Imagined Online Communities: Communionship, Sovereignty, and Inclusiveness in Facebook Groups

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Through Facebook "Group" feature, users often sensitize communionships, join different Facebook groups, and establish imagined communities with known people and strangers. In our interview study with 32 admins and users of Facebook groups, we explored the influential factors of such communionships, the challenges the Facebook group admins face while managing these communities, and how they resolve those. Our findings show that admins set rules for the entry and maintenance of the groups, monitor members' activities, and often limit their actions or mute them during conflicts. Thus, the members and admins of the groups together grow a sensibility of sovereignty within the community on Facebook. While the imagined sovereignty in Facebook groups is empowering, this empowerment may not be perceived and experienced evenly by everyone in such online communities. To explain this, we build on the concept of *'Imagined Communities'* by Benedict Anderson [16] and argue that there is a tension between Facebook admins' perceived sovereignty and other users' empowerment in practice. Our work joins the body of CSCW literature that aims at designing more sustainable and collaborative tools for specific communities on Facebook groups and other similar platforms.

CCS Concepts: • **Solidarity, Social Media, Connectionism, Facebook, Imagined Community**;

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1 INTRODUCTION

Among the 7.7B of world population, 4.4B people today access internet and 3.5B access Facebook, Twitter, Weibo, and other social media services for wellbeing, e-commerce, and social networking [54]. This number is growing, especially in the Global South [1, 47, 116, 117]. In their 2015 article, *"To Unite the Earth, Connect It"*, Bono and Mark Zuckerberg explained the need to create more opportunities for the people in the disconnected part of the world in terms of access to information and communication technologies (ICTs) [25]. While Zuckerberg has been in this conversation for a while [68, 143], this article particularly urged,

> *"In this century, global development and global connectivity are closely linked. If you want to help people feed, heal, educate and employ themselves around the world, we need to connect the world as well... It should be seen as a necessity for development, and a tool that makes larger things possible."*

Bono and Zuckerberg's call for connecting global population echos, to some extent, what computer-supported cooperative work (CSCW), social computing, and information and communication technologies and development (ICTD) researchers have been investigating in the Global South for the past two decades - people's access to information (e.g [32, 75, 76, 94, 99, 110, 139]). This body of work includes building robust and inexpensive computing infrastructures including computers, mobile phones, and telecommunication networks to make ICT available in remote areas [50, 53]. This research stream has also focused on the usability challenges of low-literate people and equipped the user interfaces with graphics [36, 44, 64, 77–79], sounds [59, 88, 95, 103, 110], and setting up 'remote help' [8, 9].

Online social media - a particular method of connecting people, is new to many people in the Global South. Among the various features of online social media, 'groups' connect people with similar interests such as music [58], teaching [19, 83, 138], and parenting [130]. However, little research has been conducted on in-depth understanding of what happens in the online social media groups. We extend this body of literature through an interview study. A recent survey on Bangladeshi Facebook users informed that people prefer to subscribe to the groups where they could participate in recreational, educational and professional conversations, and share opinions on local and global affairs, national and ethnic concerns, religion, gender justice, and e-commerce [125]. The researchers' lived experience also informed us that often specific interest group admins investigated the personal page of the applicants who requested for a membership in these groups and discarded their requests if the admins found suspicious posts on their profile or in other groups they had joined in common. We borrowed insights from the survey and further engaged with Facebook group users and admins (n=32) in Bangladesh to investigate what happens when people in Global South access online social spaces, how they form virtual communities and maintain those, and how they sustain their broader agenda of communionship. Our study sought answers to the following research questions:

> *RQ1*: Which factors influence the creators and admins to form and run the Facebook groups? What kind of strategies do they follow for recruiting members and growing a comunnionship?
> *RQ2*: What challenges and difficulties do the admins face while managing the groups? How do the existing Facebook-group tools support and fall short in this process?
> *RQ3*: How do the admins and the users negotiate between the groups' boundary and sovereignty and members' freedom and privacy?

Engaging with participants who were admins in some groups and were general members in some other groups helped us understand the perspectives of both admins and general members. We found that Bangladeshi users formed and joined Facebook groups mostly for personal interests,

creative activities, and educational and professional information. Admins of Facebook groups set rules for the maintenance of the groups, monitored members' activities, and often limited their actions or muted them during conflicts. Thus, the members and admins of the groups together grew a sensibility of sovereignty within the community on Facebook. While the imagined sovereignty in Facebook groups is empowering, such empowerment may not be perceived and experienced evenly by everyone in such online communities. Our participants also reported of engaging with the group members through the screening process of enrollment in the groups, developing and revising code of conduct within the groups, and taking disciplinary actions against the trouble-makers. Such moderation is often administrated over the group members' language and humor, local norms, and political positionalities. Furthermore, the participants reported that many of these administrative actions followed some "standard" protocols by international communities and imposed them on the local Bangladeshi group members. Consequently, they often mismatched with the values regarding communionship and eventually risked of marginalizing or disowning a subset that failed to align with the "standard". The participants also reported about their growing concerns that often the Facebook groups' admins asked for users' information or looked up on users' private Facebook account for information before letting the users in the groups.

This work makes four key contributions to the CSCW, social computing, human-computer interaction for development (HCI4D), social media research, and postcolonial computing literature. First, we present the factors that influence Bangladeshi Facebook group users to form, join, and subscribe to Facebook groups. Second, we provide an extensive overview of some of the prominent Bangladeshi Facebook communities who formed their groups; grew policies regarding enrollment, maintenance, and managing conflicts; and concerned the group members by risking their privacy through some of the existing practices. Third, building on the concept of 'imagined communities' by Benedict Anderson [16], we explain how this practice of communionship on a virtual space provides the users with a sensibility of the virtual communities' limits and sovereignty. We also explain the dilemma between the admins' perceived sensibility of sovereignty and users' perceived freedom within the group. Fourth, we show that even though the groups were supposed to serve as sovereign spaces for the Bangladeshi people with similar interests, the groups often built on modern western understanding of "community rules" and set their "standard" set of rules and protocol for running the groups in a way that often risked of marginalizing and disowning a subset of group members who poorly aligned or failed to align with the "standard". Taking all of these into account, we finally discuss how CSCW- and HCI-design could bring benefit for Bangladeshi Facebook users and other communities with similar practices.

2 BACKGROUND

The literature on online communities, social media and communionship on Facebook is gigantic and spread across the domain of computer science, HCI, CSCW, social studies, and psychology. Touching all of them is beyond the scope of this paper. However, we will bring insights from several prominent and related works and situate our research question in this section. First, we will look into how HCI and social computing research have perceived this connectivism over the ages with a range of communities holding diverse agendas. Then we will explore some of the prominent works on social media use in Global South. At the end of this section, we will explain Benedict Anderson's concept of 'imagined communities' [16] which we will use later to explain our findings on the use of Facebook groups by Bangladeshi users.

2.1 Connectivism and Social Computing

Online communities have remained very common ever since the internet became accessible to people. Some of the early examples of online communities are Friendster, Wikipedia community,

Usenet support groups regarding diet, smocking, and depression, among others [43, 114, 126, 127, 135]. All of these online communities centered their motivations in supporting through information sharing. George Siemens and Stephen Downes have defined this as *"Connectivism"* and explained it as, *"... theory that explains how Internet technologies have created new opportunities for people to learn and share information across the World Wide Web and among themselves"* [112]. HCI researchers have studied why and how users have used social media over the past two decades [17, 26, 27, 40, 41, 49, 65, 71, 118, 134]. Some earlier studies reported that users often look up on Facebook for social connection, shared identities, content, social investigation, social network surfing, and status updating [57]. Zhao et al. also reported how their participants used Facebook posts to manage impression, exhibit self-image, and achieve meaningful facets of life [141]. Some researchers found social media influencing users' social capitals through activities, personal communication, broadcasts to wider audiences, and social news consumption [29]. Robson et al. found social networking through Facebook and Twitter a worthwhile avenue for increasing awareness when they engaged with communities in a citizen science project of water management [106]. Andalibi and Forte reported that to grow awareness, many women chose Facebook for sharing their own experience of pregnancy loss, which was generally stigmatized to disclose [15]. All of these works explained how people collectively organized and participated in activities for social good.

However, the notion of today's online connectivism goes beyond the necessity of collective actions with a central agenda of social good. Researchers have studied users' connectivism in individual level on social media through their investigation of how users perceive and react to other users' posts and opinions on social media. For example, Scissors et al. showed that individuals with lower self-esteem and higher self-monitoring often thought that 'Likes' on their posts were important because that was a sign of connectedness [108]. Users' reaction has been reported to be dependent on the size of their friend-network [28]. Burke et al. also found that users with smaller friend-network were more likely to receive a reply with more emotional, positive, supportive, and longer comments when they post about their troubles [28].

After Facebook launched their 'Group' feature in 2010 [115], the paradigm of online communionship changed a bit. Now the communionship among the group members could be identified within the limit of the group, while individual members could still have their limitless communionship with other users beyond the Facebook group. Some users found Facebook group feature as a promising space for object-centered sociality, including sharing music [58], teaching aid [19, 83, 138], and parenting [130]. Sometimes the agenda of forming groups might be a subject to shaming for a particular user subgroups, for example, some fathers adapt strategic self disclosure to avoid judgment while seeking parenting suggestions in a stay-at-home dads' group [14]. Some studies have also reported citizen's civic engagement on Facebook for accomplishing certain immediate or ongoing needs, for example, Mosconi et al. studied the local instantiation of 'Social Street' into a closed Facebook group of residents in Trento, Italy and reported how they benefited from hybrid forms of community engagement [86]. Building on their study on mom-to-mom sales group on Facebook, Moser et al. reported that community commerce often affords unique and superior trust assurances and argued that such trust should be fostered through better designs of groups [87]. Over the years, many HCI researchers have shown research interest in the formation of online communities and reported about member entry, hierarchy, feedback, and many other diverse topics [22, 30, 37, 87, 92, 100, 109]. We join this body of work on Facebook groups in the context of the Global South and solicit answers to our research question, ***RQ1: Which factors influence the creators and admins to form and run the Facebook groups? What kind of strategies do they follow for recruiting members and growing a comunnionship?***

2.2 Social Media and Global South

A number of ICTD researchers responded to Zuckerberg's urge to connect the world. Such responses included the studies aiming to understand developing countries' Facebook and other social media users, critical comparison between users from the West and the Global South, and design and intervention research. For example, a study with Namibian Facebook users showed that they generally tend to accept all the friend requests [96]. This work made a comparison of Facebook use between US and Namibia and reported that putting an image of a pet, a celebrity, or a group photo as profile picture often generated suspicion according to Namibian social media culture. Thus, the Namibian users put an extra effort of posing alone and making sure that they looked consistent with the previous images while setting picture on their profiles [96]. Kumar studied Facebook use in urban India and found that access to social media empowered the Indian youth as they were attempting to break out of the imposed social boundaries and expanded their circle of relationships through Facebook [61]. Facebook groups have been reported to be useful for financial purposes including buying and selling online [24, 38, 39, 56], political [20, 38, 69], and academic purposes in many developing countries [23, 72]. Not to mention that some developing countries are strongly patriarchal and reports have showed how those practices are reflected on Facebook and other social media along with gender abuse, flirts, threats, and harassment [85, 132].

