Situating Public Speaking: The Politics and Poetics of the Digital Islamic Sermons in Bangladesh

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Research on public speaking has recently made fair progress within the CSCW scholarship that mostly focuses on training speakers to gain popularity. Core to this research is the idea of a universal set of skills that makes a public speech successful in terms of popularity. However, a strand of research has also shown skepticism to this simplistic conceptualization of the speaking context. We join this discussion by presenting a mix of qualitative and quantitative analyses of Islamic preaching videos on YouTube. These videos are created from Islamic sermons – a form of Islamic religious public speaking in Bangladesh. By exploring the topics of discussion by the preachers and by analyzing the performances of the preachers during the sermons, we demonstrate how those are situated in their social, political, and religious context. Based on our findings, we discuss how the public speaking scholarship of CSCW and related fields could benefit from studying such public speeches in non-secular contexts of the Global South. Further, we discuss how the role of such religious sermons could contribute to the development discourse within CSCW.

CCS Concepts: • **Human-centered computing** → **Social media**; *HCI theory, concepts and models.*

Additional Key Words and Phrases: Islamic sermon; public speaking; speaking skills; religious values; emotions; poetics; politics

1 INTRODUCTION

Public speaking is an important skill that has multi-faceted impacts both on the speaker and society. CSCW, HCI, Ubicomp, and other related disciplines have rightly chosen this area to help public speakers overcome various challenges by designing computing technologies. Common among the technologies are providing feedback to the speaker on various speaking skills such as the voice, gesture, and movements; creating virtual environments to train a potential speaker [40, 63, 98]; and exploring features of successful public speeches [97]. While this line of research has made a fair progress, a strand of research within public speaking literature shows skepticism to the designed technologies for improving public speaking because of their simplistic assumptions of a speaking environment, following universal standards for subjective skills development, methodological limitations stemming from controlled lab studies, and the limited impact of the technologies in

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real-life scenarios [64, 79]. Such criticism suggests that existing public speaking training tools might prove ineffective outside of a very limited scope of the environment. Indeed, most of these studies took part in the western world, and the analyses were done on the public speeches that were targeted toward a 'secular' audience. Hence, the topics and the art of delivering the speech, as they are found in the existing works, do not represent those of public speeches that take place in a more 'religious' setting, especially in the Global South.

Meanwhile, more than 84% of the world population identify themselves as part of organized religious groups [71]. Religion plays a dominant role in these people's lives [42, 70]. Many of them live in South Asia, and because of the rich religious history of South Asian countries [77, 106], religious values and practices are entangled in the lifestyles of those from all walks of life [62, 72, 103, 107]. The religious groups and institutions are increasingly using technologies to perform ritual activities and discussing religious issues [22, 23, 52]. As a result, it has become important to understand the nature of these online public speeches from a theological and cultural point of view. However, while a handful amount of works in CSCW and related disciplines explore the relationship between religion and technology and their connection to design, there is a dearth of knowledge about religious content online and its social implications. We address this gap and advance the literature on religion within CSCW and related fields by analyzing Islamic sermons online and discussing how our findings can contribute to public speaking and international development scholarships.

We situate our work in Bangladesh. There has been an emerging trend of creating and disseminating Islamic sermon videos online in Bangladesh [10, 87]. The videos are created from local Islamic sermons known as *waz mahfills* [87]. The sermons are organized by local mosques, Islamic schools, and other Islamic non-profit organizations. Most sermons of this kind happen in Winter in Bangladesh and are made open to all public. Amateur content creators and small-scale Islamic media businesses join the sermons, record them, and upload the recording on YouTube. Many of these videos have become immensely popular (over millions of views and thousands of praising comments and shares). Because of the online fame through social media and YouTube content, Islamic preachers are becoming familiar faces both nationally and internationally. The internet fame of the preachers is being transferred to mainstream media; it is very common for Bangladeshi Islamic preachers to appear in TV media regularly. With the media attention and strong support from the followers' group, the preachers have been established as social, moral, and political commentators, almost a similar figure as social media celebrities [1, 87]. Alongside discussing Islamic rituals and moral codes, the preachers often discuss and even challenge national politics. In the last several years, Islamic sermons have amplified the discussion related to national curriculum reforms for discarding contents conflicting with Islamic values [13], incorporating students from Islamic religious backgrounds to the mainstream workforce in Bangladesh [11], foreign policy reforms that support global Islamic solidarity [45], among other national policies. Broadly, it is not uncommon that many popular preachers are also active political activists in Bangladesh. Overall, YouTube preaching videos and social media contents based on the preaching videos play a vital role in establishing Islamic preachers as popular national actors.

