

Respondent characteristics

In the study area, each caste lives in caste-specific enclaves in the village. The average age of the 26 SC respondents is about 40 years and they have been members of Mulukanoor Dairy on average for 12.5 years. Approximately 61.5% have no education, and the remainder have on average about 3.5 years of schooling. The average family size is 5. Except one, respondents own land in the range of 1–4 acres with an average land size of 2.29 acres. SC respondents own an average of

1 cow and 1 buffalo each. Respondents use about 1/10th of their land to grow CoFS-29 and other green forage varieties such as para grass and SSG.

The average age of the 28 OBC respondents is 41 years, and they average 12.5 years of Mulukanoor Dairy membership. Seventy-one percent have received no education; the remainder average 2.5 years of schooling. The average family size is 4. Respondents (apart from 3 with no land) own land in the range of 1–10 acres with average land size of 2.55 acres. OBC respondents own on average 1 cow and 2 buffalos. Everyone with land grows CoFS-29 and other green forage varieties on around 1/10th of their land.

The average age of the 20 GC respondents is 44 years and they have been members of Mulukanoor Dairy for an average of 14 years. Ten percent have no education while 5 have completed high school. They average 4.5 years of education. Their average family size is 5. Their average land size 4.38 acres. GC respondents own an average of 1 cow and 2 buffalos. They devote 1/11th of their land to growing CoFS-29 and other green forage varieties.

All respondents were married.

Intra-household changes in caste and gender relations

Discussions with the headquarter Mulukanoor Dairy management board show that an important objective of Mulukanoor Dairy has been to ensure that women, regardless of caste, can participate in the dairy industry. However, board members do not consider their remit to include influencing wider caste norms beyond the gates of the organization itself. When asked about the ways in which they ensure inclusion of women across caste, they explained that training events, meetings and other interactions are “caste-free spaces” where injunctions upon who sits and eats together are not observed. Leadership positions are open to women of any caste. However, all members of the headquarter management board are GC.

SC women and men are employed by GC to labor in their fields but it is a point of honor that GC women do not work on any fields but those belonging to their husbands. Respondents agreed that friendly greetings are exchanged between Mulukanoor Dairy members (and in general) should women members of different caste meet in the field or community. However, inter-caste visits do not take place apart from formally organized visits to festive events. More broadly, self-help groups (SHG) and similar groups are caste-specific. Only Mulukanoor Dairy includes women of all castes.

Management of labor and income

Respondents explained that, prior to the establishment of Mulukanoor Dairy, women conducted almost all the work in dairying yet men sold most of the milk to private vendors, and other dairy cooperatives (one of which was exclusive to men, and the other mixed-gender) and retained the income. Today, the situation is reversed in many, though not all, households. Women prepare forage at home. Men take the forage to the cows, milk them, clean out their sheds, and often carry the milk to the village dairy society. The income they receive is then provided in its entirety to women.

Forage and other farm management decisions

When asked about forage, respondents explained that men retain key decision-making power. This has not changed despite Mulukanoor Dairy's efforts over the past 20 years to provide women with technical training on all aspects of dairy, including forage and its management. While such training programs have endowed women with technical knowledge, including the knowledge necessary to grow CoFS-29, this has not empowered women sufficiently to be able to decide whether or not to adopt forage, and most women – with some exceptions – are unable to influence the decision of their spouses on this point. Normatively, respondents argued, men decide whether or not to grow forage, and whether to adopt a specific variety. A primary reason for men's dominance is that men across caste are conceptualized as landholders with normative rights to take key decisions over how land is to be allocated between crops and livestock. They thus decide which crops to grow and whether, in their view, there is sufficient land upon which to grow forage.

It is important to note that the women stated that such decisions are of great significance to them. They repeatedly argued that improved green forage is highly desirable because it improves the quantity of milk produced. The association improved green forage → more milk → more income for women was made repeatedly.

Even more substantial decisions lie primarily within men's remit, including whether or not to maintain dairy livestock. Between 2019 and the research in November 2021, there has been significant rainfall. This has encouraged many farmers to grow annual water-hungry crops such as paddy. Land allocated to forage has been reduced or eliminated, and cattle and buffalo have been sold. Women respondents insisted they were part of this decision-making process because the focus on annual crops increases overall household income, even though they lose the dairy income under their direct control. Yet if women want to re-start their dairy business they have to buy back livestock themselves, primarily through SHG loans.

