Ladange, Adange, Jeetange: The Farmers' Movement and Its Virtual Spaces

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The farmers' movement began in November 2020, when more than 300,000 protesters marched towards New Delhi in India in opposition to new agrarian acts introduced by the Indian central government. Organised by over 400 farmers' unions along with other organisations, for the next year, farmers and allied protesters set up bases around New Delhi and sustained the movement leading to its eventual success. We conducted 20 semi-structured interviews with participants from the movement and explored the social organisation, the underlying technical infrastructures, and how collective action was organised. We outline how the social media ecosystem enabled hybrid forms of organisational structures and facilitated coalition-building between diverse groups. Further, the movement created and disseminated alternative media that opposed mainstream media narratives and facilitated community-building. We discuss how designed technologies and spaces can support social movements in the face of powerful antagonistic actors.

CCS Concepts: • **Human-centered computing → Empirical studies in collaborative and social computing**.

Additional Key Words and Phrases: social movements, informality, coalition-building, social media, social networks

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1 INTRODUCTION

Ladange, Adange, Jeetange! (We will hold our ground, fight, and win) was a slogan that resounded in the Indian capital, New Delhi, for a year starting November 2020. The Farmers' Movement's popular slogan was used as a hashtag as part of a complex virtual campaign and is emblematic of the movement's spirit against the agrarian acts introduced by the Indian central government earlier in the year. The movement sustained itself for more than a year on the borders of the Indian capital, New Delhi. In November 2021, the movement succeeded with the Indian Prime Minister announcing the withdrawal of the three Farm acts. In December 2021, the movement finally decided to end its occupation of the Delhi borders.

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Organised by over 400 farmers' unions and other organisations amid the COVID-19 pandemic, the movement sustained itself in the face of antagonistic actors. Throughout the year, the farmers, along with their allies, organisations, and individuals, battled bitter cold, water-cannons, baton-charging, and censorship to cross trenches and barricades, and established a township on various borders of New Delhi for their singular demand. The death toll of farmers during this movement as of July 11, 2022, has been reported as 735 [4, 45]. This count includes farmers who died during the movement - either in participation, in an altercation, or by suicide. In this paper, we discuss this year of mobilising and protesting, which ultimately led to the farmers' demands being met.

Social movements have historically used information and communication technologies (ICTs) to mobilise participants, build communities, give voice to the marginalised, and challenge both authorities and mainstream public narratives [29, 42]. CSCW and HCI literature has documented the increasing role of social computing in such causes [55, 56, 66, 90], along with exploring how designers can better support and empower communities [31, 95]. Further, literature has documented how ICTs are used by communities to self-organize and sustain themselves even in the face of antagonism [18, 36, 93]. Our paper builds on these themes to discuss the organisational structures and underlying technical infrastructures that enabled the Farmers' Movement to sustain itself. Our work adds to a growing work in HCI and CSCW that studies technology adoption and use in Global South contexts [3, 20, 21, 65]. Specifically, it focuses on how communities adapt technologies to local conditions [12, 19, 47, 76] often in pursuit of political goals in the face of powerful antagonistic actors. We outline how social movements such as the Farmers' Movement leverage technologies to self-organise and create robust institutional structures. The paper answers two central questions: first, how do social movements such as the Farmers' Movement utilise ICTs successfully in the face of powerful antagonistic actors, and second, as designers of these technologies, what can we learn from social movements' use of ICTs and online spaces while strengthening efforts for social justice?

The Farmers' Movement involved a diverse set of groups coming together and coalescing around the identity of the '*kisaan*' (or farmer). Creating this collective identity was an ongoing process of negotiation within a complex network of actors. We discuss how the cohesion of the movement was a consequence of "organised informality" [33] where the movement consisted of both informal networks and traditional organisational structures. Further, the resultant hybrid arrangements and social media technologies mutually shape each other. This paper thus also contributes to research on the interplay between technologies and informality.

The Farmers' Movement used a wide range of social media platforms - WhatsApp, Facebook, Twitter, Instagram, Signal, Telegram, and YouTube. These social media platforms facilitated coordination and helped mobilise existing and new participants. The participants also used them to create a decentralised communication system that helped construct a collective identity. Key to this was the creation of alternate media that allowed participants to document their stories, reject mainstream narratives, and unify the movement. Importantly, coalition-building was key to the success of the Farmers' Movement. We argue that for designers to support social movements, they must understand the interplay between the diverse set of groups, the role ICTs play in facilitating virtual spaces of negotiation and coordination, and how these online spaces influence offline movements.

2 RELATED WORK

2.1 Theories on Social Movements

Social movements have been theorised extensively since the 1960s in varied forms elaborating their emergence, fall, issues, participation, and more. Social movements are characterised as "collective, organised, sustained, and non-institutional challenges to authorities" [42]. Importantly, they work within existing political structures. Ondetti [71] specifies four broad perspectives on

social movements: discontent/grievance, organisational capacity, activist strategy, and political opportunity - a combination of these four approaches can be applied to understand different aspects (macro or micro) of a social movement. For this paper, we focus on organisational capacity and activist strategy perspectives. The organisational capacity focuses on how social groups organise and stresses the importance of pre-existing formal or informal organisation for mobilisation [69]. These institutional structures provide the movement with established communication networks, experienced leadership, and a collective group to rely on for membership [58]. In addition, while social movements, such as agrarian movements, can occur without such external support, they are often sustained in the long term only through the participation of other external actors [71].

The activist strategy approach focuses on the impacts of activists' choices on the movement. Gamson [37] argues that targeted action in terms of issue and organisation that facilitates the social movement - a structured and formalised organisational style will allow for smoother and faster decision-making amongst activists. Such centralised decision-making forms are essential to challenge well-organised and powerful antagonists. Furthermore, it is crucial how the group or leadership effectively frames their motives and issues. Snow [82] identifies three functions of frames; they bring issues into focus, articulate interconnections, and function as transformative devices by shifting understandings of issues. Collective action frames serve the primary purpose of mobilisation and are dependent on three tasks; diagnostic framing (identifying an issue as an injustice), prognostic (stating a solution), and motivational (a call to action). These signifying devices have to be further aligned to get allies to relate to the cause and mobilise, which are influenced by the credibility of the frame articulators and the cultural and historical resonances with others.

In the contemporary world, social media and the internet have become means of setting up these frames by the participants. Castells [16] proposes the idea of a network society wherein the networks of the social structures within the society function through the technologies which enable it. These can break geographic confines, spreading cultural and social movements further and sustain them over a longer time. ICTs have extensively been used within social movements as agents of mobilisation and communication within movements. The affordances of a mobile phone and existing applications allow for horizontal many-to-many and one-to-one communication that circumvents state and corporate-controlled means of communication. The multi-modal nature also allows individuals to act as instant media reporters [17]. Today, social media has been a popular tool of news dissemination and creation for both news consumers and creators. As Castells et al. [17] write, "the context in which the message circulates, its resonance with each person who receives it, and the origin of the message (which provides its credibility) are critical ingredients of the political power embedded in wireless communication technology". Therefore, a public-owned or activist created media holds much more credibility for the movements' supporters.

With forms of activist created media and channels, citizens can formulate 'counterpublics' [35]. These are almost always in competition and conflict with the bourgeoisie public, challenging its exclusionary nature. Fraser [35] terms these alternate publics created by those on the margins as "subaltern counterpublics" where these groups can "invent and circulate counterdiscourses", allowing them to reframe their identities, issues, and needs erstwhile done by the dominant groups. While these counterpublics might have their own forms of informal exclusion, they provide the necessary contestation in a stratified society, providing subordinated groups with a space to regroup and training grounds to build up their resistance.

Related to counterpublics, is the notion of enclaved public spheres [23] - sites of strategising and resistance [83] used only by participants of a movement. These are safe spaces where individuals and groups can communicate privately without fear of sanction from powerful antagonistic actors. Squires [83], in their analysis of historical Black enclave spaces in the United States, discusses how the function of enclave spaces was maintaining group memory and culture to help support forms

of resistance. While enclaves are internal spaces of smoothing out intra-movement differences in order to ensure the longevity of a movement, counterpublics are spaces which engage with those outside the movement. For doing so, they depend on mediums of distribution such as ICTs which can transport their messages outside internal structures to mobilise as well as challenge antagonistic discourses [83].

2.2 Technology and Social Movements

Social movements have consistently been at the forefront of ICT use [15, 97]. Before the emergence of large corporate social media platforms, social spaces were being developed for mobilisation and community building. 'Free Spaces' - places which act as fertile ground for democratic social movements - were developed as novel media technologies arrived, from telefax to radio to mass media [33, 55, 68]. The emergence of the internet in the 1990s saw the creation of digital counterpublics to establish their space where groups could document their mission, organise initiatives, and disseminate literature [33]. Independent networks and independent media sites were used not only as activist platforms but also as identity signalling tools as a rejection of mainstream media [2, 33, 68].

Recently, social movements have begun to leverage mainstream social media sites such as Twitter, Facebook, Instagram, and WhatsApp. In contrast to mainstream media reports that highlight violence or radical representations of social movements [60], social media use is closely tied to the mundane, i.e. accounts of everyday activities [28]. Along with key messages from the movement, social media also transmits cultural political productions. Such productions in the forms of protest art and songs can then travel beyond the physical site of the protest and , as a result, aiding in disseminating ideas and creative forms of dissent amongst wider public [43]. This visibility of individuals further humanises activists and takes away the fear-prompting mystique of social movements in mainstream media [11].

2.2.1 Social Media as Emancipatory Journalism. Social media sites enable activists to be emancipatory journalists [64]. Emancipatory journalism highlights the subjective experiences of the groups reporting on their own social issues. In a news media landscape dominated by mass communication, the democratisation of news publishing is critical for groups promoting change from the status quo [14], especially in allowing marginalised groups to reach a larger public [61].

While all movement members can act as emancipatory journalists, leaders often emerge. Large movements need to present a unified front identity in order to maintain long term momentum [33] leading to a few key technology-savvy individuals with high visibility controlling the public positioning of the group, which then gets propagated by the others in the movement [39]. A unifying organisation scheme supports the movement in that it creates a shared direction for collective action [27, 91]. Public-facing platforms also document a movement's identity as a semi-permanent artefact which can be used to maintain the identity of a movement through record keeping [2].

Social movements have previously used social media to bring international awareness to their advocacy issues and present their identity on a global scale (examples: Arab-Spring protests [86], The Occupy Wall Street movement [2, 53]). The need for emancipatory journalism is also rooted in the essential role media coverage plays in the movement's success, providing it with the space to broadcast its message. However, traditional media often provides negative journalistic coverage of social movements (also known as the protest paradigm) [62], especially for more radical groups. In case of the Farmers' Movement, online mediums of citizen journalism like blogs and Twitter did not adhere to the protest paradigm and offered an alternative outlook on the movement, opposed to that of the traditional media. Technology-mediated networks further facilitate the formation of

new spheres of communication where participants of social movements can speak for themselves through their own documentation.

2.2.2 Leaderless Movements and Social Media. Since the Occupy Wall Street movement and the Arab Spring, increasing numbers of 'leaderless movements' have formed [56]. More recent examples include the Umbrella Movement in Hong Kong, Black Lives Matter primarily in North America and MAGA in the United States [55, 75, 88]. Social media platforms have key affordances that allow leaderless movements to coordinate as a united front.

Leaderless movements rely on horizontal communication-information sharing between equal movement members [51] and facilitate a flattening of hierarchy within movements as anyone can present themselves as a source of authority [15]. Without directions distributed from an authoritative source within the movement, individuals often volunteer to take up initiatives themselves and become leaders of a small part of the movement for a "temporary anonymous task" [56]. The result is a network of small disparate tasks which must be organised into a coherent movement.

Much of the complex organising of leaderless movements happens not on the public-facing, identity-defining social media pages but in "undercurrents" usually hosted on chat platforms such as Facebook Messenger, WhatsApp, Telegram and Google Docs, where group members can strategise and communicate prior to making public announcements [55]. Undercurrent coordination occurs on a more local level, resulting in a seemingly seamless united movement as more local chapters debate their actions to the movement's identity off the more public platforms [55]. Chat platforms and Google Docs are additionally considered safer for the planning period of initiatives as they are perceived as less susceptible to data breaches [78].

Another method that has been used to create a united movement with leaderless groups is a standard communication system to coordinate initiatives. During the 2010 Haiti earthquake, 'voluntweeters' developed a unique tweet structure to identify as an activist and identify the purpose of their tweet [85]. In the anti-ELAB movement in Hong Kong, organisers made use of polls to establish consensus [56]. Importantly, as the movement is leaderless, members were independently able to choose to follow the poll results or not.

Social media activism has changed the structure of social movements and how activists can participate in them. There are different levels of involvement for new digital activism, ranging from 'clicktivism' (the practice of 'liking' or re-sharing social movement content) to data activism in the form of leaks [38]. While criticised, the practice of clicktivism encourages individuals to further participate in social movements [46], the low threshold of participation allowing individuals who would not generally get involved to participate, especially those who would generally not be able to participate in in-person activities (people with disabilities, geographically distant individuals, those concerned about safety issues etc.) to be involved [61]. Thus, it allows people from various social locations to 'access' the movement despite their limitations and permits the building of a wider ally network.