Some people in the Global South have also found that creating closed groups on Facebook could be more useful for different purposes, as research shows. Many Indian fisheries student discuss academic and educational content in a closed group [3] and medical students discuss their academic concerns in another closed group [45]. The farmers also discuss agricultural challenges in their closed Facebook group [111]. Facebook groups have also been reported as a platform of practicing solidarity economy. For example, in their study with Venezuelan Facebook users, Evans et al. explained the current economic crisis and scarcity of resources in the country and how that is pushing the people to migrate online for buying their necessities from the 'Bachaqueros'- individuals who somehow manage to purchase items in bulk and store them to sell at a higher price later [42]. For this purpose, they form Facebook groups and many users find it useful as local administration fails to supply the necessities of the citizens. Recent studies with Bangladeshi social media users showed that the Facebook groups were often used for posting job ads and e-commerce; academic purposes; supporting physical and mental health; and supporting LGBTQ communities [60, 89, 91, 120]. However, most of the works mentioned above studied a little on how such groups are formed and maintained, how the process of maintenance aligns and conflicts with the members' interest and privacy, and create further challenges. All the above-mentioned studies inspire us to investigate this gap and set our research question as: ***RQ2: What challenges and difficulties do the admins face while managing the groups? How do the existing Facebook-group tools support and fall short in this process?***

2.3 The 'Imagined Communities'

Scholars working on nationalism often seek to investigate what type of attributes the members of a nation have that ensure their belongingness and how they act up on that [70, 80]. Such a sign of belongingness is frequently termed as 'national identity' [81, 129]. Orwell and many other scholars later have argued that persons' belongingness not only applies to the physical land but also to their community [93]. Furthermore, scholars have also argued that such an imagined bond to a community may not be their ethnic-root, rather it could also be institutionally protected such that people from multiple ethnic groups imagine to belong to the same community, which sometimes bases on solidarity [63, 82]. This scholarship often sees this solidarity as a form of social justice that helps sustain the nation. Thus, scholars in this domain have argued that people

of shared ideology, ethnicity, heritage, culture, shared citizenship, values, and institutions are generally referred as a nation [67, 104]. Furthermore, Anderson has argued that individuals could conceptualize themselves as part of a community inside a structure of material conditions and rationalist perception of 'homogeneous empty time' [16]. He further stretched that it is imagined because the community in physical space is finite with limited boundaries, sovereign power, and run by fraternal and horizontal comradeship. Furthermore, the members may not even know the number of their fellows. To explain how a group of people in a physical space imagine their communionship and establish a state based on that, Anderson presents four different evolution models of the sensibility of nationalism. Among those, the fourth model was developed out of the colonial context and institutions of education, bureaucracy, and movement. Anderson suggests this model particularly matches the context of Asia and Africa as the administrative, educated, bilingual intelligentsia generally identify themselves as a colonial, national, and part of a solidarity of power and outside models of nation in these regions. Anderson termed three attributes of such nationalist sensibility: limited, sovereign, and community.

Limited: Anderson defines this attribute as: "The nation is imagined as limited because even the largest of them, encompassing perhaps a billion living human beings, has finite, if elastic, boundaries, beyond which lie other nations. No nation imagines itself coterminous with mankind. The most messianic nationalists do not dream of a day when all the members of the human race will join their nation in the way that it was possible, in certain epochs, for, say, Christians to dream of a wholly Christian planet." In the context of Facebook, group-based communionship could be a representative of such an imagined limited community where the aspects of the group feature separate them from other communities, while the members can still belong to multiple communities. This paper builds on this concept and investigates how members in Facebook groups go beyond the limits in physical world, establish their imagined community, and set up their own boundary. In this regard, we also look into the factors that influence such imagination and processes.

Sovereign: Anderson defines this attribute as: "It is imagined as sovereign because the concept was born in an age in which Enlightenment and Revolution were destroying the legitimacy of the divinely-ordained, hierarchical dynastic realm. Coming to maturity at a stage of human history when even the most devout adherents of any universal religion were inescapably confronted with the living pluralism of such religions, and the allomorphism between each faith's ontological claims and territorial stretch, nations dream of being free, and, if under God, directly so. The gage and emblem of this freedom is the sovereign state." Thus the sensibility of sovereign often connected itself to freedom but yet within a territory. In this paper, we investigate how the members and admins of Facebook groups in Bangladesh together broke the notion of hierarchical dynastic realm and establish pluriversal norms in theory and practices.

Community: Anderson defines this attribute as: "Finally, it is imagined as a community, because, regardless of the actual inequality and exploitation that may prevail in each, the nation is always conceived as a deep, horizontal comradeship. Ultimately it is this fraternity that makes it possible, over the past two centuries, for so many millions of people, not so much to kill, as willingly to die for such limited imaginings." Thus the sensibility of communionship influenced the toleration of people. In this work, we are interested to see how the horizontal comradeship works in the virtual world of Facebook groups and what kind of inequalities, exploitation, and sacrifices are normalized and discarded there.

We find that Anderson's notion of imaginary communities applies to online communities in many ways including a Facebook group members' perception of belongingness and shared ideals, and the horizontal sovereignty practice of the group-admins. Partha Chatterjee criticised this theory and stated that even the imaginations may remain colonized through such perceived homogeneity of belongingness [31]. This encouraged us to find how the attributes of *Limited*, *Sovereign* and

Community of Facebook special interest groups function under colonial influence by imaginations, norms, policies, and practices. Building on Anderson's theory and its criticism, we will investigate our research question, ***RQ3: How do the admins and the users negotiate between the groups' boundary and sovereignty and members' freedom and privacy?*** And then, building on our findings, we further engage with Chatterjee's argument to explain how the Facebook groups in the Global South may still remain under colonial influence.

3 METHODS

A recent survey on Bangladeshi Facebook users informed that people prefer to subscribe to the groups where they could participate in recreational, educational and professional conversations, and share opinions on local and global affairs, national, and ethnic concerns, religion, gender justice, and e-commerce [125]. We borrowed insights from this work and further interviewed our participants to investigate what happens when people in the Global South access online social spaces, how they form virtual communities and maintain those, and how they sustain their broader agenda of communionship.

3.1 Interviews

To deepen our understanding regarding Bangladeshi users' Facebook group participation, we conducted one-on-one interviews with Facebook group users and admins (n=32) in Bangladesh. All the participants were equal to or above the age of 18 years. The primary criteria to be eligible for this interview was that they have to be admins of at least one Facebook group and general users in multiple other groups. We recruited the volunteer participants through online social networks (e.g., Facebook), word of mouth, and snowball sampling. Although all the participants we interviewed were Bangladeshi citizens, many of the groups in the questions had Bangladeshi citizens as the majority of members along with non-Bangladeshi citizens (e.g. West Bengali citizens, non-resident aliens living in Bangladesh, and Bangladeshi diasporas/descendants living in a different country) Among the 32 groups whose admins participated in the study, admins of 21 were all male and admins of the other 11 groups were both male and female members. However, female admins of only three groups agreed to schedule interviews with us. See table-1 for the type of groups which the participants administrated and other demographic information of the participants.

The participants took part in the interview through an audio call over their preferred medium (e.g., Skype, Facebook messenger, etc.). At the beginning of the interviews, participants were asked if they had taken part in this study before. If they reported it was their first time, they were allowed to proceed and presented with an Informed Consent Document (ICD). Once they read and agreed with the statements in ICD, we started the interview. All the participants joined the interviews voluntarily and they were not compensated.

We conducted the interviews in a semi-structured fashion. In the interviews, we first asked the participants about their experiences as general members in the groups they are subscribed to. In this regard, we asked them what kind of Facebook groups did they prefer to be in, the steps of gaining an entry in such spaces, and asked about their reactions to the entry processes that included the admins of the groups asking more information to let them join the groups. We further extended the conversation with the details on rules and regulations of the groups they administrated, the maintenance and management procedures of those groups, the challenges that occurred in such groups and how those are resolved, and the tools and technologies used in this regard. We did not collect any personally identifiable information (e.g., Name, Social security Number, Driving License No. etc.). We audio recorded the interviews only with the permission of the participants and took detailed notes in our notebooks during the sessions. All of the interview sessions used Bengali as the primary language. It generally took around 25-40 minutes to complete one interview.

Total Number of Interview Participation: 32	
Gender of the Participants	**Occupation**
Male: 29 (91%)	Student: 22 (69%)
Female: 3 (9%)	Job Holder: 10 (31%)
Age Range (in Years)	**Types of Groups Administrating**
18-24: 15 (47%)	Public: 4 (13%)
25-34: 13 (41%)	Private: 22 (69%)
35-44: 3 (9%)	Hidden: 6 (18%)
45-54: 1 (3%)	

Table 1. Demographic Characteristics of the Interview Participants

We left every opportunity for the participants to leave the interview if they felt uncomfortable even during any ongoing session. We also informed them that we would discard the record of their participation if they want. However, no such event took place over the course of the study.

3.2 Data Collection and Analysis

The interviews were first audio-recorded using the researchers' phones. Later, we saved them in a secured hard-drive for further data processing steps. We collected a total of approximately 10 hours of audio recordings and 150 pages of interview-notes. In the analysis process, we first transcribed the audio recordings and later translated them into English. We then performed thematic analysis on the transcriptions and our detailed notes [33]. We started by reading through these documents carefully and allowing codes to develop. Three of the authors independently read through the transcripts carefully and allowed the codes to develop. Later they shared their codes with each other. Disagreements were resolved through discussions. We occasionally brought other authors in for their opinions, depending on their availability.

A total of 35 codes spontaneously developed during the first round of the coding. Then we clustered related codes into themes. Some of the themes seemed recurring, for example, entry questions, anti-group, admin elections, spamming, bullying, harassment, religion, politics among others. Such themes influenced the organization of our finding section presented next.

3.3 Ethical Concerns and Institutional Approval

During this work, we did not collect any of participants' Facebook data or their activity log. We also did not collect any content posted on the groups or members' details while engaging with the admins. Our study was approved by one Bangladeshi university and one North American university's Institutional Review Board.

4 ADMINISTRATING FACEBOOK GROUPS

Through the interviews, we grew an understanding of how the admins and creators formed groups and recruited members; how they set rules and solve problems while maintaining the community; what types of Facebook features are helpful and which are problematic to them; and why and what type of other external tools and technologies they frequently use. We present the findings below:

4.1 Group Formation

The focus of the groups which our participants managed could be broadly categorized into ten types: agriculture, entertainment, F-Commerce (Facebook Commerce), family connections, indigenous community, matrimony, philanthropic, public interest, student community, travel, and women

empowerment. These groups had specific motivations and followed different strategies while setting up and enrolling members, as we discuss next.