The remaining sections focus on exploring intra-household decision-making through a caste lens.

Intra-household decision-making with a caste lens

General caste

GC women claimed that, in relation to whether to retain or sell milk, and how to spend the income, women and men espouse a collaborative intra-household decision-making model and that this collaboration is recognized by the wider community. They associate this directly with the establishment of Mulukanoor Dairy. "Before 2002, there were no milk dairies for women. So men ruled. Now we have knowledge and opinions." Specific reasons for change outlined by respondents include, first, that Mulukanoor Dairy has trained women on all aspects of the dairy business. They therefore do not need men's advice, and indeed are in the position of being able to share knowledge with them. Second, the fact that women are paid by Mulukanoor Dairy is crucial. Women said, "Mulukanoor Dairy has given us the power of money" (All women nod in agreement) and, "This financial power has translated into more

women power." Respondents broadly agreed that, "In our community men always ask their women. They do not do anything without asking their women." However, one woman disagreed, "It is not always like that. Men take decisions but they clarify with us before acting over these decisions." After much probing, it became clear that men are expected to take decisions in the family interest, and the family interest is also the woman's interest. An important distinction with other castes emerged. In common with other castes, GC men generally take milk to the dairy center. However, unlike many women in other castes, many GC women go personally to the center for payment. "Yes, we are members so we should get the money. We are entitled to it." One woman said, "Earlier we did all the dairy work, feeding and milking. At least now we get paid for our work. Isn't that great!"

Specifically in relation to improved forage, GC women remarked that they are now knowledgeable. "Earlier our husbands told us how much water and dry and green forage to mix. Now we know. In fact, now we tell them." In terms of deciding whether to adopt new forage varieties, women explained that "Men decide. Women plant but men decide." One woman said, "Men decide these matters. I wanted to grow a little more forage than what I have right now but my husband wanted to grow paddy for the rains have been good this year." A woman seconded this, saying "Yes, men decide how much land should be allocated to growing green forage."

GC women were much more likely than other castes to share their technical knowledge with men – though only of their caste. They explained that men are more interested in learning about forage than women. Interestingly, there appear to be no cultural norms inhibiting GC women from talking to non-family men. "Our husbands are broad minded. They will not mind if we talk to men of our caste or other caste." Respondents also shared information with other GC women when working together with them in the fields, and with ST/SC women they employed. However, the majority of GC-led women-women knowledge sharing, particularly between castes, appears to take place in the formal setting of the dairy center. In all cases, GC women share knowledge only if they are asked to do so.

Other backward caste

It soon emerged among the OBC that men take almost all decisions over dairy income. A woman said: "I sign and take my payment and then give it to my husband." Only one young woman claimed joint decision-making. When asked if things were changing due to their membership of Mulukanoor Dairy, respondents typically asserted that men had previously exerted decision-making power and that they continue to do so. Even so, it appears that Mulukanoor Dairy membership – particularly the fact that women get income in their name – is shifting norms to some degree. Women pointed out that prior to Mulukanoor Dairy, they had not sold their milk but used milk to make ghee and curds. Income through selling milk is highly welcome to women, and the income thus generated has some bearing on women's decision-making power. One woman explained that now, "We have the guts to speak our minds in front of our husbands. I do. I at least try to negotiate." And some respondents said they negotiate to keep their dairy income through appealing to cultural norms that men are breadwinners, not women. A woman concluded, "so if he needs more money and asks us to give more, we do not relent. Our

husbands fight us. But we stand firm and do not give.”³ The sense of struggle over income led OBC respondents to compare their situation unfavorably to that of GC women, saying, “GC men are different. Our men are not like that. They exert their power and take our money and so we do not have any left with us.” OBC respondents added, “I feel sad [but] I have to give my money. After all, my husband also puts all his money in the family money collection.” Another woman said, “my family pities me and makes fun of me. They mock me that I am working so hard all day long. They are happy about the money that my work generates though.” Yet OBC women have been elected as village leaders in part due to their membership of Mulukanoor Dairy. “We have become more confident as we get more exposure and we learn new things. I am now a ward member (local level government office bearer). I was nominated by the village head” (smiles proudly and is cheered by other respondents⁴). These nuanced findings are echoed by GC respondents, some who claimed that OBC women experience equal decision-making power, though others asserted that, “Some OBC men carry a big ego.” SC women were unwilling to comment on intra-household decision-making norms among the OBC and the GC.