This paper reports our findings from a mix of a qualitative and quantitative study of 50 sermon videos from YouTube. We make two contributions to CSCW and related fields. First, we explore the topics of discussion by Islamic preachers online. We show how Islamic preachers are utilizing Islamic values and cultural sensitivities in their sermons that are creating millions of viewership online. We further discuss how their popularity creates a political voice through online videos. Second, we analyze the emotional and aesthetic performances of the preachers to problematize existing public speaking research in CSCW and related fields while also providing suggestions for broadening the vision of public speaking research. Our findings demonstrate that the main topics

of discussion in an Islamic sermon include social and cultural norms, pop cultures in contemporary society, and national and international politics. In presenting the topics, the preachers show certain strategies, skills, and speaking performances that involve drawing on religious texts and Islamic culture and demonstrating a set of skills and techniques to stir audiences' emotions. Thus, our findings enrich CSCW literature by including the new type of media and its implication to society.

CSCW has long been looking into issues that are related to online contents over various online venues, including social networking websites [15, 19, 105], question answering platforms [31], video-sharing forums [12, 17, 118], and live streaming applications [54, 55]. This line of work is concerned about the broader impacts of these digital video contents on society, culture, politics, health, and economy. This line of inquiry helps the CSCW scholarship better capture the assumed roles of collaborative digital platforms and their appropriations, which in turn informs the community of better design, use, and policy regulations. Our paper joins this body of CSCW work and similarly shares insights gleaned from our study of online religious videos shared over social media. In parallel, an emerging body of CSCW scholarship related to faith and religion is exploring how religious communities use computing technologies, which informs the design and policy around shared digital platforms to make them more inclusive of diverse contexts, cultures, norms, and traditions [57, 61, 76]. Our paper extends this line of work and informs the CSCW community of the emerging use of social media by the religious leaders in the Global South, their concerns, and required design and policy measures. Thus, we build on two growing bodies of research within CSCW to critically analyze public speaking research and offer design guidelines for making public speaking technologies more inclusive.

2 RELATED WORK

2.1 Public Speaking in CSCW

An emerging body of literature within CSCW and related fields has started focusing on public speaking as a medium for conveying expert knowledge, awareness, and critical consciousness among the mass. One dominant genre in this nascent body of work is developing methods and evaluating tools that help people overcome public speaking anxieties and improve their speeches. Some of these works explore the potential of virtual environments–a simulation of a speech environment–for training a speaker, for example [27, 101, 108]. Among them, Chollet and Wortwein et al. design an interactive learning framework with virtual audiences and conduct a study to evaluate its effectiveness [28]. They show that participants find that tool having the potential to improve their public speaking skills. They also find that participants improve eye contact behaviour with virtual audiences through that tool. However, the assessment of feedback from public speaking experts shows that the virtual audiences only had some moderate impact on improving public speaking skills. Similarly, Trinh et al. design an automated speaking coach, namely RoboCOP, to give feedback to a presenter on three aspects of presentation: speech quality, content coverage, and audience orientation [101]. The authors argue that RoboCOP provides a more engaging and interactive platform for rehearsing presentations. Pallett and Zaidi similarly design a virtual environment with VR technologies to improve public speaking [67]. They suggest that the VR simulation could provide a proper simulated environment to give speakers real-time feedback. Wang et al. explore the potential of using a conversational agent to reduce public speaking anxiety [108]. They designed and implemented an Alexa[1]-guided tutoring platform. Their evaluation shows that users perceive the conversational tutoring tool as 'non-judgemental' and more favourable than a human tutor. The authors hope that such social conversation agents could be helpful to reduce anxiety in various social interactions. Tanveer et al. design an intelligent user interface, AutoManner, to automatically