4.1.1 Setting Up. Our interviews with the admins of the groups revealed that there are several ways of setting up a Facebook group, depending on its goal and target members. First, generally people set up a group by creating one, added users they personally know, and further enrolled users through snowballing. The second way was to buy an existing functional group that was hijacked by hackers and put for sale. We discuss the details below:

Creating Groups. Our participants who were the admins of the groups mentioned that a Facebook group was usually set up by creating a group first and then inviting their friends who were interested in the same topic. Seventeen of the participants mentioned that at least twenty-three groups run by them were set up this way so that people of same interests can come together and share their thoughts. For example, one of the sports-focused group admin mentioned that,

> *"We actually want to gather all the (our club) fans of Bangladesh in a common platform. So if they visit this group they will know when the match time is or against which team the match is or any news of (our) team. That is actually the group purpose. (P2)"*

Some of the groups run by our participants were highly profession oriented and focused mostly professional communication and relevant agendas. For example, an admin of a group that worked with farmers explained to us this way,

> *"Farmers who follow our instructions to grow crops or are affiliated to us, this is a platform for them. There are 17000 followers of this group. We keep the records of buying and selling dynamics of the crops here - where the crops are coming from, who are harvesting, how much is the profit, the market demand, etc. This is a platform for communication between the consumers and the farmers... we study their culture, agriculture, house-building-pattern, power system, rivers, social infrastructure, etc."(P17)*

We also found that groups may also change their initial goal. For example, three of the admins mentioned that their groups were created for some specific agenda and later those were turned into groups of different focuses. The admin of one of the groups, which was opened to maintain communication among the students and alumni groups later became a popular place for deep and heated political discussions, explained,

> *"Initially it was a fun group and people used to post real life jokes and funny stories from their student lives. Then it started hurting some peoples' feelings as some jokes did not remain jokes anymore and started crossing the limits in some peoples' view. It became a place of politics. We had to start rethinking and reformed the group, then it became a place of more chaos. Now people go there to release their frustration and fight others." (P31)*

Purchasing Groups. Whatever the agenda the groups had, many of the groups were not created by the admins who ran them at the moment of their interviews with us. For example, one of the admins mentioned to us that he bought a group that was already filled with a few thousands of people and then he started his actions following his vision,

> *"I bought this group back in 2018 to spread awareness news, Islamic news, etc. It was a big group from the beginning, as I bought it... I bought some other groups earlier, but they got hacked. My ID got hacked, so from there I lost access. The person who hacked my ID took that group."(P4)*

We further investigated on this fact and our participants explained to us that there were many such sellers who hired people to create free Facebook accounts (locally known as *"Dummy account"* or *'Dummy users"*) and added them as members to the groups that they created. Those were called *"Dummy Groups"* or *"Empty Groups"*. Then, they advertise them and put them on sale. In many cases,

these groups were created with "public" privacy setting so that other Facebook users could have a look at their contents. The posts in such groups frequently contained religious and pornographic contents. These two were the most attractive social media contents consumed by local people, as our participants explained. Upon reaching a certain number of members in the groups, the creator could change the privacy settings. Five of our participants also informed us about buying and forming groups in this way. One of them explained that the price of buying such a group depended on the size of the group and privacy setting of the group,

> *"The sellers at first open a Facebook account, add people as their friends and add them to a group. Thus with many Facebook accounts, you can gather a lot of people...The buying rate of closed groups is low, as the contents are not public, they get fewer views/likes/shares."(P4)*

Our participants also informed us that sometimes hackers targeted popular Facebook groups and demanded money upon taking over. For instance, an admin (P30) of one of the groups with more than one million members mentioned that their group was hacked a year back. The hackers asked for money. They also kept on posting controversial contents in the group to sabotage and defame the group so that the members would leave the group. The plan of the hackers was to resell the group to them or to some other customer as the group-size was gigantic. Later, the admins contacted Facebook authority and engaged local law enforcement in the process of retrieving the group. Since this particular group was well-reputed for having many active users and not allowing *"dummy users"*, the demand of such groups was high among the group-buyers who bought dummy groups and converted them to a group of something else.

4.1.2 Member Enrollment. Our participants mentioned that setting up a Facebook group did not work alone, they had to invite Facebook users to join their group as members on rolling basis. Twenty-three of our participants mentioned that they cared more about who joined the groups than having a group with gigantic number of members. In this regard, our participants explained to us how they adapted different strategies to go through member enrollment process.

Some of the Facebook groups' admins we interviewed informed us that members' genuine interest aligning with in groups' focus was important to them. For example, the admins of the sports groups were careful of having only those people as group members who showed utmost support to their favourite team and the key player, as one of them explained,

> *"...(B)efore accepting request, we check that user's timeline and if we find that he is trolling (the football club) or (the club's key player) in his Facebook timeline then we block that person... We normally check whether it is a real id or whether the request is from a rival fan. You know, we have (our key player) in (our club), but a rival fan may insult (our key player) if we add them in our group. So we normally don't add them.", (P2)*

When we asked them what did they do to the "join request" made by someone with a locked Facebook profile, as no one can see any relevant information of the locked profiles. They replied,

> *"It's normal to have a locked profile, in that case we inbox him and if he replies properly and unlock his profile for couple of minutes or if he gives us his timeline post screenshot for proving that he is a (the football club) fan we approve his join request...Some members are very active in our group. If they add any member we don't do any verification. But if any unknown member adds any member then we ask them if the added member is really a (the football club) fan.",(P2)*

Five of the other groups mentioned that they would thoroughly investigate the answers to their preset questions which the member applicants would need to address while making the "join request" to the Facebook group. As one of them explained,

"We don't add people if they don't give us the information. If the profile is locked, we just see the answers then."(P7)

Eight of the other admins echoed the same and also pointed that the Facebook lock option was a trouble for them to verify the applicants as they maintained agenda specific closed groups. They also explained that locked option did not even let them see if those accounts had any content on their timeline, so that they could be verified those as real users and not "dummy users". Five of the admins also mentioned that they often faced troubles while verifying female accounts especially, as one of them explained,

"In Bangladesh, women active on Facebook are often harassed by random males, no matter show reserved those ladies are. That is why many women use absurd names, like "Neel Akash" (meaning blue sky), "Shagorer Dheu" (waves of the sea), "Heemaloy" (mountain Himalaya), etc. and even sometimes male names so that they could hide their gender. Such accounts are also very hard to verify, even if they are not locked."(P12)

Some admins also mentioned that many men in Bangladesh wanted to surveil and control their female family members', especially wives' accounts, and this tendency became a challenge for the admins while verifying the accounts, as one of them explained,

"Men in the country like to control and protect the ladies of their house even online. They would monitor their ladies' online activity and hence convinced them to use either the men's account or ask the ladies to share their password so that men can access and use them freely. Sometimes they even come to agreement to run one single Facebook account together. In such cases, we find a lot of duality in the posts on their timeline. Such profiles are risky to add to the groups, especially if you run a men-only groups or a group that only entertains men. We don't accept such dual accounts."(P3)

Thus, often the groups' screening process was challenged and admins ended up reaching out to them seeking information or just removed the requests. They also informed us that they would check how old the Facebook account was, if the title of the profile and the account handle [21] or username found on the address bar matched, who were the common friends (if any), what kind of Facebook posts they frequently shared, and what kind of groups and pages they joined.

Two of the rest of the groups were run closed, and for specific members, so they did not need to add any more members, as their admins mentioned. However, seven of our participants mentioned that they did not care much about who joined their Facebook groups, as they cared more about having a good number of members in their groups. So, they would add any member request without investigating the accounts' details. Some of the admins also mentioned that sometimes they would communicate with dealers of Facebook accounts, paid them and requested them to let some of the "dummy users" join the groups so that the groups would seem to have stronger network. Those admins further explained that such dummy users were useful as they would support the admins' opinions and ideologies in online fights and would vote for them as they were paid.

4.2 Maintenance

To maintain the groups, some of the admins mentioned that they set up specific group rules and regulations for the members to follow. They also grew a mutual understanding among the admins of respective groups regarding how to handle conflicts and violations of group-rules. We discuss them below:

4.2.1 Selecting Administrators. While for most of the groups the admins were selected or elected initially and there were no change since the beginning, three of the groups' admins mentioned that adding and dropping admins were a dynamic and seasonal process in their groups. They pointed about appointment of the admins periodically for three or six months and such an appointment happened through a selection or election. In the admins' selection or election process, there was generally a call for nomination and thereafter voting. For one group, all the members openly voted to select their admins, while in the other two groups, the admins privately voted and elected new admins. One of our participants also mentioned that members of the groups engage with each other during such admin elections. However, some of the admins also mentioned of their growing concerns regarding bribed-vote for and against admin candidates.

Sometimes the group admins might also need to dismiss the admin panel before its expiry for many reasons. As one of them shared an experience of an admin's betrayal led the whole panel to take the decision of discarding him from the group,

> *"So to add someone to or remove someone from admin panel, all admins first have a discussion about it... In the past, some admins tried to give admin role to their group member close friends without discussing it with other admins. They created another chat group for this and these matters went viral. Later they were removed from their admin role through a collective decision made by the panel." (P1)*

We were also curious if persons' gender played any role for or against their being admins the groups. Seven of the participants mentioned that many of their female friends in the groups were consistently helping them run the group throughout, but those ladies did not want to be admins and visibly practice adminship for several reasons, as one of them explained,

> *"We have three women actively help us run the groups, we have also added them on our admin chat since they are good with ideas and judgment. However, they never agreed to be admins because many times people take women's posts and comments lightly, sometimes as a joke. Those may even turn to trolls and harassment, as we can tell from experiences. Even if we are very strict regarding such behavior, still our female friends anticipate that such unexpected incidents would leave a trauma to the victim and the ladies do not want that." (P21)*

Thus, although, selecting or electing administrators for the groups was a crucial part of the groups' maintenance since these admins held the utmost power in the groups and played significant roles in group activities, such selections were also impacted by previous history and anticipations.

4.2.2 Rules and Regulations. The maintenance of the groups included keeping the group running while maintaining an environment for members to join the conversations and contribute. Thirteen of the admins mentioned that they set up and followed a very specific written code of conduct of groups' rules and regulations so that members would obey those. One of the admins gave us an example of one of their rules,

> *Posting screenshots from other 'Facebook groups' post/comment are strictly banned. But posting screenshot from other websites (news site) is allowed. In that case, just crop the main portion...'Copy-Paste' post isn't allowed here. But you can give original writers full credit while sharing something, that is acceptable."(P21)*

Eleven of the admins mentioned that their groups preferred the language of posts to be either Bengali or English. They did not appreciate any *'Murad-Takla Language'* (means any of the two: (1) Bengali posts written using English alphabets, and (2) English words and sentences written using Bengali alphabets). One of them explained to us,

> *"We made it clear that you have to write either in Bengali or in English. 'Banglish' (local jargon of saying a mix of Bengali and English) and 'Murad-Takla Language' are not allowed. Some members in our groups can't write properly, but their mistakes piss others off. So we remove those posts and comments. So, they just stay silent, only put likes."(P27)*

Admins of thirteen other groups also mentioned that using local dialects were also forbidden in their groups and were often seen as a violation of group rules. In such cases, they mentioned of removing posts or forcing the authors to edit their posts and taking actions against the authors not following the groups' rules. One of them explained,

> *"English is English, Bengali is Bengali. Either it (the post) should be in English, or Bengali. We do not want our group to be flooded with non-standard writings, like local dialects and indigenous languages in English or Bengali fonts. Only standard English or Bengali, please!"(P16)*

We asked P16 if the participant is not much expert in either of Bengali or English, maybe because they did not receive much change to improve their writing skills, they replied,

> *"Of course we are sympathetic to them. If we understand that is the case, then we help them learn and rewrite. Our group is giving them an opportunity to learn and match the standard and helping to blend in, isn't it great?"(P16)*

Twelve other participants mentioned that language was a major concern to them, since posts using poor language skills quickly become meme contents among Bangladeshi Facebook users and people use them to troll. Having groups' name on those troll meme contents were concerning to the group admins, as they explained.

Admin of one of the groups mentioned that they had a strict rule of using their group's hashtag with each of the members' posts to be eligible for the groups and the admins would check and verify if the hashtags were there before approving, as they explained,

> *"You must use a specific hashtag of our club's name at the bottom of your post. Otherwise your post won't be approved. We learned that such hashtags on social media are counted to prove how strong the fanbase is."(P2)*

We further investigated how such rules are established. Five of the groups' admins mentioned that most of their rules were basic common sense and reflection of local law. They would not allow disrespecting anyone, personal attacks, and hurting someone based on sensitive topics including religion and locality. Three admins also mentioned that the rules they were using in their groups were inherited from the previous admins and they frequently updated them depending on situations.