2.3 Movements, Coalition Building, and Social Media

Dolata et al. [33], echoing Dobusch and Quack [32], argue that actors in social movements are not 'non-organised' as they have a structure that is shaped by existing organisations and shared goals and values. However, they differ from formal organisations as the membership of these movements is often a consequence of existing informal networks. They are thus characterised by "organised informality" which the authors claim is necessary for the presence of collective action in social movements. This organised informality consists of self-organized sociotechnical structures that bridge individual actors and smaller groups forming coalitions. These coalitions are imperative for success in social movements, and require spanning boundaries between social

groups that are usually separate [96]. Historically, coalitions for social movements have been formed through 'bridge builders' with social ties to multiple groups building relations between different actors [91]. Social media facilitates that connection building by breaking down geographical and communication barriers [7].

Indeed, the choice of social media platform made by movements serves as not only a shared space but also a shared identity creation [64]. Social media can be used to present a singular identity as the front of the movement via consistent messaging, for example, #MeToo, 99% (Occupy Wall Street), and Black Lives Matter [53].

Social media can also be used in coordination and mobilisation efforts across social groups. Due to the very public nature of social media, knowledge of collective action movements can be seen by people outside of the group already active in the social movements, therefore increasing mobilisation potential [89]. Once diverse social groups are mobilised, groups can communicate via social media, primarily messaging platforms such as WhatsApp, Messenger, Signal, and Telegram [55]. In our paper, we study the Farmers' Movement in India to show the elaborate network of such messaging platforms and social media that help in advancing social movements. Our findings particularly deal with the 'how' of this facilitation.

3 BACKGROUND

Farmers' movements are not a novel phenomenon in India: from fighting colonial laws to the present-day neoliberal ones, farmers have been crucial political stakeholders in the Indian context. Historically, a crucial component of anti-colonial struggles were revolts in agrarian regions across the Indian subcontinent in response to the extractive-imperial nature of colonial laws. Farmers formed the backbone of these struggles and have remained critical to the politics in postcolonial India. As Bhattacharya [10] puts it, "The agrarian question – always central to the nationalist and socialist imaginary – had become an obsession in the decades after Independence".

Since India's independence, many important policies have been related to the agrarian sector. The Green Revolution that ushered in the mechanised revolution and helped India attain food security and the introduction of the MSP (Minimum Support Price), a government-recommended price that safeguards a farmer to a minimum profit, are two of the many policies that altered the face of Indian agriculture. However, the Green Revolution had many aftereffects, including increasing debt, groundwater poisoning, land distribution issues, farmer suicides, and a decreasing water table. These were in addition to historical issues plaguing Indian agriculture from colonial times.

In June 2020, amid the COVID-19 pandemic, the government introduced three farm laws informed by neoliberal ideology and privatisation. In November 2020, rejecting what they regarded as laissez-faire and a corporate takeover of agriculture, farmers began what would become the largest protest movement globally, followed by solidarity protests internationally.

3.1 The Farm Laws Explained

The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act 2020, the Farmers' (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020, and the Essential Commodities (Amendment) Act, 2020 were the laws passed by the BJP-led [1] Indian government on 20th September, 2020. The laws were passed without much parliamentary debate. These farm laws were sold by promising to "cut the middleman" (or *arthiyas*), effectively providing corporations direct and unregulated access to farmers [81]. Critics of the laws argued that the laws not only left the farmers and workers at the whims of the market and corporations but would further exacerbate income and wealth inequalities. Although advertised as "pro-farmer" bills,

[1]The BJP-led government has been the elected central government in India from 2014-2019, 2019-2024

farmers perceived it as an attempt to take away key protections, such as the Minimum Support Price (MSP), which, since the Green Revolution, have played an important role in protecting farmers' interests when negotiating selling price for their produce.

Many farmers saw MSP as an essential policy that helps protect them from exploitation when engaging with private traders [74]. Since it was instituted, MSP has also been at the core of all committees and commissions on agriculture reform. According to the Indian government's 2016 Niti Ayog report [6], while most farmers felt that the MSP was insufficient, over 94% wanted it to continue. However, while the farmers' demand was the legal extension of MSPs to all crops, the Essential (Amendment) Act, 2020 did away with certain agricultural commodities sold under MSP as "essential".

Another significant intervention of the bills was restructuring the entire public procurement and distribution system (i.e. the Agricultural Produce Market Committees or APMCs) in favour of large corporations. MSPs only make sense as long as the APMCs exist. The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act 2020 allowed private buyers to purchase directly from the farmers, surpassing the APMCs. By allowing "free trade of farmers' produce" and "eliminating the middleman", the government was effectively looking to oust government-operated markets aka APMC *mandis*. Further, the Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Act, 2020, allowed for contract farming, allowing private companies to stockpile and have greater control over the agrarian markets.

While the focus of protests has helped repeal the three laws, another critical issue of the protests was the Electricity (Amendment) Bill 2020, which the central government has been trying to pass ever since they came into power in 2014. The bill seeks to amend the Electricity Act (2003), and among other things, to privatise the power sector, in particular, the distribution of electricity [52].

3.2 Beyond the Green Revolution

The farm laws enraged farmers all over India, particularly in the Northwest parts of India – the states of Punjab, Haryana, and Western Uttar Pradesh – the states where the Green Revolution took off in the 1950s. The MSPs were introduced during this era to support wheat and paddy growth in the region. The Green Revolution is itself a problematic event, which, while solving the issue of food insecurity in India and that of the dependence on the West, did much to deteriorate the agrarian canvas.

Punjab became the "granary of India", facilitated primarily by State procurement (through MSP and APMC mandates). However, what made this sufficiency possible has also been responsible for a stagnation that today characterises Punjab and also the rest of the country and causes a high rate of farmer suicides in the state [40]. High-yielding variety (HYV) seeds, irrigation networks, greater mechanisation (with tools and tractors), and most of all pesticides and insecticides made Punjab the poster child of the Green Revolution. It was soon after attaining food security that these pesticides and insecticides polluted land, air and water, and threatened biodiversity [79]. The President of a farmers' union (Bharatiya Kisan Union) explained how the farmers are protesting "not because the existing system is fair, but because it is being replaced with an even more inscrutable system that will further disadvantage them" [1]. The protest thus mobilised around these laws. Further, the presence of multiple overlapping identity groups along with existing networks and organisations were central to the protests [94].

3.3 The Movement

The farmers and workers came together under the slogan "Kisan-Mazdoor Ekta Zindabad" ("Long Live Farmer-worker Unity"). Organised by over 400 farmers' unions, across religions, castes [2], and class, over 300,000 protesters marched to Delhi on 26th November 2020. Around the same time, about 250 million people went on a two-day general strike, which many call the largest strike in human history. Even though the farmers and workers from Punjab, Haryana, and Uttar Pradesh were at the forefront of the Farmers' Protests, several groups from other states of the Indian Union – Rajasthan, Chhattisgarh, Tamil Nadu, Kerala, West Bengal, Maharashtra, Madhya Pradesh, to name a few – also extended support and solidarity throughout the protests. The Farmers' Movement saw a path-breaking coalition-forming of more than 400 different unions that came together under the SKM (Samyukta Kisaan Morcha (or United Farmers Front)). These farmers and workers unions have a much longer history, and even though they often had interests antithetical to each other, this was not the first time some of them came together for a joint struggle, including women, trade unions, and Dalit [3] organisations joined the protests while emphasising their fight with the landed upper-caste men who have monopolised land ownership while exploiting the labour of the former for centuries.

As we will show in this paper, the Farmers' Movement was built around these coalitions; however, the agrarian sector at large still grapples with broader issues of caste, class, and gender.

4 METHODS

We began our data collection in April 2021 when the Farmers' Movement had set up bases around New Delhi, the capital of India. We used a snowball sampling technique for recruiting the interview participants. The primary researcher was based out of New Delhi and had previous experience studying social movements in North India. Her on-ground experience enabled her to leverage her social network to discretely reach out to potential participants and through them subsequently find other participants. The interviews were primarily conducted in Hindi and Punjabi.

We conducted semi-structured interviews with 20 participants from the movement. Among our participants, five belonged to Farmers' Organisations, eight belonged to Non-farmer Organisations, and 7 were allies (which included students, media persons, and unaffiliated individuals). In addition to varied associations with the movement, we also made an effort to interview a diverse set of people regarding gender, class, caste, and age.

The data analysis was conducted concurrently with data collection, with data iteratively analysed using a constructivist grounded theory methodology [22]. The research problem and initial research questions focused on collective identity, organisation, and the use of technologies within the movement.

The interviews aimed to understand the processes of mobilisation and organisation within the Farmers' Movement, particularly concerning the use of technology. The questions were designed to give participants a space to tell their histories of participation, and thus, were essentially open-ended.

[2] According to Omvedt [70], caste is a social phenomenon that has hierarchically ordered the Indian society into sub-groups, each having an accepted occupation. Membership to these sub-groups is mediated by birth and is strictly maintained. Broadly divided into Brahmins, Kshatriyas, Vaisyas, and Sudras, these groups constitute a system of social kinship and social division of labour with economic and social effects.

[3] Dalit is a term given by the Indian social and anti-caste activist, Mahatma Jyotirao Phule. It connotes people of communities who were erstwhile and pejoratively considered 'untouchables' due to their caste-related occupation of manual scavenging. The group has been considered the most marginalised, at the lowest stratum in the caste system. Within the agrarian system, most of them are landless labourers.

The research team constructed codes from the initial interview data. We further discussed and wrote memos to elaborate the codes into thematic categories. The structure of the interview protocols provided us with a minimal skeletal frame; however, the majority of questions arose from prior interviews and the participants' narrative, thus, establishing a conversation. We subsequently iterated on the interview protocols and conducted further interviews, followed by more focused coding. Data were collected and analysed until we reached theoretical saturation. The interviews ranged from 45-75 minutes and were sometimes taken over the course of two meetings, keeping in mind the many other engagements of our participants, especially during the active movement.

Semi-structured interviews have been used extensively in social movement research, allowing scholars to understand the participants' interpretation of their reality, experiences, and memories. The interviews' objective was centred on the participants' voice and understanding various nuances of the movement, like the semantic contexts of statements made by participants, how they understand their participation and the formation of collective and individual identities [13]. As the interviews happened amid the COVID-19 pandemic, all interviews were remote - we used WhatsApp, Zoom, or Telephone depending on the participant's comfort and privacy concerns. All participants were offered compensation for their time, which most of them refused, and two asked us to donate it to the movement through online mechanisms.

Due to the sensitive subject matter, interviews were conducted upon the interviewees' consent, and precautions were taken to ensure their anonymity and safety. After the interviews, audio recordings were immediately transcribed and deleted from the recording devices, followed with anonymising all transcripts. Participants were coded into alphabets corresponding to their category of participation, for example allies (A), Farmers' Organisation (O), etc and numerals were added to denote the interview number. No identifiable information that could be connected back to the participants was saved in the transcripts.

The interviews were transcribed and translated from Hindi and Punjabi into English. We worked with three transcribers-*cum*-translators, and an instructional document was prepared to maintain consistency. The primary effort was towards verbatim translations, which the interviewer then checked to assure that the meanings of the responses were not altered. Some participants were also approached for second-round interviews to clarify details of the movement in order to avoid misrepresentation.

5 THE MOVEMENT ESTABLISHES

The introduction of the farm laws in June 2020 led to an extensive and well-organised movement in Indian states like Punjab. Door to door campaigns, public meetings, street-plays and pamphleteering along with the occupation of toll plazas on state borders, and *gherao* (or surrounding) of corporate dry ports were active mechanisms that were undertaken by movement participants. However, having had no response from the government and feeling that the movement was saturated in Punjab, a decision was made by various farmers unions to move to Delhi. With this decision, the All India Kisan Sangharsh Coordination Committee (AIKSCC), or All India Farmers' Struggle Coordination Committee, an umbrella organisation consisting of nearly 400 farmers' organisations, took on the role of collectivising. As a participant noted,

> "In Punjab, farmers have been protesting for a long time; they have been sitting on railway tracks for more than 2 months. The government was not listening, they isolated Punjab, and nobody was listening. (But) this movement is not only of Punjab. These issues concern all farmers of the country. Hence, the SKM decided that a call had to be given for a big protest." (Farmers' Organisation Participant)

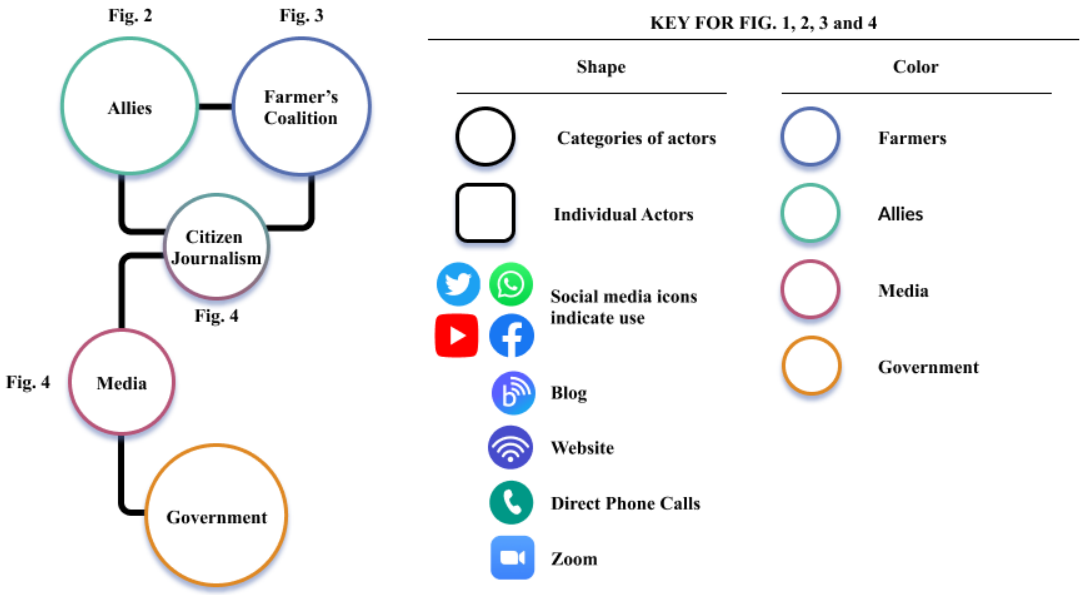

Fig. 1. Actors Connections

On 7th November 2020, AIKSCC gave the call for building a broader coalition for the movement in a meeting held at Shri Rakab Ganj Sahab Gurudwara in New Delhi, which was attended by farmers' organisations across ideological lines. This was the genesis of the 40 member committee, the Samyukt Kisan Morcha (SKM) as we know it today, constituted of participants from various farmers' organisations from the AIKSCC, 32 [4] out of the 34 farmers unions from Punjab with 40 member Indian farmer representatives. They set up the common agenda, and decided the next phase of the movement. Equally important are the trade unions, Dalit farmers' organisations, women's and student groups, which were not part of the SKM but integral to the movement as well as its success. SKM further had support from individuals in the media, IT, medical, and legal professions, who offered their services to build this vast movement which lasted almost 13 months (excluding months before November 2020). Due to its multi-organisation participation, the movement also had various leadership figures managing it. The figure above (Fig.1) broadly captures the inter-relationships between various actors within the movement, including allies, the core, and antagonists. As we move further in the paper, we explicate these identities and relationships in more detail.