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[1]A voice-based interactive device developed by Amazon [110]

extract human gestures to make speakers aware of their mannerism [98]. The user interface asks a series of questions about the speaker's body language to make them assess their own performance. The authors conclude that this tool makes the speakers aware of their body language. Overall, these studies focus on the non-verbal cues and acoustic features as well as the speech environment to train a speaker. These studies explicate common challenges for a public speaker and try to address them by providing technological solutions. In doing so, they make simplistic assumptions about subjective challenges of a speaker that stem from the speaking environment, the types of the speeches, cultural and contextual nuances, the sensitivity of the speech topic, and the type of the audience. Although some studies caution against some challenges [64], the public speakers are nevertheless inspired to adopt the technologies worldwide.

A few studies analyze the effectiveness and transferability of public speaking training tools. For example, from a review of existing computational solutions for public speaking, Ochoa and Domingues present some significant observations [64]. They find that most solutions are evaluated with a limited amount of users in non-authentic and controlled lab settings. The authors comment that even the studies that deemed to evaluate their systems objectively had methodological flaws. Schneider et al. design and evaluate a multi-modal system, namely, *Presentation Trainer*, and evaluate it to provide important lessons on such tools' real-life impact as opposed to how they perform in a laboratory testing [79]. They argue that location and time constraints often make conducting a real-life experiment of public speaking training tools challenging. In another study, Chollet et al. conduct an experiment to find the effectiveness of training technologies [26]. Particularly, they focus on the impact of individual differences of personality, public speaking anxiety, and immersive tendencies on public speaking training. The authors find that more anxious and emotionally unstable participants find performing any task more challenging and less enjoyable to use public speaking training technologies. They conclude by suggesting to take these subjective differences while designing technologies for improving public speaking skills. The studies of behavioural traits in the research above suggest that people with different personalities in different situations cannot have the same benefit out of those tools.

The research on public speaking gets a new dimension as online videos, live broadcasting, and DIY video content are becoming increasingly popular over social media platforms. With an increasing trend of uploading public speaking videos as online content–which also brings money to the content creator–a strand of research analyzes what features of the videos might draw more viewers. A handful of studies propose various methods to analyze and characterize "good" and "bad" speeches, many of which aim to find an automated process of predicting a speech's popularity online. Chollet and Schehrer use short segments of a video to predict their popularity online [27]. In doing so, they analyze the characteristics of speech, overall performance, body language, and confidence of a speaker from a small part of a video. They find that non-verbal cues in brief excerpts of a full video are enough to predict the rating of the video. Tanveer et al. analyze narrative trajectories of a set of over 2000 TED talks and find the trajectories' correlation to their subjective ratings [97]. By narrative trajectories, they mean the changes of different emotions over time in a TED talk. They show that speeches with "flat" trajectories get less attention from the audience. They suggest that variations in different kinds of emotions are helpful to get audiences' attention. They further demonstrate that talks ending with a positive note get audiences' attention more than the other talks. Sharma et al. analyze 1800 TED videos to find the correlation between the popularity of a speech and the non-verbal cues of the speaker [82]. They further propose a framework to predict the popularity of a video based on the speaker's physical appearance, facial expression and pose variations. The research shows that facial expression contributes significantly to making a video popular online.

Overall, the body of research above does an admirable job in identifying some common challenges in public speaking and establishing that technology can solve many of them. However, the research is limited by a narrow and simplistic characterization of public speech environments, methodological flaws, and superficial solutions to behavioural problems of a public speaker. Hence, the findings and the associated design products fail to work beyond the study settings, which are predominantly western and secular. Hence, this body of work is not useful much while analyzing online religious videos that originate in the Global South. Our goal in this paper is to address this gap. Building on this strand of literature and presenting a case of public speaking (namely, Islamic sermon), we aim to draw the attention of public speaking research to broaden its scope by addressing behavioural, religious, and contextual nuances of speakers in specific cultural and religious contexts.