4.2.3 Troubleshooting. The participants helped us listing in the major challenges of running a Facebook group. This list included any initiation of an irrelevant discussion by group members, aggressive and vindictive behavior by some of the members, and gender harassment. One of the admins explained why they thought that if they set the group free of restrictions on such behaviors, how irrelevant topics and discussions might harm group harmony,

> *"Some people repetitively post about irrelevant issues, some tend to write comments about irrelevant topics. We delete them primarily but then block that particular person. Recently, the most alarming issue is fundamentalistic posts. These come in various ways, maybe covered or masquaraded by other issues, but we consciously try to tackle them. " (P12)*

Seven of the group admins mentioned that often their group members got overwhelmed from diverse phenomena and started being aggressive to each other. In such a situation, they started

posting troll comments and offensive memes and initiated dogpiling. The admins mentioned that such contents were perceived as harmful by the group admins and they explained to us how they handle those,

> "The photos and videos irrelevant to our group topics are also deleted. Another thing we keep an eye on is political posts. No political post is allowed here whatever it be for the running government or others, we have zero tolerance for it." (P22)

Some groups found spamming, promotional posting, and advertisements as inappropriate actions. They set some rules against posting them. They also mentioned that often group members were annoyed by such spams and promotions and generally showed a zero-tolerance towards such actions,

> "In case of spamming, advertisement of commercial/personal pages we don't go for any other thing, we ban him directly. Not only because they were making money by annoying the groups members, but it is also a risk to keep this kind of member in the group and we don't want to destroy our group's reputation for only one member. We have already more than 20,000 members in our banned list."(P24)

Four group admins mentioned that they also hold a zero-tolerance towards gender harassment in their groups. They explained that they would immediately ban the members if they initiated or engaged in such controversy, as one of the participants explained,

> "It happens usually when a female member of the group posts about something. Then some people, who might have nothing to do with it, would just come for no reason and start posting or commenting abusive, inappropriate, or vulgar contents. In such cases, we would remove them."(P4)

Even after avoiding and restricting irrelevant and inappropriate posts on the groups, many of the participants said their groups often witnessed conflicts and disagreements. In many cases, those conflicts and disagreements were based on a topic that was related to groups' agenda. For example, one of the participants, who ran a group on healthy living, gave us an example where two subgroups of members were fighting over a news,

> "One side presented what was written in newspaper A and argued that a particular diet was healthy, while another side argued based on newspaper B and claimed otherwise. We found that both articles were written by two Bangladeshi dietitians. In such cases, we generally look up some English articles. So we did and helped the members resolve the issue with English lifestyle magazine articles."(P5)

This approach of resolving conflicts using reliable news sources and written material was adopted by several other group. In such cases, non-Bangladeshi contents and articles were considered more reliable than Bangladeshi ones.

4.3 Tools and Technologies Used

In order to maintain group details including documents describing rules and their versions, details of banned list, and admins' contact information, the admins used some tools and technologies. Sometimes they used the built-in Facebook tools and facilities in this regard. For example, twelve of the groups' admins mentioned that they had either a separate group or a chat thread to discuss critical affairs taking place on the base-group that they administrated together. Such a meta-administrative platform helped them discussing and deciding stuffs behind the scene, as one of the participants mentioned,

"We have a separate Facebook group named 'abc group'. 'abc' means assistance of (the football club) community. All the admins, moderators and 'valuable members' are the member of this 'abc' group. 'Valuable members' means the most active members of our main group. We select the most active members of '(Football Club) Fan group' and add them to this little 'abc' group."(P2)

The admins also explained to us how they distributed and balanced the workload of maintaining the group among admins, moderators, and some of the trustworthy members of the group and how some of the existing built-in Facebook tools helped them in this regard,

"There are a total of around 50 members in there now: 10 admins, 15 moderators, and rest of 25 are valuable members. And from the 'valuable members' we choose the next moderator/admin. 'Valuable members' have two types of jobs to perform. To give regular match update and write in main group. 'abc group' members have also some separate 'Facebook messenger' groups according to their work and designation like 'writers panel', 'moderator panel', 'admin panel' and 'match thread'. The 'writers Panel' members normally write detail post about (the football club) players or anything related to (the football club). The 'match Thread panel' members give post about (the football club) match by giving regular match update, match time, date and score line."(P2)

Five of the admins mentioned that they used the "turn off the comments" option provided by Facebook for those posts that make troubles. Three of the other admins mentioned that they also used the mute option for a particular trouble making member to stop him or her from posting comments, as one of them explained,

"We use the mute options as a response to someone breaking the rules. Suppose the topic is such that it provokes to use bad language like any unfair decision goes against (the football club) or we lose a match and the coach is responsible for this. So in that case, if anyone uses bad language, we then delete the comment and mute him for couple of hours."(P1)

Three of our participants mentioned that their or their fellow admins' Facebook IDs were hacked at some point and thus their group was also sabotaged. One of them mentioned how they used some of the existing tools to face such challenges,

"You have to keep your ID safe first. You should keep your birthday and contact number hidden, keep 5 trusted contacts, keep two-factor authentication on etc. You should not click on any link people give you on messenger. Many hackers are after me now. I manage three of the biggest groups in Bangladesh. So, I have to be careful."(P4)

However, still many of these attempts failed due to a number of accidental actions and often it was very difficult for the admins to retrieve the group once it was lost. As one of the participants shared their experience of losing their group,

"A few days ago, I accidentally added someone as admin, then he removed me and took the group. The options are clumsy, you know, I sometimes press the buttons accidentally."(P4)

Another of the admins explained to us how they distributed the workload and used Facebook provided tools and technologies for a better maintenance and assured the safety and privacy of the groups,

"We have multiple admins and moderators who keep the group clean. At least one or two of them stay online all day long. Admins try to post every day so that the members can learn what is allowed to post here. We have a post-approval section in our group. We delete reject and irrelevant posts there. Moreover, we handle every situation more softly. If

turning off comments may fix any problem, we only do these things, nothing else. And for some serious issue, all admins can discuss in another secret group. "(P6)

Two participants also mentioned how they used Google forms, Google survey, and Google spreadsheets to keep track of the member enrollment process; banned members' list, who added them, and when and why they were banned; and the records of groups' rules and code of conduct.

5 FACEBOOK GROUPS AS COMMUNITIES

Our work found that Facebook groups often function as a community on the virtual space for specific group of people with shared interests. However, often the members of the groups perceived this communionship as limited within the group through their identity and shared interest and found the groups as a free space for expressing and practicing their ideals. However, admins of the groups often shaped and disciplined such practices of the group members by imposing some rules which aligned with communities' identity and their shared sentiment. Our findings show that such leadership helped sustain the perceived communionship in the groups. We found that this practice of Facebook group-based communionship could be explained using Anderson's concept of imagined communities [16] and can be further stretched to the pros and cons of such perceived communionship. In this section, we will use the three attributes conceptualized by Anderson: limited, sovereign, and community to explain Facebook group-based communionship.

5.1 Imagined as Limited

Our findings showed that the admins and members of the groups imagined the community as limited collections of people with shared interests and agendas. Regardless of the group size, they followed rules and regulations and set a guideline to discipline members' behavior inside and outside the groups. In this regard, the members' common interest, based on which the groups were formed, was perceived as a part of shared identity. However, any extrinsic phenomenon beyond their groups' sentiment was not much welcomed in such group settings, as one of the group admins explained,

> *"We have 2-3 preset questions, but even if people requesting a membership do not respond to all of those, we would not bother. However, we would still check at first is whether it is a foreigner (Facebook) ID or not. Foreigner IDs are normally spams IDs and are disrespectful to group's sentiment, which is dangerous for our group. That is why we don't allow them in our group."(P2)*

We also found that admins and members of the groups often used the groups' subscription or membership as the boundary of the communionship and imposed rules and regulations to restrict sharing of groups' posts and media contents in other groups. The participants also informed us that it was quite common for members and admins to monitor members' activities inside and outside of the groups and report to the groups' admins if anything suspicious or offensive towards groups' sentiment is found. They mentioned that such activities and discussions often happened privately, as one of them explained to us,

> *"We do a lot of things behind the scene which we resolve in the admins' private group, if those keep coming out then that might be a problem for everyone. Also, why the rest of the world needs to know our troubles and secrets?"(P28)*

While many of the admins were concerned about their members' activities inside and outside of the groups, several of them were strict about group members' individual and collective political standing. They mentioned that they were also generally reluctant to share their advises to the group members in public. In this regard, they did not want to welcome the people of different ideology in their groups, as one of the admins explained to us,

However, while the admins' intention worked more for sustaining the groups' boundary and privacy, in many cases the sensibility of shared identity challenged the users of the groups with several troubles. One of the troubles we noted was regarding language. We found that eleven of the groups did not allow posts that mixed up English and Bengali words and phrases or had typos, wrong spellings, and major grammar errors. The admins believed that such posts would degrade the reputation of their groups and mentioned to us that if such posts were allowed, many members would humiliate the authors and discard the topics of the posts. However, they also pointed that rejecting such posts had the risk that the members might post less frequently and their voice would remain unheard. We also found that the notion of shared identity sometimes also demeaned groups of other identities. For example, an admin of a specific religion-centered group explained to us that they struggled to refrain the members from initiating and participating in hateful and extremely-radical discussions against other religions as many of the members believed that their religion was superior than other religions. To handle such situations, the admins turned on the Facebook group feature of "post approval" and thoroughly screened the posts before approving them. However, it was still hard to stop the hateful comments under the posts.

5.2 Imagined as Sovereign

Our study found that Facebook groups were set up based on specific and focused interests, and the members subscribed to the groups for these reasons. We also found that Facebook groups with desirable sizes could be bought and sold. Both of the ways of founding a Facebook group actually went against the theme of hierarchical dynastic realm and notion of state emerging from that. Here rather members could join and leave the communities based on their own will. Furthermore, here the users could also grow their own communities with focused agenda, or own a community by invading or buying it and imposing personal ideologies. Such actions leveraged their notion of imagined sovereignty. For example, during the interviews, two of the group admins mentioned repetitively that they were the admins of two of the biggest Bangladeshi Facebook groups and thus they were very important persons.

We found that the groups often organized activities as a sign of their unity and uniqueness. Such activities included group members participating in mass hashtag sessions where the members were expected to flood group posts with specific hashtags, admins putting themed banner on the groups, and members using themed template for their Facebook profile pictures. The admins believed that such activities were helpful to sustain the perceived sovereignty of the groups. Often times such sovereignty was associated with mutual trust. Together with this sensibility of sovereignty and trust within the members sometimes it also led to real life social movement, as one of the admins of student-centered movement group explained,

"We formed the group when the 'Quota Reform Movement' took off. We felt the need for a genuine student platform that will work for the welfare of students only, not for political parties. Now, we have emerged as an independent political group at (the) University, done the (student) election, and some of us have been elected in the central committee. So, this Facebook group has helped us a lot to build a community and work for the real betterment of general students. Now, we raise our voice against guestroom culture, admission corruption and lots of issues. Mainly raising political awareness. We plan to conduct more grass-root movements and distribute our tasks among the trusted members. This group is for the core

working members of (the group). The closed group is used to circulate any news regarding our movement."(P10)

Often this sensibility of trust between the group admins and the members and their perceived power was connected to their identity. That helped them call for activities and run social and political movements using Facebook groups, as one of the indigenous Facebook group admins explained to us,

"This group awares people of the importance of (indigenous) villages by promoting the village protection movement activities. The authoritarian culture of the state and market is killing our villages. Not only the villages of the Bengalis, Adam of the Chakma, Kami of the Tripura, Sang of the Mandi, and Ato of the Santals are also being killed. We work to protect all. Anyone can join our movement, so anyone who is our ally can join us."(P19)

However, at least five of the group admins also believed that they might have not earned that utmost power in the groups as the culture of those groups involved democratic participation of members for administrative purposes. We also found that sometimes the sovereignty was also threatened by external sources. For example, two of the admins mentioned that their groups were hacked and many group members immediately left the groups upon realizing that, instead of saving the groups.