OBC women share knowledge on improved forage within their caste, primarily with women. They do not share their knowledge with GC women. OBC women expressed superiority to SC women and said they would only share with them if prompted by the latter.

Scheduled caste

The results are more differentiated for SC women. Overall, the ability to participate in the milk market through Mulukanoor Dairy has benefited the SC. Yet, according to some SC respondents, men *de facto* manage the dairy business. Men decide whether to purchase or sell cows, they decide whether to adopt forage varieties, and they typically go to the dairy society to receive their wife’s payment (which they must deliver to women). Women justified men’s dominance by explaining that men carry milk to the dairy societies which are located far away. Distance is a function of the physical marginalization of many SC hamlets: they are located at the periphery of villages whereas dairy societies are located in the middle. Some SC women, however, claimed high levels of decision-making power in relation to the spending of dairy income. One woman said, “If we let our husbands decide they will spend on useless things. So we decide.” Another added, “Yes, we take most of the decisions. Husbands do not know. They do other types of daily wage work.” Triangulating perceptions with other castes showed that SC women are widely perceived to experience low decision-making power, including over dairy business. “Their men have big egos. They act like they are the masters” (GC woman). This was attributed to the fact that SC men provide the bulk of household income. Even when “SC women say sensible things their husbands do not listen” (GC woman). Nevertheless, some GC women tempered their remarks by acknowledging that SC decision-making

is likely to differ by household and that it was not possible to over-generalize.

When it comes to forage management, few SC grow improved forage (our sample was biased toward respondents that grow it). Improved forage requires sufficient water, yet no SC respondents had access to tube wells and they further explained their limited land had to be primarily devoted to cash crops. “We get more money from cash crops so it is not difficult to choose.” Respondents said they had been sold subsidized fodder seed by Mulukanoor Dairy 3 years ago yet had not been trained in how to grow it. “Mulukanoor Dairy did not give us any help. We saw others and learnt.” The majority of SC buy harvested green forage from Mulukanoor Dairy. This is collected and paid for by men. These processes, and the lack of land, means that the majority of SC women and men are not in a position to take decisions around whether to adopt forages or not.

SC women only share information about forage with SC women, and with male family members. SC women do not talk to men of any caste beyond their family.

Power through and the gender norms façade across caste

General caste

GC women are proud of their improved gender norms, which they identify with women having ever increasing levels of decision-making power within the household. They ascribe this to their membership of Mulukanoor Dairy. GC respondents made it clear that they are not interested in how other castes view them. One woman explained, “The decisions we make at home are good and great. So why should we bother what others think? Women know. Women have money. So, we should be given a chance to have an equal say.” Another commented, “If someone thinks that women should not be given the power to decide then that is not our concern. If they laugh then so be it.” When asked specifically if the wider community think that men should be the normative decision-maker respondents shot back, “But why should we act like that? We decide together. So why pretend otherwise?” Nevertheless, GC women felt it was important that women were not seen by the wider society to be *more* powerful than men in their homes. They warned that in such a case village men would ask the husband to discipline his wife. Even so, most respondents personally considered that such a woman would be admired by most women regardless of caste. “She deserves the respect of everyone. She is working hard to make a place for herself. She is doing it all to provide better for her family.” The relative power of GC women is closely observed and envied by OBC respondents. One OBC woman said, “In GC families, women and men take joint decisions. It is not that women dominate but they decide together.” In other words, GC women are unafraid to claim decision-making power and they do not maintain a gender norms façade that suggests men dominate decision-making within the household.

When asked, however, whether a woman could be justified in using her husband’s standing in the community to try and influence community level decision-making on various topics, nearly all GC respondents were hostile. They were adamant that men in the community would urge her husband to control her, and that women and men of all castes would laugh at her. One woman said, “The women of her caste will try to make her understand that what she is

³ This remark hints that the women may experience gender-based violence, but the research team had made a prior decision not to explore this topic. This would have required different research arrangements and specialized training for enumerators.

⁴ Note that there is a caste reservation to ensure representation by all castes.

doing is not right. That she is bringing shame to her caste. That everyone in the village is laughing at her.” However, another woman insisted, “I do not think there is anything wrong with it. As a wife she has a right to her husband’s authority.” When asked whether such a woman would be justified in using her position specifically to help empower other women, respondents considered that women of all castes would be supportive, “Why would they not like it?” However, they believed that men would be very hostile, “Wives will gain more power and this will infuriate the men.”