2.2 Religious values in CSCW

Next, we turn to the emerging body of work in CSCW and related fields around faiths and religions that inform how religious values impact the design and intervention of technologies where religion plays a dominant role in people's everyday lives. A line of research within this literature informs how organized religious groups use technologies for ritual purposes. For example, Wyche et al. study American Christian ministers and inform how the ministers are using technologies for religious studies and reflection, church services, and pastoral care [117]. In this earlier study about religion in CSCW, the authors argue that the usage of technologies in religious practices is similar to the "works" done in corporate settings. Such arguments suggest that religious practices and technology use demand similar attention to that of other workplace settings. Woodruff et al. study sabbath day home automation in Jewish families and draw design implications [113]. The authors show how religious practices and rituals can inspire community behaviours for respite from technology addiction and help the work-life balance. Bell studies existing and emerging techno-spiritual research and offers a counter-intuitive vision for Ubicomp research about techno-spirituality [14]. Bell argues that techno-spiritual research is less concerned with efficiency, seamless services, and constant updating of computing devices, which are some of the common matrices to evaluate technology's success in Ubicomp. The above and other studies [25, 114–116] within CSCW and related fields establish that religion is an important site for exploration, which may challenge existing design and strengthen CSCW theories and methodologies by offering insights from theological perspectives.

The recent studies on religion in CSCW build on the previous works and explore how a deeper understanding of religious forces can benefit CSCW and related fields to design contextually appropriate technologies [21, 43, 49, 65, 83]. For example, Abokhodair et al. study Tweets containing Quran verses and demonstrate how offline religious expressions are extending to online [2]. Their study shows that techno-spirituality is not confined to ritual-centred activities anymore; they also address social issues such as doing good deeds, giving to charities, and showing solidarity. Mostafa et al. conduct a study in three Asian countries and offer insights into the impact of Islamic belief on women's health and well-being [61]. They find that religion is an important factor through which women in that region weigh their health. They suggest that HCI must consider religion while designing for women's well-being. Using the lens of Islamic feminist views of agency, Rabaan et al. study Saudi women's domestic safety and show how religion works as a double-edged sword for women to address issues of sexual harassment [68]. In a series of ethnographic and design studies, Rifat and his colleague demonstrate how a deeper understanding of religious values, practices, habits, and culture can overcome various design challenges and introduce effective technologies for development [73], sustainability [76], and privacy [74]. The above and many other studies [50, 57, 58, 88, 90–95] show how religious values are strongly relevant for effective technology design.

Despite religion's social impact, CSCW and related fields still have only a handful of research relating to religion and technology. As Buie and Blythe explain, the sensitivity of the domain, methodological challenges, professional risks, and lack of funding are among the various common reasons for the under-representation of religion in CSCW and HCI research[2] [20]. As an example, studying religious communities often accompanies the methodological challenges of having the gender balance among participants [76]. In addition, various negative connotations of religions (such as stigma, stereotypes, Islamophobia, among others [76]) may also be responsible for CSCW's lack of attention to religion. However, a broad-brush negative portrayal of religious values marginalizes many religious communities worldwide and misses CSCW's opportunity to enrich its domains from the rich insights of the sociology of religions [29]. We advance this literature by introducing a new domain of exploration, namely the Islamic sermon. The wide range of media presence of Islamic sermons and their prevalence of studies outside of CSCW inspire the primary goals of our research.

2.3 Islamic Sermons

Islamic sermons are formal occasions for religious oratory and public preaching in Islamic tradition [87, chapter 1] [111]. There are several forms of this Islamic tradition including the Friday sermon (*khutba*), the reformist sermon in madrasah (*islahi*), congregation sermons (*bayan*), council meetings, and political speeches [87, p 28]. The particular form of sermon we analyze in this paper is called *waz mahfill*, which is "a form of preaching that has been associated with admonition, piety and later, Sufism, as well as with storytelling, and typically is held freely and didactically in markets and open spaces [p 33][87]" (fig. 1). Islamic sermons have received widespread attention in anthropology, sociology of religion, and media studies. The studies cover a wide range of Islamic sermons, including Friday sermons, Islamic conventions, televangelism, preaching using social media, among other various local cultures of Islamic public speaking.