5.3 Imagined as Community

Our study showed that when the admins and creators set up the groups from the scratch, the Facebook groups and the admins came to the users as community, in which the fraternity experienced a horizontal comradeship. In our cases, the admins were the members of the groups- one of them, accessible, connectable, and communicable. In many of the groups, such a sensibility of community brought more inclusion of diverse group of people with similar interest, as one of the academic-interest group admin mentioned,

"Seniors from the 90s batch (graduated from higher secondary standard in 1990) are here. Even though they are not students anymore, we did not remove them. This is a friendly gathering for all of us, we get benefited from mutual relationships. People who will come next, will also be benefited from us. It is a chain, a legacy."(P8)

Furthermore, our study found that such a sensibility of community could further lead to real-life activities with their members. For example, one of our travel group admins explained it this way,

"This is a big group and people listen to us for many reasons. However, that comes with a great sense of responsibility. We travel to places, and we leave those spots dirty. We felt that we can do something and we started the cleaning up tourist-spot mission. No matter when, no matter where, we always get enough volunteers to join us."(P32)

However, the admins of the groups mentioned that even after they warned that the silent and inactive members might get removed from the groups, many members still stayed shy in the group and did not participate in the group discussions and other activities. Contrarily, five of the admins thought that sometimes strict rules and regulations might scare the members and lead them to silence. Another two admins thought that if the groups' culture included that the members who were more compatible with group rules would bully and police others for their incompetence, then such group would end up marginalizing many of the members. Thus, our findings showed that even though the comradeship in many of the groups was horizontal, the members' perceived communionship may still not be homogeneous within the group in many cases.

6 DISCUSSION

In this paper, we have presented the factors that were influential to Bangladeshi Facebook group administrators and users to establish and run their groups. Here, we have overviewed some of the prominent Bangladeshi Facebook communities who formed their specific interest groups; grew policies regarding enrollment, maintenance, and managing conflicts; and eventually concerned many group members by risking their privacy through some of the existing practices. We also explained how this practice of communionship on a virtual space provided the users with a sensibility of the virtual communities' limits and sovereignty. Lessons from our study open up new scopes for CSCW, HCI, and ICTD in both design and theory fronts.

6.1 Design Implications and Challenges

We start by focusing on the design challenges that our study disentangles for CSCW, HCI, and ICTD. We found that some of the admins used other tools and technologies (Google forms and sheets, for example) to maintain Facebook group activities such as keeping track of the member enrollment process and banned members' list, reasons of getting banned and related other details. We believe that Facebook should develop and offer more group-maintenance tools for the administrators that help them with such record-keeping. Such tools might include group activity log of the members and record of offense committed by particular members. One of the old features of Facebook, namely "Notes", was reportedly useful to many writers' communities for collaborative tasks [119, 140]. An option to allow selective members and admins to access such a note feature along with its history and log within the group might help the administrators and concerned members manage the group activities better. However, we believe that while designing such tools, we need to be extremely careful of not creating more opportunities to violate the group members' privacy.

We also found that often group admins muted members as a punishment for their misconduct in the group. Thus, the convicted members forced-stayed silent for a limited span of time and could not express their opinion. While this punitive rules worked fine for many groups, this did not help the groups that worked on building solidarity. There the muted members were barred from seeking or offering help. We believe that Facebook group member "mute" feature can be improved by allowing the convicted members to participate as ghosts and their actions can only be seen by group administrators. We are hypothesizing an "improved mute" option that would be quite opposite feature to "block" option where blocked members can not see each others' content but the rest of the users in the community can. Recently, Zoom, an online webinar platform, has improved their audience feature to allow "attendees" and "panelists" [142]. The former category of users only see each other but no panelists or hosts and their interaction in the webinar is limited, and the latter group can see and interact with everyone present [142]. We believe that Facebook group settings could benefit by integrating such control mechanism for administrators.

6.2 Perceived Online Communionship and Intersectionality

Our study demonstrates several avenues for social computing, HCI, and ICTD to integrate its existing focus on social movement and political voice of the mass population. We note that Facebook groups provided the users with a sensibility of imaginary communionship with the other members and imaginary sovereignty and such a sensibility empowered the users in many ways. However, this also dis-empowers part of the communities to some extent. For example, many of the admins informed us that they did not allow the posts or comments which were not standard Bengali or English and they preferred those members who used local Bengali jargon and wrong English grammars remain silent. However, we believe that such an unwelcoming environment in the community with shared interest and perceived shared communionship may not be empowering for those

members. This could be an example of online political marginalization from an intersectional point of view [34, 35], as such members belonged to and shared their perceived identity with the community but they were also cornered because they lacked some skills expected by that community and ended up being a victim of boundary keeping by group rules. Many recent CSCW and HCI work on healthcare, women empowerment, and social justice in the global south have showed intersectionality as a major concern and suggested computing techniques to be more aware of the context, socio-economic class of users and other stakeholders, identity-politics, and local cultural ethics [62, 107, 124, 137]. We argue that CSCW, HCI, and ICTD design researchers need to carefully analyze these facts and design politically for these targeted groups of people in a way that causes no or minimum dis-empowerment to different groups and further leads to a sustainable social ecology.

6.3 Imagined 'Sovereignty' Community and Decoloniality

Our work also joins the ongoing decolonial-computing movement within HCI, CSCW, and data science. Renowned postcolonial computing talked about colonial influences in technology design, deployment, assessment and use, while decolonial computing takes into account postcolonial thinking and aims at political action to dismantle lingering colonial structures and thinking [10, 12, 84, 123, 136]. Thus, decolonial computing urges to look into who are associated with computing, where are they doing this computing from, how they are associated to this computing in terms of knowing (epistemologically) and in terms of being (ontologically) [84], and how belongingness plays a role in power practice in terms of culture and race [10]. Our work can relate to this sensibility as we found that the admins of the Bangladeshi Facebook groups who engaged with the members based on their imagined cummunionship, disciplined the group members using rules and regulation and often forced them to practice "standard" language skills. In many cases, while resolving the conflicts on confusing news, they preferred non-Bangladeshi contents over Bangladeshi experts' opinion. Thus, while practicing imagined 'sovereignty', such tendencies of Bangladeshi Facebook groups together with perceived homogeneity of belongingness in the imagine community could be pointed as *'imagination being colonized'*, as termed by Chatterjee while critiquing Anderson [31]. Building on this, we argue that researchers working in the intersection of decoloniality, computing, online community and social media should be careful of these sensibilities while analyzing information and system and designing technologies.

6.4 Tension between Privacy and Empowerment

Our work also joins the growing body of privacy and empowerment literature in CSCW and social computing. Many of the prior works point to the tension where users often need to negotiate between their privacy and their capabilities and values, including access to information, receiving quality healthcare and engaging with solidarity networks [5, 6, 11, 52, 66, 102, 125, 131, 133]. In our work, we also found such a tension. We noted that many of the group admins wanted only those users in their groups who possessed similar interests and agendas. Since the current design of the platform provided little opportunities for admins to verify such similarities in a reliable way, the admins of the groups set specific questions and investigated the personal Facebook pages of the users who sent "join requests" to the groups. We found that this process was also challenging since many people had their profiles locked and did not answer the questions properly. One possible way to address this challenge is the system-supported accumulation of users' activities to generate a summary of users' interests, shareable with others, e.g., admin of a group. However, there are many known cases where social media platforms analyzed their users' activities, showed them targeted ads, and shared those information to third party and been criticized in wider communities

for privacy and ethical concerns [18, 97, 105, 128]. Thus, we believe such a design should be aware of the tension between users' freedom of sharing and group admins' needs of credible verification and frequently inform the users who could have an access to which of their information if they requested to join any particular group. To this end, accumulating users' publicly shared information only, may alleviate their privacy concerns. However, the extent of public sharing may vary across users, which in turn, could affect the efficacy of this scheme. In an alternate approach, following a user's consent, further information, although not shared publicly by a user could be accumulated by the system towards generating a summary of their interests, where the user would use their discretion in sharing that summary with the admin of a group they are interested to join. To offer greater flexibility in decision making and negotiation, instead of generating just one summary for a user, the system could devise a set of summaries with varying levels of details, where a user would be allowed to choose which one they want to share with a group admin, and may negotiate with the admin in sharing additional details if needed, e.g., another summary from the system-provided set accommodating further information of a user's interests.

Our study also reveals the 'authenticity-privacy' tension in the context of social media use. This tension was discussed before in journalist-source communications [73, 74], where the source wants to communicate with journalists without revealing their identity, however, a journalist first needs to verify the authenticity of a source before taking the information from them into account. This tension is little explored to date, as it comes to social media group management. While Rachel [101] argues on the importance of preserving individual's private information to maintain and control social relationship with others, our findings demonstrate the needs of a social media group admin to gain access to a prospective member's personal information in order to preserve the interest or agenda-focused social dynamics and interactions within a group. Further, group admins may assume the responsibility of protecting their groups' sovereignty, integrity and existing members' privacy from an intruder with malicious intents, where a tension arises as the user wants to practice their freedom of information sharing and preserving anonymity to the desired extent while joining a group. In these contexts, our findings present a new avenue of discussion to rethink and redesign the privacy management system of Facebook, which does not deem effective in current design to address the tension between protecting individual's privacy and empowering group admins to verify a prospective member's identity, and interests.

6.5 Social Media Driven Movement

We also join the growing body of CSCW literature on social media movements. A good number of works have addressed movements against racism, gender injustice, healthcare crises, among others [7, 46, 48, 51, 85, 113]. This body of work suggested that often protesters preferred online spaces over physical spaces because mass people would be able to join such movements with greater convenience and it would be easier to drive the movement. In our work, we also found that often many Facebook groups take part in social and environmental movements, specially when such movements needed to be organized against an upper level of power hierarchy to the group members but still they needed to reach wider mass. This paper discussed two examples of such movements: government service quota reform issues and call for solidarity among indigenous communities in the hill-tracks of the country. While the end-goal of most of these movements are to establish justice, in many cases the sentiment of mass people online and infrastructure of local justice do not cohere. For example, in a recent work on gender justice on social media in Bangladesh, researchers have showed that even if some women were able to prove that they were harassed on Facebook messenger, often people concluded that they invited the harassers to harass them since they did not follow the practicing Muslim rules that possibly not allow women dropping their purdah and talking to unknown men online [122]. This work indicated that even though harassed

women thought the people who they imagined as their community would come forward, support their protest against harassment, and contribute to gender justice, such expectations brought them disappointment in many cases as their imagined community were not necessarily sharing the same sentiment as the women victims [122]. Building on this, we argue that social media movement organizers need to understand the clauses and sentiments of shared communionship and drive the movements in meaningful and beneficial ways.

7 LIMITATIONS

Our work has several limitations. First, most of the interview participants are recruited through snowball sampling and thus, they are mostly the people from the researchers' primary and secondary networks. Furthermore, almost 50% of the total number of participants were within the age group of 18-24 years and approximately 90% of the total number of participants were within the age group of 18-34 years, and 84% of them were students. Thus, due to our recruiting of participants through convenient sampling, our work is not free from participation bias and selection bias. However, this actually aligns with existing research on Bangladeshi people's access to the internet and Facebook [4, 90]. According to this literature, 75% of the Bangladeshi Facebook users belong to the age group of 18-34 years and more than 43% of them are students [4, 90]. Another group of reports showed that the number of women on the internet in Bangladesh is almost half to that of men on the internet in Bangladesh [2, 13, 55, 98, 121, 124]. Furthermore, during the study, some of our male participants informed us that they had female admins in the groups but the female admins still refused to participate in the interviews because they suspected that people might harass them in the name of research because they are women. All of these pointed that even though our recruited participants are skewed towards younger population, male and students, this actually quite represents the existing Bangladesh online community. However, we believe that the opinions of our participants and arguments driven from interviews may not represent the collective view of the Facebook users in Bangladesh.