With the call for "Chalo Delhi" (Let's go to Delhi), the farmer's movement physically shifted their base to various Delhi borders in November. The movement had completed almost 6 months before November. After months of protest on the state level, the farmers' coalition chose 26th November as the date to march to Delhi. According to a participant, the date was picked "*because*

[4]After the announcement in June, farmers' union leaders from Punjab understood the impact and opened communication lines with farm leaders of the states, Haryana and Uttar Pradesh. On 19th September, 2020, a meeting was held in Moga, Punjab, where various farmers' unions created the Coordination Sangharsh Committee with the 32 farmers' unions [41]

on 26th November 1949, the constitutional committee had signed the adoption of the constitution of India. Since these laws were an attack on the foundation of the constitution, we gave a call for a rally on the 26th " (Farmers' Organisation Participant). The trolleys [5], tents, tractors, food, everyday utilities, and stage area were soon set up on various Delhi borders that the farmers occupied. Thus, over a few weeks, various borders around the capital turned into evolving counterpublics. In our findings below, the paper shows how coalitions were built amongst distinct social identities to meet the demands of the movement and the role technology played in collectivising, mobilising, and addressing the issue. The paper looks at interpersonal relationships showcasing the various identity and ideological fault-lines within the movement and the networks of technology which were relied upon and built. In doing so, we move further towards answering the question of the inter-relationship between technology and bottom-up democratic forms of organisation.

5.1 Building Networks of Coordination

The participation of diverse sets of groups led to a large number of people travelling to the Indian capital's borders as the site of action and participation. Therefore, it also required mechanisms of coordination amongst various formal and informal organisations along with individual participants. Thus, a control room was set up by movement participants in Delhi ahead of the Chalo Delhi march to manage the influx of protesters and handle the logistical requirements of the day. The control room members coordinated with various groups marching on to Delhi borders from several directions with the help of WhatsApp groups and daily Zoom meetings. However, as the farmers marched closer to the borders, several state police charged them with batons and utilised water cannons to stop them. During this time, they relied on direct phone calls for spontaneous decisions and information about the location and well-being of each group. Below is a diagram (Fig.2) to elucidate the core structure through which the movement was organised. With the farmers' coalition at the centre, the web-like structure moves outward to extant networks such as WhatsApp groups of farmers' organisations, unions and leader accounts. At the same time, it records new entities in the form of KEM (Kisan Ekta Morcha), the official virtual account of the movement. In the sections below, we show the role of these networks, and how the communication travelled through them.

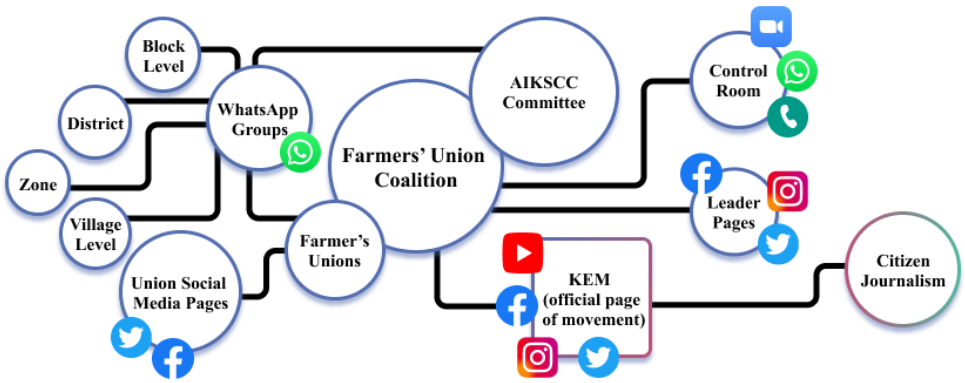

Fig. 2. Farmers Coalition Structure

While the farmers had come prepared with their trolleys loaded with mattresses, food items, and gas cylinders, the scale of participation outdid the expectations of the organisers of the movement.

[5]Trolleys are kinds of trucks used for transportation of goods and especially grains in India

In an interview, a member of AIKSCC, who was also one of the many responsible for managing the influx of farmers into Delhi and managing the control room, noted that they had neither expected the extent of preparations nor the distance that the farmers were able to cover. While they did see video clips of trolleys converted into homes and other initiatives, they were surprised that farmers overcame barricades, water cannons, and other obstacles to reach the protest sites. Thus, for the movement to successfully establish itself, it required support from people beyond the union cadres and workers.

The numerical strength of participants was central in sustaining the widespread movement. At the same time, their numbers challenged the government's assertion that only a small portion of farmers was protesting against the agrarian laws [73] [25]. However, this mass scale of participation also required logistical support. Even though the farmers who had marched had come prepared for a long movement, the everyday needs of the people gathered had to be met, along with combating the harsh winters of Delhi. A participant provided an exposition on this,

> "There were already many unions of farmers and workers operating in these areas. These unions also came to the location and joined the protests in solidarity. They also provided means and facilities for the farmers to stay at the Palwal border, such as food, ration, tent, etc. The new people arriving also brought the facilities, such as the preparations for staying and eating. The cold was about to increase. Delhi is cold in November, but December and January are especially cold. The protesters were very well prepared. Barring Mewat and Shahjahanpur borders, Sikh comrades took the responsibility of taking care of the protesters via langars (open communal kitchens that provide free food to all). Post-langar, the tent, clothes, and the winter preparation were done by the farmers with help from the people at the borders." (Farmers' Organisation Participant).

Along with farmers and the unions, religious and non-religious, individuals, and various other support groups also contributed to the movement, such as the Khalsa Aid (an international non-profit). Further, doctors, social workers and other allies from many western countries returned to India to provide help and services on the ground. A participant commented,

> "Monetary support came from families of Punjab, both from within India and outside. Money also came from workers' unions in Haryana.... There were many Punjabi singers and sportspeople who donated a lot of money along with other material support. People from gurudwaras were also continuously involved with the langar and other things. People from other places, such as Madhya Pradesh, Haryana and Uttar Pradesh, were also donating to run the movement actively and well." (Farmers' Organisation Participant)

The movement can be seen as a large-scale community movement, with participation from the youth, the Indian diaspora, prominent personalities and social-work organisations, and the community, under the farmers' leadership. Along with the medical and legal camps set up by doctors and lawyers, students and young participants set up libraries at the protest sites. Individuals and groups took up responsibilities voluntarily at the site, ranging from arranging daily rations, getting milk lorries [6] to different sites, or arranging camp tents. The movement also saw the emergence of citizen journalists as an extension of such voluntary solidarity, where several individuals, not trained as journalists or camera-persons, started reporting from the site. This aided the on-ground documentation of the movement, and was of much significance in the movement's initial days, which had little coverage from the national media. While the movement had participation of a

[6]Lorries are open back trucks or vehicles used as means of transporting goods

large group of people, this also led to schisms within them. Thus arose the need for mechanisms to span boundaries to create one cohesive identity to rally under and organise the movement.

5.2 Social Organisation of the Movement

As shown above, the movement was comprised of eclectic groups and individuals from diverse and often conflicting ideologies who came together with the specific aim to challenge the three agrarian laws. Sustaining and organising the movement required the groups to build coalitions with each other based on their shared agenda, often in the face of ideological incompatibility. However, in the long-running of the movement itself, they were forced to acknowledge different experiences as farmers from different locations. This also led to the visibility of cracks within the movement. According to a participant, while the participation of women and Dalit labourers had been massive within the movement, it was important to note that they had not brought in their own community issues. Looking further at the internal decision-making structures such as the 41 member delegation of SKM that mediated with the government; the delegation had only one woman and zero Dalit representatives. Discussing the participation and role of labourers within the movement, a participant said,

> "In the Farmers' Movement, there is no coordination as such among workers so far, because so far it has mostly been a movement of the farmers. The meetings that happen there are mostly done by farmers themselves. So, workers don't have a very big role in this. It's just that the law itself is harmful to workers also, which is why we are lending them our support. And the labour codes have also come in simultaneously, so we are here. But we are not present in their (farmers') meetings, or coordinating for some specific programmes." (Labour Organisation Participant)

Divisions within Indian society were mirrored within the movement, even when participation was welcomed. For example, Kumar [57] explains the caste dynamics amongst farmers in western Uttar Pradesh, India, where Jats [7] have not only been the majority landowners but have also subjugated the Dalit and other lower-caste labourers. The rise of communal and caste-based politics and neo-liberalisation led to a dampening of agrarian politics in the 1990s. Young Jats moved away from farming in favour of urban upward mobility, while those from the Dalit community raised their voice against caste-inequalities, refusing to partake in unequal and exploitative rural relations. However, the increased precarity of urban jobs and continued reliance on the farming land, led the youth to re-signify themselves as farmers within the protest of 2020 in the face of corporate takeover [57]. Furthermore, Bharat Kisan Union's (BKU) effort to reach out to Dalit labourers, along with Hindu and Muslim Jat unity effervesced by the ill-effects of the past communal riots, have helped them all find common ground within the farmer identity and come together for its aid [57]. Even though the movement leadership was primarily upper-caste Jat, they understood the internal divisions and the need to address them to build a larger coalition. In efforts to make space, there have been events and remembrances organised such as *"the celebration of international women's day, Dr. B.R Ambedkar's birth anniversary, or Ravidas Jayanti"* (Farmer Participant), the latter two being crucial icons of Dalit politics. According to Jodhka [50], the theologically inclusive nature of Sikhi (Sikh teachings) helped build these coalitions. Sikh farmers have used inclusive and secular idioms of Sikhi, and ensured that caste-specific idioms are not used within their speeches. However, Jodhka [50] argues that this has borne limited success due to strong pre-existing caste divides and the limited resources of labourers that do not permit long-term protest participation.

The large scale of the movement, spread over various sites, also led to the development of internal structures to sustain the movement, prevent untoward incidents, and keep participants focused on

[7] Jats is a term used to connote land-owning people from dominant caste in North India [84]

its central demands. Participants implied this when they noted that the movement had adjusted within itself multiple organisations with conflicting ideologies as long as it was about the core agenda of three laws. For instance, a participant stated, *"whatever solidarity has been built, that has been built only around this issue that the three farm laws and MSP...apart from this, the first thing is that debates don't even happen. Secondly, if incidentally a debate does take place, then it is usually disassociated from."* (Ally Participant). Thus, even in this informal organisation, there were strict norms which participants were expected to adhere to.

Instantiating this further, a participant discussed two important incidents that indicate the boundaries and informal codes of conduct that had been created both within and by the movement. The participants came together with a singular agrarian agenda: repeal of the three Farm laws, and any act that might endanger achieving the set goal was avoided and addressed accordingly. For instance, not only were there cases of verbal sexual harassment, there was also a case of sexual assault that took place at Tikri with a woman in April 2021. In the particular case, the accused was supported by the participating Khap panchayats [8], the SKM as a unit distanced itself as well as the movement from the accused. As narrated,

> "This incident [of sexual harassment] that recently took place in Tikri, the Khap stood with the accused...The SKM, Samyukt Kisan Morcha, disassociated itself from it [sexual harassment being condoned]. Similarly, the SKM disassociated itself from the 26th January incident at the Red Fort, asserting that it was not their action" (Farmer Participant)

Furthermore, SKM addressed this by setting up an Internal Complaints Committee (ICC) which was constituted by female members from some of the participating organisations, to address this and future issues of harassment against women and girls at the sites. Thus, the movement was self-evolving and developed mechanisms to solve its emergent issues.