Other backward caste

OBC women appear resigned to maintaining a gender norms façade that men decide. Women explained that men insist on claiming to the wider world that they take sole decisions. “Our men always tell everyone that they decide. They think they are the providers. That is their ego.” Another woman explained, “For our men a wife is always subordinate. Men cannot stand women becoming powerful” and “so men always tell everyone that they take all decisions for their families.” OBC respondents claimed that, in reality, women do take some decisions, but “we are habituated to the system” that men say they decide everything.

When asked how the community would react should a woman of their caste attempt to use her husband’s position in society to influence community matters, OBC women argued strongly that men would condemn both the wife and particularly the husband. Several women explained that, “Men will call the man and warn him that if his wife does not stop setting such wrong examples for the community then they will ostracize his family.” At the same time, though, some OBC women contended such a woman is admirable. Others said, though, “Girls should behave properly.” When asked about the scenario of an OBC woman earning more than her husband and taking more decisions, respondents were generally supportive though they considered that men would not be. However, they expressed deep concern at losing the respect of other castes, in particular the scenario that GC and SC women would laugh at them. “SC women will say that she is showing off her power because of her caste and that we SC women are not like that. They will say the people of her (OBC) caste are all like that. They will say we in the SC know how to behave well.” This remark led to a discussion highlighting strong hostility to SC women, including an unwillingness to talk to them and attend their social functions: “We just throw our gifts and leave.”

Scheduled caste

Although SC women - unlike in the past when only GC families held dairy cattle - now earn money through their dairy business they do not feel respected by other castes. “There is not much difference in our place in the community despite the fact that we are earning like women of other castes.” In terms of presenting any kind of normative image to other castes, SC women maintained that “We do not have time to show anything in society.” Lack of time is ascribed to having too many worries to manage. “If we have a problem who will solve it, only ourselves. No one will come to help us.” This and similar remarks suggest that the influence, and perhaps even the willingness, of Mulukanoor Dairy to specifically assist SC women is limited. Respondents from GC and OBC castes viewed gender norms among the SC negatively, arguing that SC men dominate SC women due to their “egos.” Given that male dominance among the SC is all too clear

to other castes, it appears that SC men are keen to maintain the gender norms façade in public that they are sole decision-makers.

Regarding the scenario whereby a SC woman uses her husband’s name to influence decision-making in the community, SC women considered that, “She is maligning his respect in the community and that is not right.” They argued that such a woman would bring shame upon her caste, particularly that “Men will be very angry that a woman is behaving like this and ruining the reputation of our caste.” One woman said, “Women should not behave so high and mighty. They should respect their husbands.” This suggests that the reputation of SC caste women rests primarily on the ability of SC men to maintain the respect of the wider community.

Respondents considered that other castes would resent any form of help from an SC woman, “It’s like why does a woman from the SC have to come to help us? It will hurt their ego.” In common, though, with GC and OBC respondents, SC women expressed admiration for a woman who earns a lot of money. “She is working very hard to be where she is and so we should (as women) admire her” ... “Yes, she deserves respect for she is working hard day and night for her family.” However, they all feared that men would not accept this situation. “Men will be furious and they will all pounce upon the man for letting his wife take control of their home,” and “Men will be scared that she is setting a wrong example for their wives.”

Discussion

This study aimed to discuss changes in women’s empowerment, gender and caste dynamics brought by the Mulukanoor Dairy over the past two decades. The conceptual framework to help shape the questions, and to analyze the data, was structured around six concepts of power: *power within*, *power to*, *power with*, *power over*, *power to empower*, and *power through*. The concept of a *gender norms façade* was also tested.

In terms of changes in women’s empowerment the data provide convincing evidence for the development of *power within* - in the form of women’s acknowledgment of their dairy work, the contribution of such work to household income and their right to claim that such work be acknowledged in some way - as a direct consequence of women’s membership of Mulukanoor Dairy. This is partly due to women being trained in the dairy business and thus frequently experiencing a higher degree of technical knowledge than their husbands. A key factor is also regular direct payment to women which demonstrably increases their intra-household decision-making power. Overall, there is no evidence that women are unaware of their needs and status within the household and in the broader community. It is no longer an unquestioned truth that men should take all decisions, or that women have internalized external constraints such that they do not actively wish to improve their lives. Rather than passively living lives of adaptive preference (Sen, 1990, as discussed above), women consciously adapt their preferences to their personal situation and their individual negotiating skills, as well as through carefully adjusting to the norms of their caste. It is particularly interesting to note that caste norms appear to be tightly bound up with caste-based expressions of *masculinity*, rather than femininity (although the two are interdependent), at the community level. These masculinity-centered norms frame “what is possible” for a woman in a particular caste and place limits upon the free expression of *power within*.