Second, our interviewees were both administrators and members and most of the time the participants provided us with their observations and explanations from admins' perspective. Although, they sometimes shared their experiences as members to some other groups, that was occasionally and infrequent. While engaging with the participants who were both admins of a group and group members in some other groups benefited the work by allowing participants to elaborate their experiences from both perspectives, these two perspectives might also potentially interfere with each other, further influencing their assumptions of how other admins of other groups managed their groups where the participants were general members only. As a result, the findings of our work might have those biases. However, recruitment of both types of participants separately could have helped overcome this issue.

Third, we only engaged with the participants who were expert users of Facebook and failed to engage with any mediated-user (dependent on others) or shared-user (who shared device or Facebook accounts with others). Thus, we did not gain any insight into their challenges. Despite these limitations, the findings of our study will be useful for social media studies similar other communities in the context of the Global South. Also, the arguments and lessons from this study will contribute to contextualizing privacy-friendly policy-making on Facebook and other social media.

8 FUTURE WORKS

In the future, we will expand this research in depth and breadth. In the future interactions of this work, we will recruit more general members of Bangladeshi Facebook groups from diverse age groups and examine how their perspectives regarding the themes presented in this submission

differ from that of the admins presented in this paper. We will also solicit more of female Facebook users' perspectives in this regard. By the time we finished writing this manuscript, Facebook has introduced a new feature where members can hide their names and post using the name of "group member". In the future iteration of this work, we would also investigate how this feature helped online imagined communionship. We can also explore how the admin-to-member and member-to-member interaction go in Facebook messenger groups threads and the newly launched Facebook room feature. Executing such studies would extend the literature on online communities within CSCW, HCI, and social computing.

9 CONCLUSION

This paper presented several crucial factors that influenced Bangladeshi Facebook group users to form and subscribe to Facebook groups. We engaged with the administrators of some of the prominent Bangladeshi Facebook communities and explored how they ran their groups based on the members' perceived shared communionship; grew policies regarding enrollment, maintenance, and managing conflicts. We found some growing concerns, including Facebook administrators practicing comradeship and monitoring the group members' online behavior within and outside the groups. Building on the concept of 'imagined communities' by Benedict Anderson [16], we explained how this practice of online communionship provided the members with a sensibility of the virtual communities' limits and sovereignty. Finally, we discussed the dilemma between the admins' perceived sensibility of sovereignty and users' perceived freedom within the group and we suggested how this work contributed to CSCW, HCI, ICTD, and social media research.

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REFERENCES

[1] Global Digital Report 2019. 2019. Global Digital Report 2019 - We Are Social. https://wearesocial.com/global-digital-report-2019?utm_source=logos_digital_2019&utm_medium=PDF&utm_campaign=Digital_2019&utm_content=textlink_Slide.

[2] How a2i is using empathy to foster innovation in Bangladesh | UNDP. 2017. http://www.undp.org/content/undp/en/home/blog/2017/2/21/How-a2i-is-using-empathy-to-foster-innovation-in-Bangladesh.html.

[3] S Abuthagir Iburahim, Bharathi Rathinam, Suraj Pradhan, and Jaiswar Kumar. 2018. Facebook Fisheries: A tool Towards Improvement of Fisheries and Fishers. *FISHING CHIMES* 38, 4 (2018), 44.

[4] SM Ahmed, Md Hossain, and Md Haque. 2012. Usage of Facebook: Bangladesh Perspective. *Mahbubul, Usage of Facebook: Bangladesh Perspective (May 15, 2012)* (2012).

[5] Syed Ishtiaque Ahmed, Md Romael Haque, Shion Guha, Md Rashidujjaman Rifat, and Nicola Dell. 2017. Privacy, security, and surveillance in the Global South: A study of biometric mobile SIM registration in Bangladesh. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. 906–918.

[6] Syed Ishtiaque Ahmed, Md Romael Haque, Irtaza Haider, Jay Chen, and Nicola Dell. 2019. Everyone Has Some Personal Stuff: Designing to Support Digital Privacy with Shared Mobile Phone Use in Bangladesh. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. ACM, 180.

[7] Syed Ishtiaque Ahmed, Steven J Jackson, Nova Ahmed, Hasan Shahid Ferdous, Md Rashidujjaman Rifat, ASM Rizvi, Shamir Ahmed, and Rifat Sabbir Mansur. 2014. Protibadi: A platform for fighting sexual harassment in urban Bangladesh. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. 2695–2704.

[8] Syed Ishtiaque Ahmed, Steven J Jackson, Maruf Zaber, Mehrab Bin Morshed, Md Habibullah Bin Ismail, and Sharmin Afrose. 2013. Ecologies of use and design: individual and social practices of mobile phone use within low-literate

rickshawpuller communities in urban Bangladesh. In *Proceedings of the 4th Annual Symposium on Computing for Development*. ACM, 14.

[9] Syed Ishtiaque Ahmed, Maruf Hasan Zaber, Mehrab Bin Morshed, Md Habibullah Bin Ismail, Dan Cosley, and Steven J Jackson. 2015. Suhrid: A Collaborative Mobile Phone Interface for Low Literate People. In *Proceedings of the 2015 Annual Symposium on Computing for Development*. ACM, 95–103.

[10] Syed Mustafa Ali. 2016. A brief introduction to decolonial computing. *XRDS: Crossroads, The ACM Magazine for Students* 22, 4 (2016), 16–21.

[11] Mohamed Alloghani, Thar Baker, Dhiya Al-Jumeily, Abir Hussain, Jamila Mustafina, and Ahmed J Aljaaf. 2020. A systematic review on security and privacy issues in mobile devices and systems. *Handbook of computer networks and cyber security* (2020), 585–608.

[12] Adriana Alvarado Garcia, Juan F Maestre, Manuhuia Barcham, Marilyn Iriarte, Marisol Wong-Villacres, Oscar A Lemus, Palak Dudani, Pedro Reynolds-Cuéllar, Ruotong Wang, and Teresa Cerratto Pargman. 2021. Decolonial Pathways: Our Manifesto for a Decolonizing Agenda in HCI Research and Design. In *Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems*. 1–9.

[13] Salahuddin Aminuzzaman, Harald Baldersheim, and Ishtiaq Jamil. 2003. Talking back! Empowerment and mobile phones in rural Bangladesh: a study of the village phone scheme of Grameen Bank. *Contemporary South Asia* 12, 3 (2003), 327–348.

[14] Tawfiq Ammari and Sarita Schoenebeck. 2016. "Thanks for your interest in our Facebook group, but it's only for dads" Social Roles of Stay-at-Home Dads. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing*. 1363–1375.

[15] Nazanin Andalibi and Andrea Forte. 2018. Announcing pregnancy loss on Facebook: A decision-making framework for stigmatized disclosures on identified social network sites. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. 1–14.

[16] Benedict Anderson. 2006. *Imagined communities: Reflections on the origin and spread of nationalism.* Verso books.

[17] Lars Backstrom, Dan Huttenlocher, Jon Kleinberg, and Xiangyang Lan. 2006. Group formation in large social networks: membership, growth, and evolution. In *Proceedings of the 12th ACM SIGKDD international conference on Knowledge discovery and data mining*. 44–54.

[18] Stephen L Baglione and Louis A Tucci. 2019. Perceptions of social media's relevance and targeted advertisements. *Journal of Promotion Management* 25, 2 (2019), 143–160.

[19] Nedal A Bani-Hani, Mahmoud A Al-Sobh, and Abdel-Rahman H Abu-Melhim. 2014. Utilizing Facebook groups in teaching writing: Jordanian EFL students' perceptions and attitudes. *International Journal of English Linguistics* 4, 5 (2014), 27.

[20] Francis P Barclay, C Pichandy, Anusha Venkat, and Sreedevi Sudhakaran. 2015. India 2014: Facebook 'like'as a predictor of election outcomes. *Asian Journal of Political Science* 23, 2 (2015), 134–160.

[21] Francine Berano. 2020. What Are Social Media Handles? https://whatagraph.com/blog/articles/social-media-handles#:~:text=A%20social%20media%20handle%20is,when%20someone%20opens%20your%20profile..

[22] Annika Bergviken Rensfeldt, Thomas Hillman, and Neil Selwyn. 2018. Teachers 'liking'their work? Exploring the realities of teacher Facebook groups. *British Educational Research Journal* 44, 2 (2018), 230–250.

[23] Harry Bett and Lazarus Makewa. 2018. Can Facebook groups enhance continuing professional development of teachers? Lessons from Kenya. *Asia-Pacific Journal of Teacher Education* (2018), 1–15.

[24] Stephen E Blythe. 2006. Pakistan Goes Digital: The Electronic Transactions Ordinance as a Facilitator Growth for E-Commerce. *J. Islamic St. Prac. Int'l L.* 2 (2006), 5.

[25] Zuckerberg Bono and Mark. 2015. Opinion | To Unite the Earth, Connect It - The New York Times. https://www.nytimes.com/2015/09/27/opinion/sunday/to-unite-the-earth-connect-it.html.

[26] Danah M Boyd and Nicole B Ellison. 2007. Social network sites: Definition, history, and scholarship. *Journal of computer-mediated Communication* 13, 1 (2007), 210–230.

[27] Jean Burgess. 2006. Hearing ordinary voices: Cultural studies, vernacular creativity and digital storytelling. *Continuum* 20, 2 (2006), 201–214.

[28] Moira Burke and Mike Develin. 2016. Once more with feeling: Supportive responses to social sharing on Facebook. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing*. 1462–1474.

[29] Moira Burke, Robert Kraut, and Cameron Marlow. 2011. Social capital on Facebook: Differentiating uses and users. In *Proceedings of the SIGCHI conference on human factors in computing systems*. 571–580.

[30] Eshwar Chandrasekharan, Mattia Samory, Shagun Jhaver, Hunter Charvat, Amy Bruckman, Cliff Lampe, Jacob Eisenstein, and Eric Gilbert. 2018. The Internet's hidden rules: An empirical study of Reddit norm violations at micro, meso, and macro scales. *Proceedings of the ACM on Human-Computer Interaction* 2, CSCW (2018), 1–25.

[31] Partha Chatterjee and Pārtha Caṭṭopādhyāẏa. 1993. *The nation and its fragments: Colonial and postcolonial histories.* Vol. 4. Princeton University Press.

[32] Jan Chipchase. 2005. Understanding non-literacy as a barrier to mobile phone communication. *Retrieved September* 16 (2005), 2008.

[33] Victoria Clarke and Virginia Braun. 2014. Thematic analysis. *Encyclopedia of quality of life and well-being research* (2014), 6626–6628.

[34] Kimberle Crenshaw. 1994. Mapping the margins: Intersectionality. *Identity Politics, and Violence* (1994).

[35] Kimberlé W Crenshaw. 2017. *On intersectionality: Essential writings.* The New Press.

[36] Sebastien Cuendet, Indrani Medhi, Kalika Bali, and Edward Cutrell. 2013. VideoKheti: making video content accessible to low-literate and novice users. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems.* ACM, 2833–2842.

[37] Vanessa P Dennen and Kerry J Burner. 2017. Identity, context collapse, and Facebook use in higher education: Putting presence and privacy at odds. *Distance Education* 38, 2 (2017), 173–192.