The second incident discussed by the participant was that of the violence that occurred on 26th January, 2021. On the particular republic day of India, farmers gathered at the site had given a call for a tractor rally. The participants took pre-decided routes allowed by the states, and were mostly on the roads encircling the capital. However, it was alleged that some protesters deviated from the sanctioned routes, entered Delhi, and hoisted a religious flag on the Red Fort. This led to an altercation between those who had entered the capital and the Delhi police, the lodging of various First Investigation Reports (FIRs) against participants, and allegations from by the BJP government of the protest having Khalistani (separatist) motivations[30]. The majority of participants in the interviews noted this as the Centre's conspiracy to malign the movement while alleging connections between the perpetrators and the ruling party. For the purpose of this paper, we cannot delve deep into the incident owing to its highly complex nature. However, we focus on some actions of the SKM after the incident that elucidate our point on informal norms within the movement. The SKM immediately disassociated itself from the violence stating that it was not their action. Furthermore, it also led to the removal of an organisation from the SKM, which was blamed for not following the decided route for the march.

While participants were not so concerned about forms of surveillance, they were worried about factors and intrusions that might derail the movement and contribute to their vilification, thus affecting their credibility. Disassociating with events that could potentially harm the movement was one mechanism of self-defence. One of the other tactics was creating internal mechanisms which kept a check on such activities. As an example of this, a participant adds,

[8]Khap panchayats are lineage-based groups active in the rural landscape of northern parts of India, and have been known to enforce patriarchal limitations on women, and caste-based exclusion of Dalits

> "Our team has the responsibility to check for any wrong propagators. If someone comes in drunk, or does any suspicious activity, we hand over those people to the committee, and the committee hands them to the police." (Farmers' Organisation Participant)

Thus, structures were created organically within the movement to sustain it and maintain its credibility.

5.3 The Farmer Identity

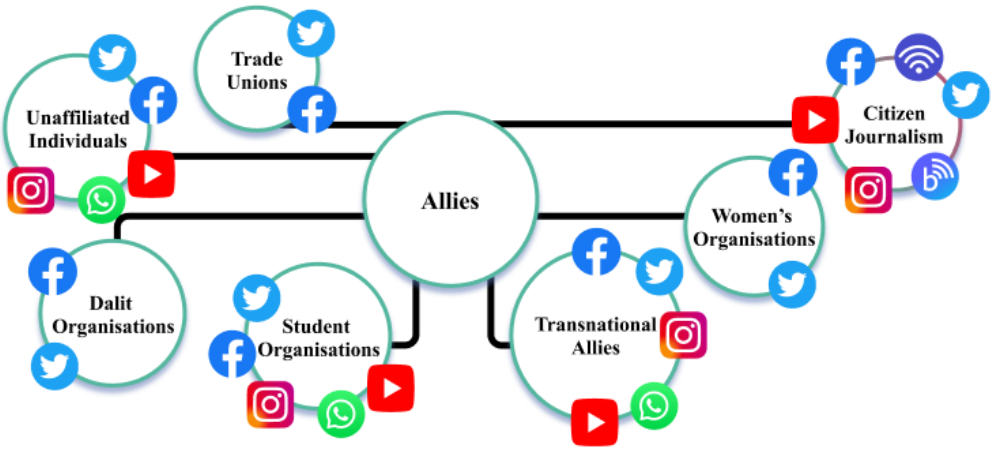

Fig. 3. Allies of the Farmers

Maintaining credibility and moral grounds were one of the ways the movements' organisers were safeguarding it and ensuring its longevity. Another important means to do that were collectivising people under a single banner despite their differences. The findings in this section speak to such acts of creating cohesion in the face of internal differences and external obstacles. As noted above, the movement was constituted and supported by a multiplicity of conflicting identities. In the figure above (Fig. 3), we point towards the various groups that have provided the means to sustain the movement, in terms of numerical strength, financial, material, and ideological structures. While compounded together in a diagram, it is crucial to consider the purpose of their solidarity; the farmers' demands. Therefore, it is important to stress that the Farmers' Movement is built around the shared unit and grievances of the farmer, where articulations of other identities which intersect the figure of the farmer are often neglected. As a participant notes,

> "Building this national identity took a lot of effort. There were people with several different identities involved. So, there was just one concern that whatever gets discussed on social media, it would strictly and only be limited to these laws, apart from which no other issue will be discussed. ... even within farmers' issues, it is about the three laws and MSP. As in, even within the agrarian society, there are several major issues including, indebtedness, of women farmers, of Dalit farmers. An agrarian society is very multi-layered. For instance, issues like organic farming, issues of the environment, are very important. However, we haven't taken those up yet. Right now, the core issue is only to get the three laws repealed, and it's on these that the solidarity has been built." (Farmers' Non-organisational participant)

This counters the government attempts and claims to malign the movement by suggesting that it had been hijacked by "Naxalites and Maoists" [9] [30] [80] and consisted of *andolanjeevi* (i.e. one who makes a living out of protesting) [30]. It was thus important for the movement to focus on the identity of a 'Kisan' or farmer to ensure that their concerns were not de-legitimised by the government.

The national-level coalition of farmers' organisations came to a strict decision of peacefully demanding the repeal of the three laws and nothing further. According to a participant, *"they all have agreed on this minimum program, so that's why nobody can talk about anything else"* (Farmers' Organisation Participant). Another participant reiterated this,

> "SKM is like a platform. It's not an organisation. SKM is a platform under which several independent organisations work. They might have disagreements amongst themselves too, but they have a good understanding of the three laws. They are all against these corporate neoliberal policies. It's a farmers' protest, and it is to fight for their sake. It is the reason that they have come under the banner of SKM, which reiterates that no political party's views or religious ideals will be promoted here." (Farmers' Organisation Participant)

From the very beginning of the movement, the participants were aware of their demands and who the demands were aimed at and who they were against. As a participant put it, "*the fight was against the Union [central] Government who brought in the laws…everyone realised that the target was the Narendra Modi Government, the Central Government, and we had to reach Delhi for that*" (Farmers' Organisation Participant). Baviskar and Levien [9] further elaborate on the Farmers' Movement as a direct challenge to the BJP. According to them, by enforcing the three laws at the level of the Centre, BJP enclosed the arena for collective action at the local level making state-level dissent ineffective. By challenging this "centralisation of power, as well as by refusing the imposition of laws scarcely debated in parliament, the farmers' movement is part of a larger challenge to the BJP's authoritarianism" [9]. Thus, in addition to existing informal networks, decentralised organisational structures were created by the farmers to tackle the highly organised central government. Technologies were integral to how the formal and informal networks facilitated the movement and coordination within it.

6 UNDERLYING TECHNICAL INFRASTRUCTURES

Given the geographical scale of the movement, a politically strong antagonist, and demands against state policy, the organisers utilised ICTs in multi-pronged ways to sustain the movement. We explore three overlapping ways in which they were used; (a) as mediums of communication and coordination, (b) as digital counterpublics, and (c) as free spaces of alternate media production. Concurrently, we also discuss the various obstacles the participants faced in executing these.

6.1 Communication and Coordination

According to the participants, WhatsApp was used extensively for internal communication. However, it was not a channel through which decisions were made, but only through which they were passed to various people. Key decisions were made through physical meetings and deliberation. WhatsApp was however the central medium for the protest; for coordination, organisation, communication, and creation of other mobilisation mechanisms. Participants mention the creation of several WhatsApp groups ranging from those for Farmers' Coordination Committee, Women's

[9]The word Naxal comes from the Naxalbari village in West Bengal. The village is known for the far-left armed peasant movement, the Naxalbari movement, 1967 and its participants are known as Naxalites or Maoists. The movement is ongoing in various parts of India.

Coordination Committee, Press or Media Committee, Volunteer Committee, and various volunteer groups. The volunteer groups were further divided according to various sites at the borders. Alongside this, there were various WhatsApp groups for the different organisational levels such as state, district, and national (Fig. 3). Similarly, participant organisations utilised pre-existing networks to strengthen the movement, as a participant noted, *"Every union has its own cadres, a district-level committee, a block-level committee or a village-level committee. So, units were made in a hierarchical system, where information passes from top to bottom"* (Farmers' Organisation Participant). Another participant elaborated further,

> "Mostly how it happens is that there is a village unit, then there is a block unit, then district, then zone, then state. So, in this manner, there is a chain of command consisting of five layers. So, if a message reaches the village unit, it gets forwarded to the village's farmers, which happens mostly over the phone, or over WhatsApp messages" (Farmers' Organisation Participant).

Like the individual farmers' unions, AIKSCC also had pre-existing WhatsApp groups before the movement moved to Delhi, which facilitated the organisation of the movement. As the movement grew, the existing union groups grew in size while new ones were made. The volunteer pages that sprung up online in support of the movement also utilised WhatsApp groups for communicating within the group. WhatsApp was also used by volunteers to communicate to provide required help in tents, everyday rations, and medical assistance at the site. The large scale of the movement also required offline arrangements that responded to the needs of the numbers, which was made possible through messaging applications like WhatsApp. Participants noted that most everyday supplies were met through the distribution system, i.e. without payment, voluntary distribution, or langar. The communication about what was required at each site and the delivery mechanisms was also organised through messaging apps.

The use of other messaging applications like Telegram and Signal was sparse within the movement. Even when urban participants note that the application allows easier management of communication groups while also permitting a greater number of people to be added, it was not the primary mode for personal communication. The issues of privacy and surveillance were accepted by all participants, especially with WhatsApp's announcement of changes in its policies [10]. This led to many users shifting to alternate messaging applications. However, that did not deter people from using the application within the movement due to their familiarity with it. According to most interviewees within the study, the use of communication apps like WhatsApp had been steady and rising amongst the elderly population who were part of the movement. Their new comfort with communication apps made it difficult to learn an entirely new communication channel. Due to this familiarity and already established networks of channels, it was challenging to shift to newer forms of communication.

Furthermore, along with people at the site, communication channels had to be maintained for participants in various rural villages and districts who were critical stakeholders within the movement. The lack of internet networks in these areas and unfamiliarity with other apps contributed to the continued usage of WhatsApp. It is of equal importance to acknowledge the financial constraints in acquiring mobile data to use these platforms. As a participant noted, "*WhatsApp was also a challenge for farmers, if we have 3 acres of land then how will we arrange the money for (internet) data*" (Farmers' Organisation Participant).

[10]In early 2021, WhatsApp re-introduced its privacy policy that did not allow users to not share their information with Facebook, the parent company [67]

6.2 Social Media as a Political Space

While WhatsApp was the primary device of internal communication, coordination, and information sharing, organisers and participants engaged with multiple forms of ICTs as activist strategy. These were targeted towards gathering support, framing their issues, mobilising, and countering narratives which were against them. For example, the need for social media also arose due to the void the participants felt about the coverage of their movement. Many felt that not only was the media ignoring them, but also misrepresenting them. According to a participant, "*National media are owned by the corporate, and it would be to their benefit if the protests break off one way or another. Hence, they would not show the protests*" (Farmers' Organisation Participant). Several participants critiqued the reportage of some national news channels terming them as *'godi media'* (or lapdog media), a term popularised by popular news anchor Ravish Kumar. This was accompanied by alternate media and citizen journalism online on a diverse set of platforms such as Twitter, YouTube, Facebook, and Instagram, as underlined by a participant: *"the local channels are formed against the godi media"* (Farmers' Organisation Participant). Their aim of such media was to reveal to the world the intimate ongoing events in the form of everyday meetings and proceedings of the movement, pushing the participants to create their own means of documentation and broadcasting.

In the early weeks of the movement, voluntary social media pages like Ann.daata (*annadata*; provider of food) on Instagram, and 'Tractor2Twitter' on the micro-blogging site Twitter popped up, acting as on-ground news reporters from the borders of Delhi. Soon after, some participants in consultation with the committee of unions established the official Twitter page for the farmer's movement, 'Kisan Ekta Morcha' (KEM). The initiative and the suggestion for this was primarily led by the youth involved in the movement, many of who were IT professionals who recognised the positive impact of social media on the movement. The Twitter account broadcasts announcements, news, press releases, and calls for action by the movement. With over 432 thousand followers on their Twitter page, the group also had Facebook, Instagram, and YouTube accounts.

Other pages soon started collaborating with the KEM page, to bring a cohesive online movement to life. It could be said that, *"farmers grew their own media themselves"* (Farmers' Organisation Participant).

In contrast to WhatsApp, Twitter was recognised by participants and allies as a political space. For instance, according to a participant, "*Twitter is the formal form of social media, when it comes to serious activism, when you want you to be heard, but heard by whom? Heard by journalists, politicians, and activists, right? So, Twitter is the only platform for that*" (Ally Participant). Another noted that "*Twitter is being used as more of a political-pressure building tool... SKM's handle is not for direct communication with the supporters*" (Farmers' Organisation Participant). This was also confirmed in other responses of interviewees who state that SKM's handle was primarily about broadcasting, rather than engaging directly with their supporters. It's purpose was to provide a centralised space through which news and information could be shared by the organisers.