Fig. 1. A typical Islamic sermon (*waz-mahfill*) in Bangladesh[a]. The whole sermon area are decorated with a big tent. The attendees sit on the ground covered in mats. The preachers and organizers sit on the stage. Sometimes, organizers arrange chairs for older and popular preachers.

[a]In early 2020, one of the authors in this paper visited several sermons in Dhaka, Bangladesh, as part of this research. They recorded the sermons during their visits with a 360° camera.

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[2]Although this study was done in 2013, most of the reasons still hold true.

2.3.1 Impacts of Islamic Sermons. Notable among the studies of Islamic sermons is Charles Hirschkind's celebratory work on Egyptian cassette sermons [47]. The cassette sermon is the category where the recorded Islamic sermons are disseminated through cassettes or other electronic forms. Hirschkind sees cassette sermons as a medium for creating sensory effects on Muslims' minds [47] and bringing moral changes to society. To him, the sermons are ethical therapy [47, p.37] and pious relaxation [47, p.68] that recovers Islamic societies from sinful acts [47, p.37] by saving Muslims' heart from corrosion due to sins [47, p.38]. Hirschkind not only analyzes preachers and their sensory affect through the sermons but also foregrounds listeners' role for a successful sermon. He describes sermon listeners as performers who try to keep intone with the preachers with their praise words, gestures, and supplications [47, p.84]; the bodily responses and receptions of sermons by listeners make the sermons interactive and establish spiritual connections between the preachers and the listeners. In another study, Hirschkind analyzes short videos from Friday sermons on YouTube to explore Islamic devotional practices and ethical affect mediated through Internet [48]. He argues that YouTube creates a new space for Islamic discursive practices, where viewers interact with the preachers and other viewers. This interactive space opens up new avenues for the *public Islam*. First, the YouTube viewers do not only glean ethical lessons from Islamic sermons but they are also exposed to various other genres (some of which might be secular, too) that broaden their ethical spaces. Second, the interactions between users and sermons lead to new debates and reforms of Islamic ethical meanings.

Hirschkind's systematic analysis of cassette sermons draws widespread attention from the sociology of religion, anthropology, and media studies scholars [35, 38, 39, 56, 66]. For example, Sounaye studies Alarama, a media preacher in the city of Niger to demonstrate how audiovisual media has changed Islamic culture and religious imagination [84]. Sounaye shows that young people like Alarama–who may or may not have strong theological or philosophical intellect–are becoming popular Islamic figures because of their media-facing sermon activities. As a result, the intellectual spaces that were popularly held by Islamic scholars (*ulama*) before, who are often known to hold the authorities of moral and religious rules in Islam fiercely, are changing. Through the media presence of young preachers like Alarama and their mass viewer-ships, Sounaye argues, this practice is creating an interaction between media entrepreneurs and religious actors. Echchaibi studies the preaching activities on new media and analyzes their impact on the reforms of Islamic meanings [34]. He argues that new media has dramatically accelerated Islamic reforms because of the convenience of producing religious content. He refers to such preaching through media as different from historical processes of Islamic reforms as new media creates opportunities for both Islamic intellectuals and ordinary Muslims alike to participate in discussing Islamic meanings in everyday life. These and many other studies show how communication technologies are mediating and amplifying social changes by disseminating sermon content as well as creating new avenues for dialogues among preachers and their followers.

Other strands of research explicate the connection of Islamic sermons to political, moral, and aesthetic aspects [3, 41, 51, 81, 112]. The Islamic sermon has been used as a means for political communication for a long time. The political elites have taken different measures to control and utilize Islamic sermons. For example, Borthwick shows how political elites used Islamic sermons to control the Muslim population in the Middle East [18]. He shows that political regimes used Islamic sermons to include people from all sectors in the society in the state's economic development projects. Many political regimes used to censor sermons as the preachers often proved as threats to the political regimes [78]. Friday sermons have been used as a platform by many governments to increase acceptances of the Federal policies [78]. The scholarships demonstrate the impact of Islamic sermons in society by focusing on the sermon's sensory, visual, artful, and aesthetic impact on Islamic societies. However, such political impacts through social media, or the Internet in general,

have not been studied in CSCW and related fields, and hence little do we know about the ways these sermons create a political voice and what skills and arts are involved in performing in these sermons. Our work addresses this gap and addresses these questions.