[38] Stephanie Diepeveen. 2019. The limits of publicity: Facebook and transformations of a public realm in Mombasa, Kenya. *Journal of Eastern African Studies* 13, 1 (2019), 158–174.

[39] Rodney G Duffett. 2017. Influence of facebook commercial communications on generation z's attitudes in South Africa. *The Electronic Journal of Information Systems in Developing Countries* 81, 1 (2017), 1–22.

[40] Nicole B Ellison, Charles Steinfield, and Cliff Lampe. 2007. The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of computer-mediated communication* 12, 4 (2007), 1143–1168.

[41] Nicole B Ellison, Jessica Vitak, Rebecca Gray, and Cliff Lampe. 2014. Cultivating social resources on social network sites: Facebook relationship maintenance behaviors and their role in social capital processes. *Journal of Computer-Mediated Communication* 19, 4 (2014), 855–870.

[42] Hayley I Evans, Marisol Wong-Villacres, Daniel Castro, Eric Gilbert, Rosa I Arriaga, Michaelanne Dye, and Amy Bruckman. 2018. Facebook in Venezuela: Understanding Solidarity Economies in Low-Trust Environments. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems.* 1–12.

[43] Friendster. 2002. Friendster. www.friendster.com.

[44] Rikin Gandhi, Rajesh Veeraraghavan, Kentaro Toyama, and Vanaja Ramprasad. 2007. Digital green: Participatory video for agricultural extension. In *Information and Communication Technologies and Development, 2007. ICTD 2007. International Conference on.* IEEE, 1–10.

[45] Omar Ghanem, Heather J Logghe, Benjamin V Tran, Desmond Huynh, and Brian Jacob. 2019. Closed Facebook™ groups and CME credit: a new format for continuing medical education. *Surgical endoscopy* 33, 2 (2019), 587–591.

[46] Paul C Gorski and Noura Erakat. 2019. Racism, whiteness, and burnout in antiracism movements: How white racial justice activists elevate burnout in racial justice activists of color in the United States. *Ethnicities* 19, 5 (2019), 784–808.

[47] A. Halim, H. 2017. Only 2% active Facebook users in Bangladesh | Dhaka Tribune. https://www.dhakatribune.com/feature/tech/2017/09/06/2-active-facebook-users-bangladesh/.

[48] Naeemul Hassan, Manash Kumar Mandal, Mansurul Bhuiyan, Aparna Moitra, and Syed Ishtiaque Ahmed. 2019. Nonparticipation of bangladeshi women in# MeToo movement. In *Proceedings of the Tenth International Conference on Information and Communication Technologies and Development.* 1–5.

[49] Jeffrey Heer and Danah Boyd. 2005. Vizster: Visualizing online social networks. In *IEEE Symposium on Information Visualization, 2005. INFOVIS 2005.* IEEE, 32–39.

[50] Kurtis Heimerl, Shaddi Hasan, Kashif Ali, Eric Brewer, and Tapan Parikh. 2013. Local, sustainable, small-scale cellular networks. In *Proceedings of the Sixth International Conference on Information and Communication Technologies and Development: Full Papers-Volume 1.* ACM, 2–12.

[51] Karina Horsti. 2015. Techno-cultural opportunities: The anti-immigration movement in the Finnish mediascape. *Patterns of Prejudice* 49, 4 (2015), 343–366.

[52] Faheem Hussain, Abdullah Hasan Safir, Dina Sabie, Zulkarin Jahangir, and Syed Ishtiaque Ahmed. 2020. Infrastructuring hope: Solidarity, leadership, negotiation, and ict among the rohingya refugees in bangladesh. In *Proceedings of the 2020 International Conference on Information and Communication Technologies and Development.* 1–12.

[53] Daniel Iland and Elizabeth M Belding. 2014. EmergeNet: Robust, rapidly deployable cellular networks. *IEEE Communications Magazine* 52, 12 (2014), 74–80.

[54] Global Digital Insights. 2019. Digital 2019: Q2 Global Digital Statshot. https://datareportal.com/reports/digital-2019-q2-global-digital-statshot.

[55] Muhammad Zahidul Islam. 2020. Bangladesh trails behind 14 low, middle income countries in internet usage gender gap | The Daily Star. https://www.thedailystar.net/business/news/bangladesh-trails-behind-14-low-middle-income-countries-internet-usage-gender-gap-1938953.

[56] Vipul Jain. 2014. The Impact of Social Commerce on Consumer Behaviour: with special reference to F-commerce. *Available at SSRN 2403898* (2014).

[57] Adam N Joinson. 2008. Looking at, looking up or keeping up with people? Motives and use of Facebook. In *Proceedings of the SIGCHI conference on Human Factors in Computing Systems.* 1027–1036.

[58] Mayur Karnik, Ian Oakley, Jayant Venkatanathan, Tasos Spiliotopoulos, and Valentina Nisi. 2013. Uses & gratifications of a Facebook media sharing group. In *Proceedings of the 2013 conference on Computer supported cooperative work*. 821–826.

[59] Arun Kumar, Sheetal K Agarwal, and Priyanka Manwani. 2010. The spoken web application framework: user generated content and service creation through low-end mobiles. In *Proceedings of the 2010 International Cross Disciplinary Conference on Web Accessibility (W4A)*. ACM, 2.

[60] Bezon Kumar, Purnima Banik, and Md Aminul Islam. 2019. Social Network, Facebook Use and Loneliness: A Comparative Analysis Between Public and Private University Students in Bangladesh. *International Journal of Psychological and Brain sciences* 4, 2 (2019), 20–28.

[61] Neha Kumar. 2014. Facebook for self-empowerment? A study of Facebook adoption in urban India. *New media & society* 16, 7 (2014), 1122–1137.

[62] Neha Kumar and Naveena Karusala. 2019. Intersectional computing. *Interactions* 26, 2 (2019), 50–54.

[63] Will Kymlicka. 1997. The rights of minority cultures. (1997).

[64] Ilda Ladeira and Edward Cutrell. 2010. Teaching with storytelling: An investigation of narrative videos for skills training. In *Proceedings of the 4th ACM/IEEE International Conference on Information and Communication Technologies and Development*. ACM, 22.

[65] Cliff Lampe and Erik Johnston. 2005. Follow the (slash) dot: effects of feedback on new members in an online community. In *Proceedings of the 2005 international ACM SIGGROUP conference on Supporting group work*. 11–20.

[66] Michael V Laric, Dennis A Pitta, and Lea Prevel Katsanis. 2009. Consumer concerns for healthcare information privacy: A comparison of US and Canadian perspectives. *Research in Healthcare Financial Management* 12, 1 (2009), 93.

[67] André Lecours. 2000. Ethnic and civic nationalism: towards a new dimension. *Space and Polity* 4, 2 (2000), 153–166.

[68] Steven Levy. 2013. Zuckerberg Explains Facebook's Plan to Get Entire Planet Online | WIRED. https://www.wired.com/2013/08/mark-zuckerberg-internet-org/.

[69] Admire Mare. 2018. Politics unusual? Facebook and political campaigning during the 2013 harmonised elections in Zimbabwe. *African Journalism Studies* 39, 1 (2018), 90–110.

[70] Thomas Humphrey Marshall, Thomas Burton Bottomore, et al. 1992. *Citizenship and social class*. Vol. 2. Pluto Press London.

[71] Alice E Marwick and Danah Boyd. 2011. I tweet honestly, I tweet passionately: Twitter users, context collapse, and the imagined audience. *New media & society* 13, 1 (2011), 114–133.

[72] Nancy Mayoyo, Tom N Nyang'au, Evans Nyamwaka, and Nemwel N Aming'a. 2015. An Assessment of the Extent of Facebook Use by Students at Kisii University, Kenya and Its Implication on Educational Activities. *Journal of Education, Society and Behavioural Science* (2015), 165–175.

[73] Susan E McGregor, Polina Charters, Tobin Holliday, and Franziska Roesner. 2015. Investigating the computer security practices and needs of journalists. In *24th USENIX Security Symposium*. 399–414.

[74] Susan E McGregor, Elizabeth Anne Watkins, Mahdi Nasrullah Al-Ameen, Kelly Caine, and Franziska Roesner. 2017. When the weakest link is strong: Secure collaboration in the case of the Panama Papers. In *26th USENIX Security Symposium*. 505–522.

[75] Indrani Medhi, Ed Cutrell, and Kentaro Toyama. 2010. It's not just illiteracy. *India HCI/Interaction Design & International Development, Mumbai* (2010).

[76] Indrani Medhi, SN Gautama, and Kentaro Toyama. 2009. A comparison of mobile money-transfer UIs for non-literate and semi-literate users. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. ACM, 1741–1750.

[77] Indrani Medhi, Aman Sagar, and Kentaro Toyama. 2006. Text-free user interfaces for illiterate and semi-literate users. In *Information and Communication Technologies and Development, 2006. ICTD'06. International Conference on*. IEEE, 72–82.

[78] Indrani Medhi and Kentaro Toyama. 2007. Full-context videos for first-time, non-literate PC users. In *Information and Communication Technologies and Development, 2007. ICTD 2007. International Conference on*. IEEE, 1–9.

[79] Indrani Medhi-Thies, Pedro Ferreira, Nakull Gupta, Jacki O'Neill, and Edward Cutrell. 2015. KrishiPustak: A social networking system for low-literate farmers. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing*. ACM, 1670–1681.

[80] David Miller. 1988. The ethical significance of nationality. *Ethics* 98, 4 (1988), 647–662.

[81] David Miller. 1995. *On nationality*. Clarendon Press.

[82] David Miller. 1999. *Principles of social justice*. Harvard University Press.

[83] Eli Miron and Gilad Ravid. 2015. Facebook groups as an academic teaching aid: Case study and recommendations for educators. *Journal of Educational Technology & Society* 18, 4 (2015), 371–384.

[84] Shakir Mohamed, Marie-Therese Png, and William Isaac. 2020. Decolonial AI: Decolonial theory as sociotechnical foresight in artificial intelligence. *Philosophy & Technology* 33, 4 (2020), 659–684.

[85] Aparna Moitra, Naeemul Hassan, Manash Kumar Mandal, Mansurul Bhuiyan, and Syed Ishtiaque Ahmed. 2020. Understanding the Challenges for Bangladeshi Women to Participate in# MeToo Movement. *Proceedings of the ACM on Human-Computer Interaction* 4, GROUP (2020), 1–25.

[86] Gaia Mosconi, Matthias Korn, Christian Reuter, Peter Tolmie, Maurizio Teli, and Volkmar Pipek. 2017. From facebook to the neighbourhood: Infrastructuring of hybrid community engagement. *Computer Supported Cooperative Work (CSCW)* 26, 4-6 (2017), 959–1003.

[87] Carol Moser, Paul Resnick, and Sarita Schoenebeck. 2017. Community commerce: Facilitating trust in mom-to-mom sale groups on Facebook. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems.* 4344–4357.

[88] Preeti Mudliar, Jonathan Donner, and William Thies. 2012. Emergent practices around CGNet Swara, voice forum for citizen journalism in rural India. In *Proceedings of the Fifth International Conference on Information and Communication Technologies and Development.* ACM, 159–168.

[89] Benazir Elahee Munni and Sheikh Mehedi Hasan. 2020. Teaching English during COVID-19 Pandemic Using Facebook Group as an LMS: A Study on Undergraduate Students of a University in Bangladesh. *Language in India* 20, 6 (2020).

[90] NapoleonCat. 2021. Facebook users in Bangladesh - January 2021. https://napoleoncat.com/stats/facebook-users-in-bangladesh/2021/01/.