However, while the Twitter accounts were public-facing, WhatsApp groups were integral to their functioning. One of the early Twitter handles by the allies and volunteers of the movement, Tractor2Twitter, was also started and functioned through a small WhatsApp group. They also used the group to connect with people on the ground, which allowed them to report the events and validate their narratives through images and raw footage, and most of all, counter the misinformation being spread against them. The group for their page ballooned up from its initial size of 5-6 people to over 250 within ten days of its establishment. Decisions regarding the name of the page, the content, the strategy to combine hashtag trending and campaigning were all decided within the group. According to a participant, they had other informal groups on Twitter and Telegram, which

were also used to share information about incidents or amp-ing up the campaign. A participant elaborated on this,

> Whenever we need a push or additional efforts, we would just broadcast a message to the Twitter groups and Telegram groups. So, let's say if some news channel is doing some propaganda against the farmers... Because we cannot keep an eye on everything, people would send us links to that page, the website, or the Facebook post. We would just pick up the information, and then decide and discuss how we needed to answer [the propaganda]. We will just tweet the answers, and those guys [from Twitter groups] would further share our tweets…We're not guiding them. We're not forcing them. We're not directing them. We're just sharing the information with each other (Ally Participant).

Twitter as a political space was reinforced by the Government of India's Ministry of Electronics and Information Technology (MeitY), sending orders to Twitter to block or take down accounts related to the movement and take action against hashtags that they considered contained harmful content. Twitter, in response, took action that they deemed were consistent with the Indian law and their own policies while arguing for "protected speech and freedom of expression" [77].

Despite pressure from the government, getting hashtags to trend on Twitter was an important strategy for the movement. Twitter groups were also helpful in involving participants who wanted to maintain their anonymity. Explaining the process of trending hashtags on Twitter, a participant explained,

> "On Twitter, you can create the groups; you can add the handles to those groups. So, they work like Facebook groups; you have people following you, those who are very active in the campaign, so you easily share the tweets in that group. It's very easy for them to retweet and use the information. ... Many people have anonymous accounts on Twitter, who do not use their real names, do not wish to share their contact numbers to be added to Telegram, for a sort of privacy. So, they just want to be in the Twitter groups only. They don't want to be part of any Telegram or WhatsApp groups." (Ally Participant)

6.3 Communicative Social Media: Creating Alternate Media

Participants acknowledged the central role of social media within the movement as a medium of establishing communication for the purpose of mobilisation, making counter-arguments, and identity-building. One interviewee noted, *"this movement's backbone was that they developed their parallel communication system that was not centralised, it was decentralised. And in this decentralisation, there was a big role played by social media"* (Farmers' Organisation Participant). The participant further pointed out that developing communication channels of their own allowed the movement to challenge the neglect and antagonism of national media. Another participant reaffirmed this,

> "This (godi) media is in the control of corporate along with the government. They benefit from corporates, so why will they broadcast the movement? So the farmers have created their parallel communication. Thousands of groups were made on Whatsapp in Punjabi, Haryanvi, Hindi, Bihari, Bhojpuri and English. So in all these languages, the message was sent daily. They developed a decentralised system" (Farmers' Organisation Participant).

An alternative farmers' media had therefore been established, primarily by the youth, as *"the media houses are not publishing their (side of) things"* (Farmers' Organisation Participant). The movement was strengthened by citizen journalists, participants who used the 'live' function of social media sites such as Facebook, to broadcast their stories and voices to the people. This was of

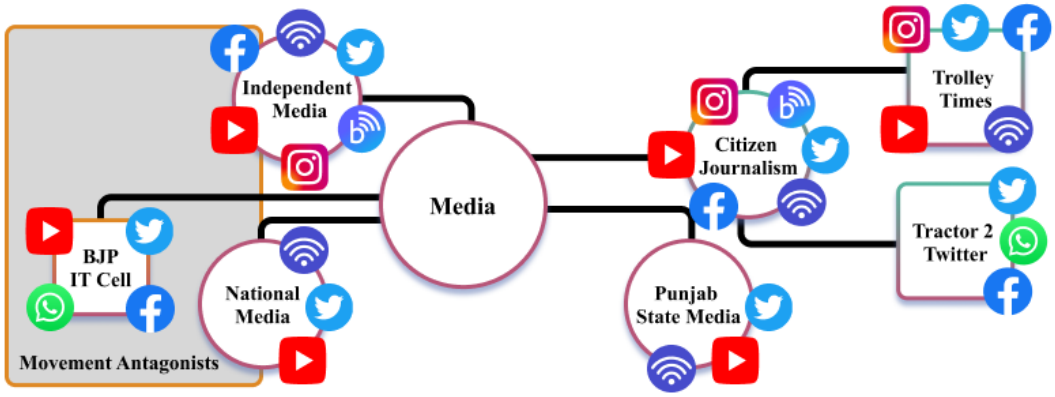

Fig. 4. Media Platforms Structure

special importance during the pandemic, as told by a participant, *"when the reporters don't come because of Covid, we stream live on social media"* (Farmers' Organisation Participant). The live feature of Facebook also informs followers immediately when a person is streaming. Figure 4 above visualises the media interactions within the movement. The image primarily captures the social media ecosystem of the media; however, traditional mediums such as television, radio, and print had also been functional within the movement reportage. While national and state media had access to traditional and technological means to broadcast, journalism within the movement relied largely on social media and the internet. The option to do Facebook live was undertaken by individuals often with no training in journalism, who however, felt the need to broadcast on-ground reality. Therefore, the movement grew not only its own media, but also its own journalists. Many also started their own YouTube channels and uploaded videos of the interviews of participants, leaders, and speeches given at the sites. Individuals captured the everyday activities of the movement, which traditional channels were either not able to or did only for a moment. Both Facebook and YouTube became mechanisms of video documenting the movement. However, YouTube was preferred for the purpose, as Facebook live disappeared for even the posters after 30 days.

Along with individual citizen journalists, various online groups emerged on other platforms. For example, Tractor2Twitter. The founders of the Tractor2Twitter noted that Twitter was an important site for reaching out to wider political circles and making their voices heard. As the farmers decided to march to Delhi, the volunteer founders of the page felt that the mainstream media was only televising government propaganda against the farmers, which they could counter through hashtag campaigns on Twitter. One participant noted, *"you have your own direct channel of communication to your supporters, to your cadre and so on, especially when regular well-established mass media don't either cover you or cover you in an adversarial fashion"* (Ally Participant). As the name, 'Tractor2Twitter', suggests, the initial aim of the small group was to get the farmers and their allies on Twitter itself to activate that social media space. To that effect, they created posters asking people to join Twitter and shared them within their private chat groups and Facebook profiles. The participants could use their personal profiles to scale up the social cause.

According to another participant, while Twitter was being used to build political pressure, Facebook and WhatsApp were used for direct communication to inform participants about the movement and the actions to be undertaken. Social media pages that have critiqued television media for their reportage have also dealt with backlash in response - for example, Aaj Tak, a new

channel, filed a defamation lawsuit against Tractor2Twitter [54]. Another participant affiliated with a farmers' organisation noticed that their reach on social media sites like Facebook had been reduced regarding the number of groups they could share videos with. According to an ally, this was a common discussion amongst activists from organisations who felt censored. Their posts were restricted from a few hundred thousand to a few hundred. In addition to this, there were instances of Twitter profiles of such allied accounts being withheld or suspended multiple times. In the case of Tractor2Twitter, the account was reported so much that it has been permanently marked as sensitive, which significantly affected its reach. Some accounts had anticipated such actions and had created alternate accounts as a backup so that their reporting would not be hindered.

Some have also seen social media as embedded with the choice to bypass the clutter of traditional news media. As one interviewee noted,

> "the kind of raw reception people like me want is where there isn't the blabbering of reporters and anchors, but the content that is actually happening there [in the movement]; if there is noise, it shows noise. And if there is someone candid on the ground, it is all more appealing in the world of today" (Ally Participant).

News from social media derived its appeal due to the current state of traditional media, its neglect of the event, and the legitimacy of on-ground participants reporting. The younger participants of the movement recognised this precise value of the Internet which could give them a voice and credibility. While allies, volunteers, and participants recognised the utility of social media and the role of technology within this movement, they were also cognisant of the need to spread the knowledge to use these mediums. According to a participant, while many people did have profiles on Twitter, they did not know its functionalities. Therefore, they sent out a call to the public to send them explanatory videos on functions like 'quote tweet', 'hashtagging', which could be shared further. In this way, the group worked in collaboration with the larger public, as people *"would just record their screens, draft the tweet, and boom, send it. So, this way, we got information from the general public"* (Ally Participant).

One of the central features of the movement was its ability to generate its own mechanism of sharing information. With the lack of reportage, many forms of citizen journalism arose from within the movement, the most significant of them being the 'Trolley Times'. According to one of the founding members, *"We had a rationale that we wanted to print a newsletter, which brought the news of the movement to the trolleys in their language"* (Ally Participant). While initially in print format, as the newsletter gradually developed, it also established its online presence through a website and various social media handles (Fig. 4). It relayed important stories and opinion pieces from the movement to the public. However, its primary readers were the participants at the site. As the name suggests, the news was from the trolleys and to them. Thus, it was also a mechanism through which participants of different sites were aware of the ongoing events on each location as well as their own. As each protest site was spread over several kilometres. People, especially older adults, in trolleys that were parked far away from the stage, were unable to hear or follow what was being said from a distance. This is where the newsletter came in and made a dent by spreading the message and forming a cohesive community. Thus, the movement had developed its own mechanisms to transport information about itself on its own terms to its supporters, and those outside of the movement. As we have shown above, this ability to frame their own issues, and have robust systems of communication had various obstacles in the form of censorship, financial restrains, and legal suits. Another consideration in the use and making of their own media was that of surveillance which we elaborate below.

6.4 Concerns of Surveillance

In our interviews, participants discussed their concerns of primarily two forms of surveillance, digital surveillance and infiltration of virtual groups, and secondly, on-site surveillance through drones. Many interviewees, while acknowledging privacy issues, relegated privacy concerns primarily to the urban activist. For the farmers, the fear of privacy-breach was not enough to push them to a new application, as they felt they were speaking the truth, and thus, had nothing to fear. As one interviewee noted, *"they were more worried about the physical surveillance, that there were intruders - people from the Intelligence, or the RSS (the right-wing support base of the BJP)... In fact, there was one graffiti on the Singhu border, which said, 'police is under our surveillance'"* (Ally Participant). However, that does not mean that state surveillance did not exist. Participants were aware of not only physical intrusions from members of the Rashtriya Swayamsevak Sangh (RSS) [11], but also within their WhatsApp groups. While being cautious of antagonistic elements within their physical and virtual spaces, farmers also had to manoeuvre drones and internet jammers installed by the police. According to participants, jamming of the internet would begin as early as 7-8 AM and go on till 10 PM. Only at night, the connections would be restored with some normalcy at the sites. When asked how the farmers were able to bypass this, a participant responded that they would,

> "Type the message on the phone or record the message in audio or video, and one person then goes 2-3 kilometres away from the jammer area and stream it or upload it. Secondly, they (the police) cannot install jammers in such a big area of up to 15-20 kilometres. They used to cut off the internet... The people of that area cooperated a lot for those 15 days when they cut off the internet. The people living in the houses and the shopkeepers had written their WiFi passwords outside their houses." (Farmers' Organisation Participant)

It was thus the support of local groups in addition to the massive scale of the movement that helped it mobilise technology despite obstacles. When the internet was jammed, the scale of communication suffered a setback. A participant pointed out that it was not only citizen journalists and participants who found it difficult to communicate but also national media reporters who could not immediately upload their news stories. Some participants of the movement also decided to move out of what one termed as the *"silent zone"* (Farmers' Organisation Participant) so they could maintain the network of communication between the protest and the rest of the world.

7 MAKING OF THE DIGITAL KISAN (OR DIGITAL FARMER)

Community support and networks of allies permitted the creation of a successful digital campaign despite obstacles. Early on after its move to Delhi, the organisers streamlined their mechanisms of internal and external communication. The most visible example of this within the digital sphere was the official page of the movement, the Kisan Ekta Morcha (KEM). The KEM Twitter page describes itself as the official account of the Farmers' Movement, with hashtags like #DigitalKisan (Digital Farmer) and #DigitalKisanMorcha (Digital Farmer Movement). This indicates that the virtual profile aided the physical offline movement and worked towards creating a virtual Farmers' Movement and a digital kisan identity. The creation of an official social media page or a virtual mouthpiece arose due to the highly heterogeneous participation within the movement. The presence of multiple actors as central nodes often led to a hyper-voice (multitude of overlapping voices), where basic information was often lost. In the initial days, the presence of multiple organisations and leadership

[11] Rashtriya Swayamsevak Sangh (RSS) translated to National Volunteer corps is a Hindu-nationalist Indian organisation. It is "based on a paramilitary organization and relied on a xenophobic brand of the Hindu nationalist religious ideology, regarding Muslims as second-class citizens" [48] The organisation has found support in, and in turn supported other organisations which centre similar ideology. It has also been known to give political support to the BJP [48]

created a variety of messages regarding decisions on movement organisation. Therefore, to avoid confusion arising from numerous message sources, a centralised source of communication was made through social media.

According to one of the participants, when the protest began, it faced heavy criticism from the Indian government, claiming that a small section of farmers was against these laws [25][73]. The popularity of the KEM page, with an *"exponential rise in the subscriber base"* (Ally Participant), helped in countering the claim. The movement further functions on informal codes primarily decided by the coordination committee of leaders, which are adhered to. However, without a central figure, or a mouthpiece, participants were simply left with too many sources of information, often leading to confusion. While the KEM page began voluntarily and organically, according to a participant, it was also needed to clear the 'clutter' of voices. It is then a one-stop location for legitimate information, news, and further action for the protest.