2.3.2   *Performance of the Preachers.* The wide range of impact of the Islamic sermons is partially due to the performances of the preachers. In addition to gaining the common skills of a presenter, the preachers adopt culturally sensitive elements to make their speech engaging and affective to the audience. Naggar studies Baba Ali, a Muslim televangelist, who gained popularity with his YouTube preaching videos [37]. Nagger finds four features that made Baba Ali popular among his followers: religious invocation, video editing skill, self-representation, use of humour, and interactivity. Naggar points out to a new genre of preaching through Baba Ali, where the preacher does not present himself in traditionally known formal preaching settings in terms of dress codes, language, following religious codes and rituals (such as having beards, wearing a turban, reciting Arabic); rather, the preacher in this new genre shows ordinariness in attire, speaks in colloquial languages, and uses culturally sensitive humour and different forms of entertainment (music, lyrics, sounds effects, graphics, etc.). Naggar calls such YouTube video makers as quasi-preachers who provide religious and personal advice online while being engaged full-time in another profession, such as comedian and actor in Baba Ali's case. Eisenlohr studies the mediatization of religion in India and analyzes its impact on religious changes [36]. One of the cases he analyzes is a popular preacher in the Indian subcontinent, Zakir Naik and peace TV directed by Zakir Naik. Eisenlohr shows how Naik's success is due mainly to his performances, including keeping close to the topic and forms of expression.

Scholz studies rhetorical techniques used by Islamic preachers. Based on aesthetics and rhetorical theories, Scholz demonstrates that both preaching in a sermon and listening to it is a bodily experience [80]. He argues that for affecting the audiences through various emotions, the preachers need to feel the emotions themselves first. The preachers' gestures and facial expressions create dramatic experiences in the sermon to feel the expressed emotions. In a more recent study, Max Stille builds both on them and provides an in-depth study of preachers' performance in Bangladeshi Islamic sermons [87]. One of his focuses in this study was to analyze Bangladeshi Islamic sermons through musical rhetorical analysis [87, p. 153–189]. He demonstrates that different forms of melodies, including chanting, melodic presentation of Islamic history, devotional songs, musical poetics, and melodic recitations, are crucial to the political manipulations of the masses by the preachers in a sermon [87, p.153]. Stille argues that such melodic performances in Islamic sermons emotionalize the preachers' political positions and their value judgement of the society [87, p.179]. Despite the interest this topic generated in the sociology of religion, it has not been discussed or used in the CSCW scholarship to better understand the form of arts and crafts that are being presented over social computing platforms through a religious communication discourse and how those skills contribute to developing a political voice. Our study addresses this important gap in this paper.

3   METHODS

We conducted a mix of qualitative and quantitative studies in this research. The qualitative study includes the collection and analysis of videos from YouTube. We complemented the findings from the qualitative research with sentiment analysis of video transcripts.

3.1   Collection and Qualitative Analysis of YouTube Videos

With the twofold primary goals of analyzing the contents of Islamic sermons and the performance of Islamic preachers, we analyzed videos from YouTube. YouTube has a large collection of Islamic

preaching videos with millions of view counts. The videos are uploaded regularly from many YouTube channels. Most uploaded videos are raw in nature that mainly capture the voices and performances of preachers and responses from audiences. We started our search from a randomly chosen YouTube channel and starting to watch videos from the channel. Based on YouTube's suggestion, we randomly watched more than 20 videos and skimmed 100 more videos. This initial video watching activity gave us a higher level idea of the YouTube channels that upload sermon videos, the preachers, topics of sermons, view counts, upload frequencies of sermon videos in the channels, and the length of the videos. Based on our initial observation, we primarily selected 100 videos for our analysis. The primary selection criteria of the videos for our analysis was the minimum view count of 20000. The videos are full-length for one speaker's speech; we discarded the videos that presented partial speech from one speaker. We also made sure that no single preacher should appear more than three times in our analyzing data set. We discarded any video that had a similar topic of discussion to another video. After the initial screening, we finalized 50 videos for our final analysis. The average length of all videos is 70 minutes.