In terms of changes in gender relations the findings show that membership of women in Mulukanoor Dairy brought changes in *power over*. Gender norms about men's *power over* the dairy business have shifted decisively over the past 20 years across all castes. Women previously cared for dairy livestock but did not receive sales income for milk nor have much say in its expenditure. Today, men are the primary carers of livestock while women handle milk sales and income. Men's *power over* how dairy income is spent is much reduced. Across caste, women strategize to keep control over most of the dairy income by granting men some of the dairy income for their own use. This study did not analyze how women and men rationalize this process. It appears that men's participation in caring for livestock is a strategy whereby men feel able to claim some of the dairy income for their personal needs. Women asserted they were willing to allow men some personal dairy income in return for the labor they provide. It also seems important that dairy income is framed as an "extra" with men remaining conceptualized as breadwinners.

At a deeper level, however, gender norms remained intact: men retain *power over* the necessary resources for a dairy business: land, forage and to some degree dairy livestock. According to informants, all land belongs to men. Men decide whether to adopt forage, and they also decide whether to sell livestock (though women as noted control dairy products). Women have some input into these decisions, but it is not ultimately their decision to make. This is problematic because the level of milk income rests on the quantity, and quality, of milk they can produce. These in turn depend in part on the quality of forage. Men's control over the key resources for dairy production certainly shows the limit of changes in women's empowerment and gender relations.

In terms of changes in caste relations Mulukanoor Dairy is not mandated to address caste inequalities beyond its doors. The findings show that caste equality is espoused within the domains that Mulukanoor Dairy controls – meetings and training events mostly. Women sit and eat together, and everyone has the right to speak freely (though the degree to which this actually happens is a matter for further study). This therefore has the potential to foster *power with* between women in these specific settings. However, beyond formal meetings and training events very little inter-caste sharing of technologies – or socializing – were found to occur between women members and non-members outside of the co-operative space. The persistence of caste norms in everyday life, and the lack of personal association between women members of different castes is striking. Yet it is not unprecedented. Research conducted on a watershed management group in Karnataka, India (Mudliar and Koontz, 2018) found that the "muting" of caste in one action arena (the organization) did not mute the performance of caste in other action arenas, where the effect of caste is to continue to reproduce and maintain power asymmetries (*ibid.* 241).

Mudliar and Koontz (*ibid.*) further find that strong, well-performing institutions dampen inter-group inequalities to promote successful collective action in a particular domain. Participation in such groups enables weak actors (such as the SC) to access opportunities that they could not have accessed individually, even though (and because) fundamental inequalities continue to structure their lives beyond the group (*ibid.*). Mulukanoor Dairy seem to have promoted distributional equity – the fair distribution of benefits – which makes economic sense for Mulukanoor Dairy because it promotes quality milk production and thus strengthens market

competitiveness. Distributional equity promotes group cohesion without rocking the fundamental, systemic inequalities of caste, as shown by our findings. Taken together, the data indicate that Mulukanoor Dairy represents a *power to empower* approach mostly within its boundaries and only partly beyond them.

The results also suggest that while solidarity among women is enhanced within the boundaries of Mulukanoor Dairy, caste dynamics persist in its governance structure: the GC, an elite caste group, has control over governance in Mulukanoor Dairy's Board at headquarters. This has occurred despite the institution of transparent election procedures. Mulukanoor Dairy, therefore, does not use its *power to empower* to fully promote a *power with* approach despite being a women's organization. Solidarity between women is largely trumped by caste. The dominance of GC women may be, in part, a consequence of the historical dominance of the GC in dairy in Mulukanoor Dairy's catchment. Eroding this arguably takes time. Mudliar and Koontz (2018) note that, in India, upper caste members of organizations tend to dominate decision-making regardless of their economic standing (see Stuart, 2007; Christie and Chebrolu, 2020; Ravichandran et al., 2021 for similar findings in the dairy cooperative sector in India). It is possible to speculate that OBC and SC members are unwilling to openly challenge GC caste dominance in Mulukanoor Dairy governance because this is the only arena in which they can aspire to some form of economic and social equality – as women and regardless of caste status – in their lives. This proposition requires further research.