As we previously mentioned Twitter was a political space that was used by the organisers to broadcast news and information to the broader public and help build political pressure against the opposition. The participants felt the need to be heard even more acutely as they had already witnessed the use of social media by the government against themselves. Tracing the emergence of the Twitter space, a participant asserted, that social media was required *"(to counter) the government's propaganda that was coming in, such as that of the BJP IT Cell, so, to prop up a full force for that. Secondly, we had to spread our own information with everyone, including our own people"*(Ally Participant) [12].

In the interviews conducted, most participants underlined the two communication functions of social media and technology: sharing verified information and countering the government's propaganda mechanisms. Another participant reaffirmed this when they highlighted that social media *"tends to have a potential for the marginalised to use it for themselves as much as the powerful to use it. Whereas, the other media, the traditional media, certainly does not have that space at all for the marginalised"* (Farmers' Organisation Participant). The vocabulary regarding the social media campaign is another evidence of the same. The KEM is popularly known as the Kisan IT Cell as a direct counterpart to the BJP IT Cell within the movement. Figure 2. visualises KEM as an organisational core of the movement, precisely due to its ability for public-facing against the strong antagonist. As a participant noted, *"It is believed that the BJP IT cell is making propaganda against this [movement]. So people thought that the alternative of that IT cell will be an IT cell"* (Ally Participant).

Furthermore, the strategy of hashtag trending on Twitter has been popularly used by political parties to popularise their messages. One participant noted, *"The hashtag is like your message of the day, your tone of the day, your agenda of the day, your narrative of the day"* (Ally Participant). They further added that hashtagging was also a technique used by social media pages of the movement. Tractor2Twitter, in consultation with many other online voluntary teams, started sharing everyday hashtags in December 2020. However, once Kisan Ekta Morcha was established as the official mouthpiece, these multiple teams started working with them. As noted,

> "When the Kisan Ekta Morcha was formed, we saw it as the formal social media platform for the farmers' protest. So, we started finalising the hashtag with the Kisan Ekta Morcha because ultimately, they were the centralised body to decide and run the narrative or subject to trend the next day." (Ally Participant, Personal Interview)

[12]The BJP IT Cell that had gotten active during the 2014 election campaign for Prime Minister, Narendra Modi. The cell is a dense network of individuals, volunteers, and IT professionals (mostly U.S. trained) who support the PM. They used a multi-media approach to mobilise votes for the PM and the BJP and recruited and trained volunteers to do the same. [49]

Furthermore, participants differentiated their everyday hashtag sharing from that of the political parties. They noted that the tweets of political parties were mostly empty of information, consisting simply of the hashtag to trend it. However, the participant underscored, *"on a daily basis, if you click on the hashtag which belongs to farmers, you will find the valuable information there regarding the campaign"* (Ally Participant). In addition to learning from their opponents, the farmer's movement also had innate histories which informed their actions and understandings of the protest space within contemporary times. As an example, we relay the following story by a participant:

> "I will share one last story about the first independence struggle of 1857, which was said to be the first freedom struggle ... The British wondered how did it take place? How did messages travel? Because at that time, the communication or the media system was under the control of the British. And the zamindars [13] with them were also wondering how the messages had been passed? When you go into its [the movement's] history, it was through the village where the message was given, and then they would decide to be involved in the struggle. In that particular village, 5 rotis [14] were made, and on each roti, they kept a lump of salt and a part of the meat, for the Hindu and the Muslim community. Then, these 5 rotis were sent to 5 villages that were nearby. The village which accepts that roti would send it further to other villages. Within 72 hours from Awadh to Magadh, Bundelkhand to Bulandshahar, the message of that struggle had reached all the villages. That rebellion was of the farmers." (Farmers' Organisation Participant)

The participant here is likely referring to the *chappati* [15] movement of 1857, the real motive behind which remains unknown, nevertheless multiple stories exist about it such as the one above. Its purpose in the discussion is also to show how movements draw inspiration from their past histories, the strategies and stories told within. Through the narrative, we focus on two aspects of the farmers' struggle: first, the farmers have had a long history of mass organising, and second, within these struggles, they have also been accustomed to developing ingenious forms of internal communication for the purpose of mobilisation. The *roti* in the story is also analogous to the modern-day message or a tweet within the virtual sphere. Much like it, a tweet is embedded with signs and messages for allies and supporters to spread forward and increase mobilisation. They can re-tweet (send the *roti* ahead), and quote-tweet (wrap in a lump of salt/meat), spreading the message to even more supporters, creating a massive cycle of communication for mobilisation.

8 DISCUSSION

The Farmers' Movement witnessed wide-scale national and international participation with a complex set of solidarities. Over its year-long duration, it built its own media, overcame internal differences and external obstacles, and created formidable counterpublics against a powerful antagonist. By the end, it had successfully met its goal, with its strength lying in the effective use of ICTs. In the discussion below, we focus on ICTs; (a) as means of democratic formalisation of informal organising, (b) as means of on-ground coordination, (c) as counterpublics and mediums of framing, (d) as identity-building spaces, and (e) as spaces of solidarity and coalition. We further discuss how researchers and designers can learn from the use of ICTs in this movement to support future social movements.

[13] The word zamindars translates into land owners who were historically upper-caste.

[14] Rotis are a kind of Indian wheat bread, usually round in shape

[15] Chappati is a kind of Indian whole wheat bread and is similar to the wheat bread roti. The terms are often used synonymously.

8.1 Informal Networks and Systems of Organisation

Our findings revealed various formal and informal structures that sustained the movement successfully for over a year that were aided by the use of ICTs. The broad identity group of farmers utilised their existing formal networks and gradually created informal ones for mobilisation, and everyday organisation. The long history of formal organisation provided the movement with a robust online and offline ally network and leadership and prepared them for large-scale communication [58]. An important factor driving the movement (and leading to its eventual success) was disparate groups of actors coming together and organising collective action. An ongoing negotiation process between groups helped coordinate their activities against a common antagonistic actor (in this case, the central government). The cohesion displayed by the movement was a consequence of what Dolata [33] refers to as "organised informality", characterised by the presence of both informal networks and organisational structures. While seemingly paradoxical, organised informality has historically played an essential role in how communities at the margins have structured themselves in the face of formal state actors. It is indicative of the ability informal communities have in self-organising and creating bottom-up institutions and structures that facilitate collaboration and coordination.

In the case of the Farmers' Movement, while the traditional farmer and worker unions had pre-existing structures in place, a key challenge was informal coordination between these groups and other allied groups to mobilise both resources and participants. The difficulty was exacerbated further by extant fault lines between the Khap (also known for its patriarchal outlook towards women) and women's organisations and between Jat farmers and Dalit labourers. While not part of the formal SKM structure, groups like women's and Dalit organisations were integral within the organised informality. There was thus an interplay between bottom-up self-organisation and union organising resulting in an organisational structure that was a hybrid arrangement where both vertical and horizontal mechanisms of collective action intertwined. In both forms of organisation, the collectives either already had a formalised structure such as in the case of unions, women's and students' groups or one had been created in the movement through engagement such as amongst volunteers, journalists and between the older and the new groups. Having central nodes within these in the form of SKM, group administrators, contact persons, and decentralised leadership allowed for an easier and quicker decision-making [37] This organisational structure builds organisational capacity [69] and shapes what technologies are used.

The multi-leader nature of the movement lends it the hybridity between decentralisation of power and centralised leadership. The leadership nodes are scattered amongst the various participating organisations, allowing democratic decision-making. Despite the diversity of actors, the movement was able to have a shared strategic direction resulting from the effective use of organisational structures, informal networks, and technologies. It was enforced through a community-run system that delegated tasks, monitored participants' behaviour, and enforced a system of informal sanctions if someone deviated from established norms. Going beyond techno-deterministic accounts, the organisational and communication structures in the Farmers' Movement need to be looked at as "everyday social processes of human negotiation and construction" [8], that are shaped by existing institutional structures and which create "multiple and overlapping spaces of action and meaning" [8]. Thus, while functioning under the broad leadership of SKM, participants also had freedom to devise their own strategies of protest and articulation.

8.2 Technologies and Collective Action

ICTs played a key role in this articulation by the participants, as individuals, and as a group. One of the biggest strength of the movement was its effective use of the digital vehicles of communication as mediums for organisation, mobilisation, and even identity formation. Prior literature has outlined

how ICTs are integral to 'leaderless' movements with flattened hierarchies. They also show how the use of technologies encourage collaboration between social movements creating new (and often more) democratic forms of organisation [26]. As seen in the Farmers' Movement, ICTs also allowed flexible hybrid arrangements consisting of traditional vertical hierarchies and flattened horizontal hierarchies. Such arrangements used social media technologies that facilitated coordination among pre-existing networks while also adapting and expanding the networks in a decentralised manner.

The movement engaged with a social media ecosystem consisting of a diverse set of platforms such as WhatsApp, Facebook, Twitter, Telegram, Signal, and YouTube, which were integral to how the Farmers' Movement orchestrated collective action.

8.2.1 Coordination and Mobilisation. In our findings, we have shown that the participants coordinated and mobilised by relying on hundreds on online groups. While some groups were already functional when the movement began, many more were and had to be created as it grew in size. These groups on various online mediums such as WhatsApp, Signal, Facebook, and Twitter to name a few consisted of members of SKM, media persons, and allies traversing national and international boundaries. The model of communication created was emblematic of the modern network society [16] which was able to breach geographic limitations and permit vast boundary spanning between identities. Those who could not be physically present due to geography, disabilities, fear of backlash/violence or the lack of means to travel could contribute to the movement and learn its decisions through these virtual networks.

WhatsApp groups were particularly important informal channels of communication and information exchange, and Facebook played a crucial role in coordinating activity. Previous research on WhatsApp has shown the role it plays in the coordination of movements and reinforcing a collective identity through private group communication (ex. Umbrella Movement [72]). In the case of the Farmers' Movement, WhatsApp was already being used by existing unions and organisations as their primary communication tool, so new actors using WhatsApp was a natural progression. Trere [87] refers to the "banality of WhatsApp" wherein the everyday mundane and informal interactions that underlie the functioning of organisations occur on this application. The affordances of the application permitted a decentralised internal communication system via a multiplicity of WhatsApp groups. It thus formed the communicative core of the movement - with the non-public facing work happening on this application. The existence of prevenient groups not only provided the movement with a well-oiled communication system but also a vast cadre that they could mobilise [69]. WhatsApp formed the communication backbone as a chat platforms, allowing for the undercurrent coordination amongst spread out national, international, and hyper-local (district-wise, protest-site wise, etc.) groups. Telegram and Signal, while sparsely used, played a similar role as WhatsApp. The ability of Telegram to support a larger number of participants led to its use as a tool to amplify the campaign, especially in urban areas.

Facebook was a crucial public-facing tool used to mobilise protesters. Along with WhatsApp, public Facebook groups and Facebook Live were used to relay decisions made by the core to other participants and coordinate actions. Almost all prominent actors in the movement - both organisations and individuals - had Facebook accounts that became virtual channels for information dissemination, such as posting updates about the protests and major events. With Facebook being a commonly used social media platform, existing interpersonal networks and weak ties were crucial in spreading information, recruiting participants, and expanding the movement's reach.

The Farmers' Movement adapted these social media applications depending on their familiarity with participants and the affordances of the technology. These applications also allowed communication in a diverse set of regional languages. Thus private groups on WhatsApp helped coordinate movements while public groups on Facebook were used to mobilise participants. Together they

helped in creating a decentralised communication system that enabled a robust movement culture and, in the process, helped construct a collective identity.

8.3 Alternative Media: Social Media tools and Politics

Virtual spaces, while providing critical means of communication through which national and international supporters in addition to the Indian diaspora could reach the movement, were also fundamental in strengthening the unifying 'farmer' category and allowing the organisers to curate the frames for their issues. Media; its structure, and its operation play an important role in social movements. As prior research has shown, movements have often been excluded from mainstream news media not sympathetic to their causes. Coverage bias has been well-documented, with the mainstream media not adopting the social movement's frame. In the Farmers' Movement, perceived misrepresentation and insufficient coverage led to the need for emancipatory journalism and creating an alternative media ecosystem consisting of social media pages on Instagram and Facebook, videos on Facebook Live and YouTube, micro-blogging on Twitter, and protester-run newspapers. Younger social-media-savvy participants primarily drove these media ecosystems. We identify three ways the alternative media ecosystem was used: a) rejecting and subverting mainstream media narratives, b) unifying the movement, and c) documenting the movement and peer monitoring.

The Farmers' Movement saw the production of democratic and independent media content. Caroll and Hackett [14] while writing on alternative media differentiate between "democratization *through* the media and democratization *of* the media themselves." In the Farmers' Movement, various amateur independent citizen journalists created their own YouTube and Twitter spaces, in addition to the formation of the official KEM page. Virtual journalistic efforts such as Trolley Times and unofficial ally pages like Tractor2Twitter are all examples of the democratisation of media wherein content and the ethics of reporting arise organically from within the space of their creation. Not only did they oppose and critique mainstream narratives, but also captured the marginal voices in the protests. Through constructing a reality that opposed the mainstream media, they contested existing power structures [5]. By utilising collective action frames [82], they mounted an online strategy such as live videos and everyday hashtags, which pin-pointed the issue at stake, provided concrete solutions through their demands, and gave people directions for future actions to meet these demands.