[91] Fayika Farhat Nova, Michael Ann DeVito, Pratyasha Saha, Kazi Shohanur Rashid, Shashwata Roy Turzo, Sadia Afrin, and Shion Guha. 2020. Understanding How Marginalized Hijra in Bangladesh Navigate Complex Social Media Ecosystem. In *Conference Companion Publication of the 2020 on Computer Supported Cooperative Work and Social Computing.* 353–358.

[92] Phillip Nyoni and Mthulisi Velempini. 2018. Privacy and user awareness on Facebook. *South African Journal of Science* 114, 5-6 (2018), 1–5.

[93] George Orwell. 2018. *Notes on nationalism.* Penguin UK.

[94] JS Parikh and Kaushik Ghosh. 2006. Understanding and designing for intermediated information tasks in India. *IEEE Pervasive Computing* 5, 2 (2006), 32–39.

[95] Neil Patel, Deepti Chittamuru, Anupam Jain, Paresh Dave, and Tapan S Parikh. 2010. Avaaj otalo: a field study of an interactive voice forum for small farmers in rural india. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems.* ACM, 733–742.

[96] Anicia Peters, Heike Winschiers-Theophilus, and Brian Mennecke. 2013. Bridging the digital divide through Facebook friendships: A cross-cultural study. In *Proceedings of the 2013 conference on Computer supported cooperative work companion.* 249–254.

[97] Angelisa C Plane, Elissa M Redmiles, Michelle L Mazurek, and Michael Carl Tschantz. 2017. Exploring user perceptions of discrimination in online targeted advertising. In *26th {USENIX} Security Symposium ({USENIX} Security 17).* 935–951.

[98] BANGLADESH POPULATION POLICY. 2019. http://www.mohfw.gov.bd/index.php?option=com_content&view=article&id=75&Itemid=93&lang=en.

[99] Anthony Poon, Sarah Giroux, Parfait Eloundou-Enyegue, François Guimbretière, Nicola Dell, and Cornell Tech. 2019. Engaging High School Students in Cameroon with Exam Practice Quizzes via SMS and WhatsApp. (2019).

[100] Urszula Pruchniewska. 2019. "A group that's just women for women": Feminist affordances of private Facebook groups for professionals. *new media & society* 21, 6 (2019), 1362–1379.

[101] James Rachels. 2017. Why privacy is important. *Privacy* (2017), 11–21.

[102] Alfian Ramadhan et al. 2016. A survey of security aspects for Internet of Things in healthcare. In *Information Science and Applications (ICISA) 2016.* Springer, 1237–1247.

[103] Carlos Rey-Moreno, Marie Josee Ufitamahoro, Isabella Venter, and William D Tucker. 2014. Co-designing a Billing System for Voice Services in RuralSouth Africa: Lessons Learned. In *Proceedings of the Fifth ACM Symposium on Computing for Development.* ACM, 83–92.

[104] Anthony H Richmond. 1984. Ethnic nationalism and postindustrialism. *Ethnic and Racial studies* 7, 1 (1984), 4–18.

[105] Katherine K Roberts. 2010. Privacy and perceptions: How Facebook advertising affects its users. *The Elon Journal of Undergraduate Research in Communications* 1, 1 (2010), 24–34.

[106] Christine Robson, Marti Hearst, Chris Kau, and Jeffrey Pierce. 2013. Comparing the use of social networking and traditional media channels for promoting citizen science. In *Proceedings of the 2013 conference on Computer supported cooperative work.* 1463–1468.

[107] Ari Schlesinger, W Keith Edwards, and Rebecca E Grinter. 2017. Intersectional HCI: Engaging identity through gender, race, and class. In *Proceedings of the 2017 CHI conference on human factors in computing systems.* 5412–5427.

[108] Lauren Scissors, Moira Burke, and Steven Wengrovitz. 2016. What's in a Like? Attitudes and behaviors around receiving Likes on Facebook. In *Proceedings of the 19th acm conference on computer-supported cooperative work & social computing*. 1501–1510.

[109] Nicola Sheeran and Daniel J Cummings. 2018. An examination of the relationship between Facebook groups attached to university courses and student engagement. *Higher Education* 76, 6 (2018), 937–955.

[110] Jahanzeb Sherwani, Nosheen Ali, Sarwat Mirza, Anjum Fatma, Yousuf Memon, Mehtab Karim, Rahul Tongia, and Roni Rosenfeld. 2007. Healthline: Speech-based access to health information by low-literate users. In *Information and Communication Technologies and Development, 2007. ICTD 2007. International Conference on*. IEEE, 1–9.

[111] J Shiby and Aravinda Shetty. 2018. Content Analysis of Facebook use by Farmers in Kerala, India: A Case Study of Trithala Block of Palakkad District, Kerala. *Research Journal of Humanities and Social Sciences* 9, 4 (2018), 841–848.

[112] George Siemens and Stephen Downes. 2013. Connectivism (Siemens, Downes) - Learning Theories. https://www.learning-theories.com/connectivism-siemens-downes.html.

[113] Naomi Smith and Tim Graham. 2019. Mapping the anti-vaccination movement on Facebook. *Information, Communication & Society* 22, 9 (2019), 1310–1327.

[114] Smokefree. 2020. Smokefree. https://smokefree.gov/.

[115] Anne Sraders. 2020. History of Facebook: Facts and Latest Developments - TheStreet. https://www.thestreet.com/technology/history-of-facebook-14740346.

[116] Internet World Stats. 2019. Asia Internet Usage Stats Facebook and 2019 Population Statistics. https://www.internetworldstats.com/stats3.htm.

[117] Internet World Stats. 2020. Asia Internet Stats by Country and 2020 Population Statistics. https://www.internetworldstats.com/asia.htm#bd.

[118] Charles Steinfield, Nicole B Ellison, and Cliff Lampe. 2008. Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. *Journal of applied developmental psychology* 29, 6 (2008), 434–445.

[119] Paulette Stewart. 2009. Facebook and virtual literature circle partnership in building a community of readers. *Knowledge Quest* 37, 4 (2009), 28.

[120] Mohammad Tipu Sultan and Farzana Sharmin. 2020. An exploratory investigation of facebook live marketing by women entrepreneurs in bangladesh. In *International Conference on Human-Computer Interaction*. Springer, 415–430.

[121] Sharifa Sultana, Syed Ishtiaque Ahmed, and Susan R. Fussell. 2019. "Parar-daktar Understands My Problems Better": Disentangling the Challenges to Designing Better Access to Healthcare in Rural Bangladesh. *Proceedings of the ACM on Human-Computer Interaction* 1, CSCW (2019), 25.

[122] Sharifa Sultana, Mitrasree Deb, Ananya Bhattacharjee, Shaid Hasan, S.M.Raihanul Alam, Trishna Chakraborty, Prianka Roy, Samira Fairuz Ahmed, Aparna Moitra, M Ashraful Amin, A.K.M. Najmul Islam, and Syed Ishtiaque Ahmed. 2021. 'Unmochon': A Tool to Combat Online Sexual Harassment over Facebook Messenger. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*.

[123] Sharifa Sultana and Susan R Fussell. 2021. Dissemination, Situated Fact-checking, and Social Effects of Misinformation among Rural Bangladeshi Villagers During the COVID-19 Pandemic. *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW2 (2021), 1–34.

[124] Sharifa Sultana, François Guimbretière, Phoebe Sengers, and Nicola Dell. 2018. Design Within a Patriarchal Society: Opportunities and Challenges in Designing for Rural Women in Bangladesh. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. ACM, 536.

[125] Sharifa Sultana, Pratyasha Saha, Shaid Hasan, SM Raihanul Alam, Rokeya Akter, Md Mirajul Islam, Raihan Islam Arnob, Mahdi Nasrullah Al-Ameen, and Syed Ishtiaque Ahmed. 2020. Understanding the Sensibility of Social Media Use and Privacy with Bangladeshi Facebook Group Users. In *Proceedings of the 3rd ACM SIGCAS Conference on Computing and Sustainable Societies*. 317–318.

[126] Alt Support. 2020. alt.support.depression. https://groups.google.com/g/alt.support.depression.

[127] Alt Support. 2020. alt.support.diet.low-carb. https://alt.support.diet.low-carb.narkive.com/.

[128] Daniel Susser, Beate Roessler, and Helen Nissenbaum. 2018. Online manipulation: Hidden influences in a digital world. (2018).

[129] Yael Tamir. 1995. *Liberal nationalism*. Princeton University Press.

[130] Emelie Maria Thoren, Boris Metze, Christoph Bührer, and Lars Garten. 2013. Online support for parents of preterm infants: a qualitative and content analysis of Facebook 'preemie'groups. *Archives of Disease in Childhood-Fetal and Neonatal Edition* 98, 6 (2013), F534–F538.

[131] Abdul Kawsar Tushar, Muhammad Ashad Kabir, and Syed Ishtiaque Ahmed. 2021. Mental Health and Sensing. In *Signal Processing Techniques for Computational Health Informatics*. Springer, 247–260.

[132] Aditya Vashistha, Abhinav Garg, Richard Anderson, and Agha Ali Raza. 2019. Threats, abuses, flirting, and blackmail: Gender inequity in social media voice forums. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. 1–13.

[133] Mojca Volk, Janez Sterle, and Urban Sedlar. 2015. Safety and privacy considerations for mobile application design in digital healthcare. *International Journal of Distributed Sensor Networks* 11, 10 (2015), 549420.

[134] Georg Von Krogh, Sebastian Spaeth, and Karim R Lakhani. 2003. Community, joining, and specialization in open source software innovation: a case study. *Research policy* 32, 7 (2003), 1217–1241.

[135] Wikipedia. 2008. Wikipedia community. https://en.wikipedia.org/wiki/Wikipedia_community.

[136] Marisol Wong-Villacres, Adriana Alvarado Garcia, Juan F Maestre, Pedro Reynolds-Cuéllar, Heloisa Candello, Marilyn Iriarte, and Carl DiSalvo. 2020. Decolonizing learning spaces for sociotechnical research and design. In *Conference Companion Publication of the 2020 on Computer Supported Cooperative Work and Social Computing*. 519–526.

[137] Marisol Wong-Villacres, Arkadeep Kumar, Aditya Vishwanath, Naveena Karusala, Betsy DiSalvo, and Neha Kumar. 2018. Designing for intersections. In *Proceedings of the 2018 Designing Interactive Systems Conference*. 45–58.

[138] Shaomei Wu, Lindsay Reynolds, Xian Li, and Francisco Guzmán. 2019. Design and Evaluation of a Social Media Writing Support Tool for People with Dyslexia. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. 1–14.

[139] Susan Wyche and Charles Steinfield. 2016. Why don't farmers use cell phones to access market prices? technology affordances and barriers to market information services adoption in rural Kenya. *Information Technology for Development* 22, 2 (2016), 320–333.

[140] Johana Yusof, Nor Ashikin Ab Manan, and Ahmad Ashaari Alias. 2012. Guided peer feedback on academic writing tasks using Facebook notes: An exploratory study. *Procedia-Social and Behavioral Sciences* 67 (2012), 216–228.

[141] Xuan Zhao, Niloufar Salehi, Sasha Naranjit, Sara Alwaalan, Stephen Voida, and Dan Cosley. 2013. The many faces of Facebook: Experiencing social media as performance, exhibition, and personal archive. In *Proceedings of the SIGCHI conference on human factors in computing systems*. 1–10.

[142] Zoom. 2021. Managing attendees and panelists in a webinar. https://support.zoom.us/hc/en-us/articles/115004834466-Managing-attendees-and-panelists-in-a-webinar.

[143] Mark Zuckerberg. 2013. Mark Zuckerberg: Is Connectivity a Human Right? - About Facebook. https://about.fb.com/news/2013/08/mark-zuckerberg-is-connectivity-a-human-right/.