Taken together, the findings raise questions around the transformative potential of Mulukanoor Dairy, and the ability of women members to exert transformative agency both in gender and caste relations. From the outset, there appears to have been an assumption that technical training (such as for example, Mulukanoor Dairy's training on CoFS-29 for women) helps to create women as people of knowledge, and that, from here, knowledgeable women are in a better position to influence decision-making norms in the household around "who decides," including on how land is to be used. Our data shows that this causal chain is not verified. Second, our findings suggest that Mulukanoor Dairy is successful shifting control over dairy income allocation largely to women (albeit with nuances across caste). Changing the identity of the dairy value chain across many thousands of producers is indeed an enormous achievement for Mulukanoor Dairy. Yet if transformative change is limited to one domain in a farming system at household level, is it then correct to speak of transformation in gender dynamics? The limited changes in caste dynamics within and particularly outside the Mulukanoor Dairy boundaries clearly indicate the limited transformational impact in caste dynamics.

We now move to the findings on the gender norms façade - that men are said to take key decisions regardless of the actual decision-making arrangements in the household. Respondent women were found to manipulate the *gender norms façade* regardless of caste. Respondents repeatedly affirmed that men are key providers for the whole household, and that women's income should be considered supplementary. In cultivating this perception women demonstrate a stratagem they have developed to maximize their personal control over dairy income. This is an expression of successfully "negotiating with the patriarchy" (Kawarazuka and Prain, 2019: 222) which demonstrates women's agency. However, in their overt recognition of male superiority women appear to be wielding a double-edged sword

that limits the potential transformation of gender norms: by reconfirming men's role as main bread-winners women may keep control over dairy income but may not challenge gender norms beyond dairy. Men, as discussed, continue to control all productive assets.

When studying the *gender norms façade* with a caste lens the findings show that caste identity plays a central role in maintaining or nuancing this façade. The GC *gender norms façade* is the most relaxed. GC respondents espouse a relative willingness to admit to intra-household gender equity in decision-making provided they also demonstrate to the wider community that women's decision-making power never exceeds that of men. There thus seems to be a correspondence between the relaxed nature of the GC *gender norms façade* and GC women's sense of *power within*, and their *power to act*. It is perhaps a function of the relative power of the GC caste vis-à-vis other castes that leads GC women to express little concern about how they – as women – are viewed by other castes. Whereas SC women do not talk to men outside their family, GC women do not sense any constraints in their freedom to converse with whom they choose (provided they do not take the initiative). By way of contrast, women in the most marginalized caste, the SC, appear particularly vehement in their wish to maintain the *gender norms façade*. It appears that their standing, as a caste, rests upon the ability of SC men to acquire and maintain respect in the community. This respect is interpreted by both women and men to involve maintaining, and demonstrating, male superiority over women of the same caste. These findings suggest that the *caste norms façade* is intrinsically coupled to a *gender norms façade*. Performance of the *gender norms façade* appears intrinsic to the successful performance of the *caste norms façade* – particularly in the case of the SC and less so with other castes. This finding raises further considerations around the degree of gender transformative change through Mulukanoor Dairy. It could be argued that such change needs to be supported in the framework of women's satisfaction with the benefits that the household as a whole enjoys from the change, even when achieved through men's control over some assets.

The findings thus far indicate that differences in the degree of women's empowerment can be largely attributed to their membership of a particular caste. This is an expression of *power through*. As a reminder, this concept allows for an individual to be empowered, or disempowered, through no effort of their own. The data show clear differentiation by caste in women's experience of the various forms of power, and caste-specific expression of the *gender norms façade*. At the same time, women evidently deploy their agency to maintain the status associated with *power through*. A mechanism for doing so appears to be creating symbolic capital (Mudliar and Koontz, 2018). Symbolic capital includes feelings such as honor, pride, unity and collective identity. Actors seek to accumulate symbolic capital to serve their interests through their everyday interactions (*ibid.*). The findings in this article suggest that when the primacy of men is undermined, a caste as a whole can lose symbolic capital. SC and OBC women who appear to be empowered at the “expense” of men are considered not only to undermine a specific man, but also to undermine the dignity of their entire caste in the eyes of the community. The findings further suggest that the OBC caste feel themselves particularly vulnerable to ostracization should their ability to maintain the norms of their caste be questioned. OBC respondents – as a middle caste posed precariously between the GC and SC – expressed contempt toward the SC combined with a longing to achieve a similar level of respect as the