While they tried to influence the broader public opinion, a large part of the content was created by the community - participants in the movement capture their thoughts and experiences. Produced media were thus documentation of group and individual experiences and captured the movement - content that was shared not just domestically but also internationally. Furthermore, many citizen journalists and alternate media captured the everyday and mundane activities of the movement itself, countering efforts to demonise the movement. Images and narratives of gentle human interaction increased the movement's credibility and permitted them to draw more people in by removing the fear of participation. Thus, online counterpublics became a space where the oppositional narratives were dismantled by centring the experiences of the participants. Further, it played a role in allowing the community to monitor itself, which was crucial to the enforcement of informal sanctions in case someone deviated from established norms.

This content also played an essential role in constructing collective identity and had a deep symbolic meaning for the participants in the movement. Besides the instrumental role of providing information, it was often expressive and emotive facilitating collective action and community-building.

8.4 The Face of the Protest: Creating Solidarity

Prior scholarship on social movements has argued that collective action and identity creation are intertwined [29]. While commonalities and identifying an 'other' are important to collective action, the action itself continuously reshapes collective identity. Eschewing structuralist arguments, the antagonistic relationships that define a social movement are shaped by both conflict (i.e. tensions between actors with conflicting interests) and the ongoing construction of a collective identity. Key to this process is the construction of boundaries between members of the movement and those against it. Technologies play an important role here - creating virtual spaces of solidarity, allowing interactions between participants, and public affirmations of the collective identities. As the paper shows, the movement's participants, and its virtual appendages clearly identified not only the issue, but also the central government as its antagonist. The boundary between 'us' and 'them' was mapped out neatly for the online campaign. Multiple identities collided and coalesced under the banner of 'farmers' with a singular agenda of combating the three laws brought in by the central government.

While, we note the robust creation of groups on either sides of the movement's boundary, it is critical to remember that the Farmers' Movement was not homogeneous - it consisted of diverse groups with their own sets of agendas and motivations. There were tensions - for example, with respect to women and Dalit organisations who were at odds with the elite within the movement. However, the movement coalesced under the identity of the "farmer" with the ruling government identified as the "opposition". Having a shared political goal - protesting against the increasing corporatisation of the economy by the government - held the movement together. This identity of the 'farmer' did not organically arise from the movement; rather, it was a decision made by the core of the movement adopted by the rest of the network. It can be seen as a framing decision or an activist strategy by the leadership, which recognised the need for a united front and a well-defined goal and antagonist. It persisted due to its "recognition as a credible political player" [59] which could take on powerful antagonistic actors such as the government. Much like Gamson [37] notes, the strategy towards organised functioning facilitated the construction and employment of this credibility.

For designers to support social movements, it is necessary to understand the interplay between the diverse set of actors involved - how collective identity results from networks of actors interacting with each other and coalescing around powerful political identities.

8.5 Design and Coalition Building

Most social movements model themselves as counterpublics in opposition to mainstream public narratives. The success of large, sustained movements is, however, contingent on their ability to build coalitions [92] between disparate groups. This coalition building, in part, happens behind the scenes, away from the public displays of rhetoric in enclave spaces [23, 83]. In the case of the Farmers' Movement - a geographically distributed movement - the enclave spaces were enabled by offline in-person meetings, messaging applications such as WhatsApp, and video teleconferencing software such as Zoom. These were non-anonymous spaces of negotiation, with coalition-building an ongoing activity shaped by a history of grassroots mobilisation. As previously argued, these spaces were integral to creating a community way of doing things - establishing norms on what is acceptable and sanctions for those who deviated. Analysing counterpublics and enclave spaces also focuses on how hybrid organisational hierarchies manifest in social movements - in the Farmers' Movement, a seemingly decentralised counter-public was built upon a hierarchical organisation within the enclave spaces.

The importance of these enclave spaces cannot be understated as they support the creation of counterpublics that look to engage the public and represent broader group interests. Designers need to be aware of how to create safe spaces that can allow discourse between disparate groups. The focus here is not on expression for public consumption but rather negotiation and coordination. Designed spaces also need to be quasi-private to allow potential new participants to enter while keeping those who are unwanted out. Our respondents were wary of intrusion - both in physical and virtual spaces. While end-to-end encryption and security features might be important in the face of powerful antagonistic actors, there was the greater weariness of everyday intrusion in physical or virtual spaces and censorship attempts. Technology use was also shaped by what participants were familiar with, especially with respect to non-tech-savvy users.

While social media platforms have been vital to many recent social movements, including the Farmers' Movement, the platform's role cannot go unquestioned. As the content published on these platforms is almost entirely user-generated, they seem like an ideal democratic space. However, while the content is created by movement members, the context and salience with which the content appears is still dependent on commercial interests and the invisible structuring of social media companies [33]. For example, we see how attempting to make hashtags trend on Twitter to reach a broader audience involves figuring out the underlying Twitter algorithms.

Much like the highlighting of more extreme protester behaviour by mainstream media, the higher engagement of social media audiences with sensationalist content can skew the representation of the movement. Movements need to navigate platform guidelines and how the platforms react to political pressure from governments. In addition, the choice of social media platform determines who can participate in the movement. For example, in the Farmers' Movement, WhatsApp and Facebook were used because they were more familiar to the majority of participants. Designers need to be aware that not all stakeholders (within and without the movement) may feel included by a chosen platform. As Kow et al. [56] point out, members of a given digital platform do not represent the entire population, and "there is a cost to creating a class of people who feel ignored".

9 CONCLUSION

'Ladaange, adange, jeetange!', the slogan used within the movement and the title for this paper, aptly captures the movement's strategy (to fight and obstruct) and goal (to win). Participants have stressed the importance of a peaceful, non-violent fight against the three farm laws from the very beginning. Within this, they developed their own media and utilised prior communication channels, mounting a cohesive collective action online and offline to obstruct the propaganda against the movement. The word *adange* also captures the will of the movement to sustain itself over the year, fighting the bitter cold, obstacles in the form of water cannons, barricades, and censorship. While it remains to be seen how and if at all the collectives formed within the movement are translated within everyday agrarian relations, it nevertheless marked a moment that revealed the possibility to address structures of historical oppression and build collective identities.

As researchers of social movements, the question of ethics has encapsulated our research and writing approach. Scholars have critiqued contributions to social movement through scholarship, especially due to the inaccessibility of academic writing on social movements to activists, due to economic and linguistic barriers [34]. Responding to this, Meyer argues that useful scholarship will arise from keeping activist concerns at the centre of one's research and treat "academic research as a means to answer questions that are important outside the academy" [63]. Within this paper, we understand forms of coalition building and movement organising through our analysis of the social media ecosystem within the Farmers' Movement. At the same time, we have been cognisant of the limits of our contributions to the movement and the power relationships between the researcher and researched. We have attempted to address these in some ways by placing the voices of our

participants at the crux of this study. Furthermore, we hope that our study on organisations' internal structures opens up avenues for designers and researchers to co-design with activists to help them bypass obstacles like those faced by our participants and ease participation in social movements. While academics engage in one kind of knowledge production, social movements are also crucial knowledge producers independent of the academy. As ethical researchers, we note the possibilities of social movement research, but also how "the knowledge practices of social movements are crucial to our understanding of new ways of being and acting together" [24]. Thus, studying social movements provides us critical ways to transpose collective formation framework within academia. Writing and researching social movements can also be source of hope for researchers, especially amidst active movements in authoritarian spaces [44]. Often, reaffirming a belief in possibility of change within their environment. Therefore, we underscore a symbiotic relationship between the academic and activist forms of knowledge production which offers promising opportunities for change towards a more inclusive society.

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REFERENCES

[1] A Aga. 2021. Farm protests in India are writing the green revolution's obituary. *Scientific American* (2021).
[2] Sheetal D Agarwal, Michael L Barthel, Caterina Rost, Alan Borning, W Lance Bennett, and Courtney N Johnson. 2014. Grassroots organizing in the digital age: Considering values and technology in Tea Party and Occupy Wall Street. *Information, Communication & Society* 17, 3 (2014), 326–341.
[3] Syed Ishtiaque Ahmed, Nusrat Jahan Mim, and Steven J Jackson. 2015. Residual mobilities: infrastructural displacement and post-colonial computing in Bangladesh. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*. 437–446.
[4] Anuroop. 2021. Martyr List. https://trolleytimes.com/martyrs/
[5] Chris Atton. 2007. Current issues in alternative media research. *Sociology Compass* 1, 1 (2007), 17–27.
[6] NITI Ayog. 2016. Evaluation study on role of public distribution system in shaping household and nutritional security India. *Policy* 72 (2016), 80.
[7] Joe Bandy and Jackie Smith. 2005. Factors affecting conflict and cooperation in transnational movement networks. *Coalitions across borders: Transnational protest and the neoliberal order* (2005), 231–252.
[8] Veronica Barassi. 2013. Ethnographic cartographies: Social movements, alternative media and the spaces of networks. *Social Movement Studies* 12, 1 (2013), 48–62.
[9] Amita Baviskar and Michael Levien. 2021. Farmers' protests in India: introduction to the JPS Forum. *The Journal of Peasant Studies* 48, 7 (nov 2021), 1341–1355. https://doi.org/10.1080/03066150.2021.1998002
[10] Neeladri Bhattacharya. 2019. *The great agrarian conquest: The colonial reshaping of a rural world.* SUNY Press.
[11] J Patrick Biddix. 2010. Technology uses in campus activism from 2000 to 2008: Implications for civic learning. *Journal of College Student Development* 51, 6 (2010), 679–693.
[12] Nicola J Bidwell. 2020. Women and the Sustainability of Rural Community Networks in the Global South. In *Proceedings of the 2020 International Conference on Information and Communication Technologies and Development*. 1–13.
[13] Kathleen M. Blee and Verta Taylor. 2002. Semi-Structured Interviewing in Social Movement Research. In *Methods of Social Movement Research*, Bert Klandermans and Suzanne Staggenborg (Eds.). University of Minnesota Press, Minneapolis, London, 92–115.
[14] William K Carroll and Robert A Hackett. 2006. Democratic media activism through the lens of social movement theory. *Media, culture & society* 28, 1 (2006), 83–104.
[15] Victoria Carty and Francisco G Reynoso Barron. 2019. Social movements and new technology: The dynamics of cyber activism in the digital age. In *The Palgrave handbook of social movements, revolution, and social transformation*. Springer, 373–397.
[16] Manuel Castells. 2010. *The Rise of the Network Society* (2nd ed.). Wiley-Blackwell.

[17] Manuel Castells, Mireia Fernández-Ardèvol, Jack Linchuan Qiu, and Araba Sey. 2007. *Mobile Communication and Society: A Global Perspective Manuel*. Number July. Massachusetts Institute of Technology, Cambridge. https://doi.org/0262033550
[18] Priyank Chandra. 2016. Order in the warez scene: explaining an underground virtual community with the CPR framework. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. 372–383.
[19] Priyank Chandra. 2017. Informality and invisibility: Traditional technologies as tools for collaboration in an informal market. In *Proceedings of the 2017 chi conference on human factors in computing systems*. 4765–4775.
[20] Priyank Chandra, Syed Ishtiaque Ahmed, and Joyojeet Pal. 2017. Market practices and the bazaar: Technology consumption in ICT markets in the global south. In *Proceedings of the 2017 CHI conference on human factors in computing systems*. 4741–4752.
[21] Priyank Chandra and Jay Chen. 2019. Taming the Amazon: the domestication of online shopping in Bangalore, India. In *Proceedings of the Tenth International Conference on Information and Communication Technologies and Development*. 1–11.
[22] Kathy Charmaz. 2014. *Constructing grounded theory*. Sage.
[23] Karma R Chávez. 2011. Counter-public enclaves and understanding the function of rhetoric in social movement coalition-building. *Communication Quarterly* 59, 1 (2011), 1–18.
[24] Graeme Chesters. 2012. Social Movements and the Ethics of Knowledge Production. *Social Movement Studies* 11, 2 (2012), 145–160. https://doi.org/10.1080/14742837.2012.664894
[25] Man Aman Singh Chhina. 2021. Only a few farmers protesting against farm laws, most stand behind PM's decisions: Shekhawat. https://indianexpress.com/article/cities/chandigarh/only-a-few-farmers-protesting-against-farm-laws-most-stand-behind-pms-decisions-shekhawat-7595825/
[26] Harry Cleaver. 1999. Computer-linked social movements and the global threat to capitalism. *On-line. Available HTTP: http://www. eco. utexas. edu/Homepages/faculty/Cleaver/polnet. html (8 April 2005)* (1999).
[27] Elisabeth S Clemens and Debra C Minkoff. 2004. Beyond the iron law: Rethinking the place of organizations in social movement research. *The Blackwell companion to social movements* (2004), 155–170.
[28] Débora de Castro Leal, Max Krüger, Kaoru Misaki, David Randall, and Volker Wulf. 2019. Guerilla Warfare and the Use of New (and Some Old) Technology: Lessons from FARC's Armed Struggle in Colombia. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. 1–12.
[29] Donatella Della Porta and Mario Diani. 2020. *Social movements: An introduction*. John Wiley & Sons.
[30] DHNS. 2021. From 'Khalistanis' to defeat 'anti-national' forces: Rhetoric Around Farmers Protest Comes a Full Circle. https://www.deccanherald.com/national/national-politics/from-khalistanis-to-defeat-of-anti-national-forces-rhetoric-around-farmers-protest-comes-a-full-circle-1052696.html
[31] Jill P Dimond. 2012. *Feminist HCI for real: Designing technology in support of a social movement*. Georgia Institute of Technology.
[32] Leonhard Dobusch and Sigrid Quack. 2011. Interorganisationale Netzwerke und digitale Gemeinschaften. In *Organisation und Umwelt*. Springer, 171–213.
[33] Ulrich Dolata. 2018. Social Movements: The Sociotechnical Constitution of Collective Action. In *Collectivity and Power on the Internet*. Springer, 31–55.
[34] Richard Flacks. 2005. The Question of Relevance in Social Movement Studies. In *Rhyming Hope and History: Activists, Academics, and Social Movement Scholarship*, David Croteau, William Hoynes, and Charlotte Ryan (Eds.). University of Minnesota Press, Minneapolis, London, 3–19.
[35] Nancy Fraser. 1990. Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy. *Social Text* 25/26, 25 (1990), 56–80. https://doi.org/10.4324/9781315822174-11
[36] Christian Fuchs. 2006. The self-organization of cyberprotest. *The Internet Society II. Advances in Education, Comerce & Governance* (2006), 275–295.
[37] William A. Gamson. 1975. *The Strategy of Social Protest*. The Dorsey Press, Illinois.
[38] Jordana J George and Dorothy E Leidner. 2019. From clicktivism to hacktivism: Understanding digital activism. *Information and Organization* 29, 3 (2019), 100249.
[39] Paolo Gerbaudo. 2014. The persistence of collectivity in digital protest. *Information, Communication & Society* 17, 2 (2014), 264–268.
[40] Sucha S Gill. 2005. Economic distress and farmer suicides in rural Punjab. *JPS* 12, 2 (2005), 220.
[41] Sucha Singh Gill. 2020. Recent Farmers ' Movement in Punjab : Organisation , Stages of Mobilisation and Achievements. *JSPS* 29, 1 & 2 (2020), 123–142.
[42] Jeff Goodwin and James M Jasper. 2014. *The social movements reader: Cases and concepts*. John Wiley & Sons.
[43] Paridhi Gupta. 2020. Art(s) of visibility: resistance and reclamation of university spaces by women students in Delhi. *Gender, Place and Culture* 27, 1 (2020), 86–103. https://doi.org/10.1080/0966369X.2019.1586652

[44] Paridhi Gupta. 2021. The Researcher of/in Crisis: Writing Resistances During the Pandemic. *Communication, Culture and Critique* 14, 2 (2021), 365–368. https://doi.org/10.1093/ccc/tcab025

[45] Human Cost of Farmers Protest. 2020. Deaths in Farmers' Protest 2020. https://humancostoffarmersprotest.blogspot.com/2020/12/list-of-deaths-in-farmers-protest-at.html

[46] Hyesun Hwang and Kee-Ok Kim. 2015. Social media as a tool for social movements: The effect of social media use and social capital on intention to participate in social movements. *International Journal of Consumer Studies* 39, 5 (2015), 478–488.

[47] Margaret Jack, Jay Chen, and Steven J Jackson. 2017. Infrastructure as creative action: Online buying, selling, and delivery in Phnom Penh. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. 6511–6522.

[48] Christophe Jaffrelot. 2013. Refining the moderation thesis. Two religious parties and Indian democracy: The Jana Sangh and the BJP between Hindutva radicalism and coalition politics. *Democratization* 20, 5 (2013), 876–894. https://doi.org/10.1080/13510347.2013.801256

[49] Christophe Jaffrelot. 2015. The Modi-centric BJP 2014 election campaign: new techniques and old tactics. *Contemporary South Asia* 23, 2 (2015), 151–166. https://doi.org/10.1080/09584935.2015.1027662

[50] Surinder S. Jodhka. 2021. Why are the farmers of Punjab protesting? *The Journal of Peasant Studies* 48, 7 (nov 2021), 1356–1370. https://doi.org/10.1080/03066150.2021.1990047

[51] Jeffrey S Juris. 2015. Embodying protest: Culture and performance within social movements. In *Anthropology, theatre, and development*. Springer, 82–104.

[52] Tejal Kanitkar, Sudha Mahalingam, and R Srikanth. 2020. Electricity (Amendment) Bill, 2020: Inviting a Bigger Crisis. *Economic and Political Weekly* 55, 41 (2020), 40–45.

[53] Anastasia Kavada. 2020. Creating the collective: social media, the Occupy Movement and its constitution as a collective actor. In *Protest Technologies and Media Revolutions*. Emerald Publishing Limited.

[54] Khadija Khan. 2021. Delhi High Court restrains Twitter handle 'TRACTOR 2 TWITER' from publishing defamatory material against Aaj Tak. https://www.barandbench.com/news/litigation/aaj-tak-asks-delhi-high-court-take-down-defamatory-content-tractor-2-twitter

[55] Yong Ming Kow, Yubo Kou, Bryan Semaan, and Waikuen Cheng. 2016. Mediating the undercurrents: Using social media to sustain a social movement. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*. 3883–3894.

[56] Yong Ming Kow, Bonnie Nardi, and Wai Kuen Cheng. 2020. Be Water: Technologies in the Leaderless Anti-ELAB Movement in Hong Kong. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–12.

[57] Satendra Kumar. 2021. Class, caste and agrarian change: the making of farmers' protests. *The Journal of Peasant Studies* 48, 7 (nov 2021), 1371–1379. https://doi.org/10.1080/03066150.2021.1990046

[58] Doug McAdam. 1982. *Political Process and the Development of Black Insurgency, 1930-1970.* The University of Chicago Press, Chicago. https://doi.org/10.2307/2149752

[59] Doug McAdam, Sidney Tarrow, and Charles Tilly. 2004. *Dynamics of contention*. Cambridge University Press.

[60] Patrick McCurdy. 2012. Social movements, protest and mainstream media. *Sociology Compass* 6, 3 (2012), 244–255.

[61] Jessica McLean. 2020. 'It's Just Coding': Disability Activism In, and About, Digital Spaces. In *Changing Digital Geographies*. Springer, 229–246.

[62] Douglas M. McLeod. 2007. News Coverage and Social Protest : How the Media's Protest Paradigm Exacerbates Social Conflict. *Journal of Dispute Resolution* 1 (2007), 185–194.

[63] David S. Meyer. 2005. Scholarship That Might Matter. In *Rhyming Hope and History: Activists, Academics, and Social Movement Scholarship*, David Croteau, William Hoynes, and Charlotte Ryan (Eds.). University of Minnesota Press, Minneapolis, London, 191–205.

[64] Stefania Milan. 2013. *Social movements and their technologies: Wiring social change*. Springer.

[65] Nusrat Jahan Mim. 2021. Gospels of Modernity: Digital Cattle Markets, Urban Religiosity, and Secular Computing in the Global South. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. 1–17.

[66] Aparna Moitra, Syed Ishtiaque Ahmed, and Priyank Chandra. 2021. Parsing the'Me'in# MeToo: Sexual Harassment, Social Media, and Justice Infrastructures. *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW1 (2021), 1–34.

[67] Blake Morgan. 2021. WhatsApp Controversey Shows Just How Much Privacy Matters To Customers. https://www.forbes.com/sites/blakemorgan/2021/01/14/whatsapp-controversy-shows-just-how-much-privacy-matters-to-customers/?sh=3530349bff33

[68] Daniel J Myers. 1994. Communication technology and social movements: Contributions of computer networks to activism. *Social Science Computer Review* 12, 2 (1994), 250–260.

[69] Anthony Oberschall. 1973. Social Conflict and Social Movements.

[70] Gail Omvedt. 1982. Class Caste and Land in India: An Introductory Essay. In *Land, Caste and Politics in Indian States*, Gail Omvedt (Ed.). Authors Guild, Delhi, 9–50.

[71] Gabriel Ondetti. 2008. *Land, Protest, and Politics: The Landless Movement and the Struggle for Agrarian Reform in Brazil.* Vol. 11. The Pennsylvania State University. https://doi.org/10.1111/j.1471-0366.2010.00292.x
[72] Natalie Pang and Yue Ting Woo. 2020. What about WhatsApp? A systematic review of WhatsApp and its role in civic and political engagement. *First Monday* (2020).
[73] Sunil Prabhu and Chandrashekhar Srinivasan. 2021. "Only Group Of Farmers Protesting": Government In Farm Laws Repeal Note. https://www.ndtv.com/india-news/farm-laws-repealed-only-group-of-farmers-protesting-government-in-farm-laws-repeal-note-2627247
[74] Vignesh Radhakrishnan and Singaravelu Naresh. 2020. Data | Even in States with limited procurement, farmers wanted MSP programme to continue - The Hindu. https://www.thehindu.com/data/data-even-in-states-with-limited-procurement-farmers-wanted-msp-programme-to-continue/article32798325.ece
[75] Adam D Reich. 2017. The organizational trace of an insurgent moment: Occupy Wall Street and New York City's social movement field, 2004 to 2015. *Socius* 3 (2017), 2378023117700651.
[76] Muhammad Sadi Adamu. 2021. Rethinking Technology Design and Deployment in Africa: Lessons from an African Standpoint. In *3rd African Human-Computer Interaction Conference: Inclusiveness and Empowerment*. 75–83.
[77] Twitter Safety. 2020. Updates on our response to blocking orders from the Indian Government. https://blog.twitter.com/en_in/topics/company/2020/twitters-response-indian-government
[78] Pedro Sanches, Vasiliki Tsaknaki, Asreen Rostami, and Barry Brown. 2020. Under Surveillance: Technology Practices of those Monitored by the State. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–13.
[79] Amandeep Sandhu. 2019. Panjab: Journeys Through Fault Lines.
[80] Sidhartha, Vishwa Mohan, and Akhilesh Singh. 2020. Leftist, Maoist elements have infiltrated farmer stir: Piyush Goyal. https://timesofindia.indiatimes.com/india/leftist-maoist-elements-have-infiltrated-farmer-stir-piyush-goyal/articleshow/79688107.cms
[81] Shreya Sinha. 2020. The Agrarian crisis in Punjab and the making of the anti-farm law protests. In *The India Forum, November. https://www. theindiaforum. in/article/agrarian-crisis-punjaband-making-anti-farm-law-protests*.
[82] David A. Snow. 2013. Framing and Social Movements. In *The Wiley-Blackwell Encyclopedia of Social and Political Movements*, D. Snow, D. Della Porta, B. Klandermans, and D. McAdam (Eds.). Blackwell, Oxford. https://doi.org/10.1002/9781405165518.wbeosf065
[83] Catherine R Squires. 2002. Rethinking the black public sphere: An alternative vocabulary for multiple public spheres. *Communication theory* 12, 4 (2002), 446–468.
[84] M.N. Srinivas. 1962. *Caste in Modern India and Other Essays*. Asia Publishing House, Bombay.
[85] Kate Starbird and Leysia Palen. 2011. " Voluntweeters" self-organizing by digital volunteers in times of crisis. In *Proceedings of the SIGCHI conference on human factors in computing systems*. 1071–1080.
[86] Kate Starbird and Leysia Palen. 2012. (How) will the revolution be retweeted? Information diffusion and the 2011 Egyptian uprising. In *Proceedings of the acm 2012 conference on computer supported cooperative work*. 7–16.
[87] Emiliano Treré. 2020. The banality of WhatsApp: On the everyday politics of backstage activism in Mexico and Spain. *First Monday* 25 (2020).
[88] Kenneth H Tucker. 2018. The political is personal, expressive, aesthetic, and networked: Contemporary American languages of the self from Trump to Black Lives Matter. *American Journal of Cultural Sociology* 6, 2 (2018), 359–386.
[89] Zeynep Tufekci and Christopher Wilson. 2012. Social media and the decision to participate in political protest: Observations from Tahrir Square. *Journal of communication* 62, 2 (2012), 363–379.
[90] Marlon Twyman, Brian C Keegan, and Aaron Shaw. 2017. Black Lives Matter in Wikipedia: Collective memory and collaboration around online social movements. In *Proceedings of the 2017 acm conference on computer supported cooperative work and social computing*. 1400–1412.
[91] Nella Van Dyke and Bryan Amos. 2017. Social movement coalitions: Formation, longevity, and success. *Sociology Compass* 11, 7 (2017), e12489.
[92] Nella Van Dyke and Holly J McCammon. 2010. *Strategic alliances: Coalition building and social movements*. U of Minnesota Press.
[93] Vasillis Vlachokyriakos, Clara Crivellaro, Pete Wright, Evika Karamagioli, Eleni-Revekka Staiou, Dimitris Gouscos, Rowan Thorpe, Antonio Krüger, Johannes Schöning, Matt Jones, et al. 2017. HCI, solidarity movements and the solidarity economy. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. 3126–3137.
[94] Prateek Waghre. 2021. Radically Networked Societies: The case of the farmers' protests in India. *Indian Public Policy Review* 2, 3 (May-Jun) (2021), 41–64.
[95] Steve Walker and Andy Dearden. 2005. Designing for civil society. , 8 pages.
[96] Dan Wang, Alessandro Piazza, and Sarah A Soule. 2018. Boundary-spanning in social movements: Antecedents and outcomes. *Annual Review of Sociology* 44 (2018), 167–187.

[97] Volker Wulf, Konstantin Aal, Ibrahim Abu Kteish, Meryem Atam, Kai Schubert, Markus Rohde, George P Yerousis, and David Randall. 2013. Fighting against the wall: Social media use by political activists in a Palestinian village. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. 1979–1988.

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