GC. While OBC women envy the gender norms of the GC, they recognize that their own desires are sublimated by their male partners in an attempt to maintain social standing in the community. Interestingly, SC women appear to achieve a degree of *power through* as a consequence of the perception that SC men are understood by the broader community to be key decision-makers. Interestingly, the findings also suggest that an intersectional lens is very relevant for *power through* given that the ‘association with significant others’ may move along various social markers. In the case of this study the women strategically chose whether to leverage their gender or caste identity to maximize the benefits from being associated to others.

Conclusion

This study aimed to answer the research question: ‘Has membership of Mulukanoor Dairy translated into new gender dynamics at the household level and across households belonging to different castes?’. It was suggested, as part of the conceptual framework, that people's lived experiences of gender may be quite different to their lived experience of caste. In other words, any examination of the intersectionality of caste and gender should speculate that these social markers may differ profoundly to each other.

We find that gender dynamics did change in member households, but that caste dynamics changed to a much more limited degree. This in turn affected the speed and modality of change of gender dynamics. We looked for evidence of new gender dynamics in the management of milk allocation, milk income and forage in the household of Dairy members. We found that Mulukanoor Dairy's intervention – now two decades in the making – has significantly enhanced women's agency in the household, across caste. We studied whether changes in gender dynamics vary across households of different castes. The findings suggest that gender identity is dynamic, fluid and subject to change over time. However, caste affiliation poses limits to the fluidity of gender expression and gender relations. Caste helps to shape the ability of women to empower themselves at the household level, and it limits the ability of women to share a sense of collective identity based on their gender. Although the performance of caste is muted in the cooperative space, caste is performed again in community level interactions.

We explored the concept of *power through*. We found that caste membership appears foundational to the differential ways women in each caste express their agency in intra-household decision-making. GC women are particularly successful at exploiting the *power through* that is awarded to them by their caste status. This is harder for OBC and SC women, because their castes are disempowered vis-à-vis the GC and thus the potential for achieving *power through* their caste membership is less. Finally, we studied whether and how women deploy the *gender norms façade* strategically to exercise decision-making in their households. There is strong evidence that women across caste manipulate the *gender norms façade*, particularly among the SC and OBC, in order to achieve their aims. The findings also show that the *gender norms façade* interacts with the *caste norms façade* which hampers women's expression of their agency in communal spaces, particularly for the OBC and SC.

Taken together, the findings point to the transformational potential in gender and partly in caste dynamics within the boundaries

of the Mulukanoor Dairy. They show how such transformations spill over beyond Mulukanoor Dairy's boundaries into more equitable gender relations in the household. Such transformation, however, does not spill beyond dairy management. Caste relations do not change beyond the Dairy's boundaries. The performance of caste restricts the ability of women to wield truly transformative agency in their households and community, and it restricts the ability of Mulukanoor Dairy to be a truly transformative organization.

Our findings provide considerable food for thought and point the way for further research. It would be interesting, for example, to deepen exploration around procedural equality in mixed-caste cooperatives. For instance, is there evidence of procedures in place which allow the SC to ask the membership to collectively challenge discriminatory structures in the community? Can SC members speak, and be listened to, on matters that affect them directly – as opposed to issues which affect all castes equally? Is there evidence that women are bonding with each other across caste in the community to achieve aims associated with women's empowerment? Another topic could be deeper work on associations between a caste norms façade and a gender norms façade.

Data availability statement

The datasets for this article are not publicly available due to concerns regarding participant anonymity. Requests to access the datasets should be directed to the corresponding author.

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Author contributions

CRF, AG, and PB contributed to conception and design of the study including fieldwork tools. CRF and AG prepared the conceptual framework. PB conducted all the fieldwork. CRF and PB conducted data analysis. CRF wrote the first draft of the manuscript. AG and PB wrote some sections of the manuscript. All authors contributed to manuscript revision, read, and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

The reviewer VK declared a past co-authorship with the author CRF to the handling editor.

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