After the initial selection, we transcribed and translated all videos to English. Two professional translators conducted this work of transcription. We keep contact with the transcriber and discussed each transcript to ensure the best possible quality of translation. We ensured that the transcripts embed all situational and contextual nuances in the sermon videos. This process resulted in more than 600 pages of the English translation of the sermon videos. Additionally, we took notes while watching the selected videos multiple times, which we complemented with the video transcript data. All preachers in our data set used Arabic and Persian languages in their recitation of Quran and Hadith as well as poems and Islamic songs. One transcriber with training from a Qawmi madrasah–which traditionally teach Urdu and Persian in addition to Arabic–helped us transcribing the parts involving foreign languages.

In the next step, we conducted an analysis of the video transcripts following the inductive approach [100]. One objective of this qualitative analysis was to explore the topics discussed in the Islamic sermon. Because of our openness to any emerging themes, we did not have any predetermined themes. Two of us started the analysis separately with a careful reading of the transcripts several times. During this initial reading, we discarded irrelevant and redundant parts of the transcripts. All of the authors met weekly to discuss the discarded transcripts so that we do not omit any useful excerpt. Then we highlighted the excerpts of the transcripts that were meaningful to our research questions. Later, we employed open and axial coding to explore patterns [24]. We clustered data based on the patterns and then combined the patterns to come up with the final themes. During this process, the research team met weekly to discuss the themes and analyze the themes' contextual accuracy based on both highlighted and non-highlighted texts. All members of the research team thoroughly discussed the codes and themes in several rounds and aggregated the themes from two analyzers based on the consensus of the research team.

All of the authors in this paper are born and raised in Bangladesh and have a Sunni Islamic background. The authors have deep knowledge about Bangladeshi Islamic rituals, culture, and social practices. Two of the authors attended Islamic sermons before conducting this study. The authors are mosque attendees and have previous experiences of working with mosque leaders. All authors are formally trained in computer science and one of the authors have training on South Asian study. Such backgrounds helped the authors in this study from the selection to the analysis of sermon videos by providing contextual insights in both qualitative and quantitative parts of the analysis.

Research Ethics: This research was approved from the first author's institutional review board. We followed the guideline of the review board in collecting the data set, analyzing the data, and sharing the research result outside of the authors. As this study did not involve any human subject,

we did not have to give any attention to the identity of the preachers; the preaching videos are available online for all.

Gender representation of the preachers: Historically, the Islamic sermons in Bangladesh are male dominated. Many sermons arrange separate spaces for women so that women can participate within their seclusion rule (purdah) in Islam. However, women preachers are not invited in a sermon where there are male participants. We found a handful of the sermon videos on YouTube participated by women preachers. Women preaching events also do not allow any male participants. Because of this, the ratio of women to male preachers are negligible on YouTube, which is also reflected in our data set. Among the 48 preachers that we studied, only two of them are women.

3.1.1 Sentiment Analysis. To complement our qualitative findings, we conduct a sentiment analysis of the video transcripts to find the dominant emotions expressed by the preachers along the changes of emotions in a video. To do so, we used IBM Watson tone analyzer [109] (also used in [9, 97]). IBM Watson tone analyzer is used for obtaining sentence-wise or document-wise scores on written texts for emotional, language, and analytical features. We used this tone analyzer to get scores on different emotions including 'joy', 'sadness', 'anger', and 'fear'. Additionally, this tool gives us scores on language features. Language features include 'analytical', 'tentative', and 'confidence'. The 'analytical' score represents the amount of reasoning the preachers used in the sermons. The 'tentative' scores demonstrate how doubtfully, or debate-fully the preachers present various topics. The 'confidence' score shows the optimism of the preachers during their sermons. Details about the tool can be found in the IBM Watson tone analyzer [109] document pages or from Tanveer et al. [97].

First, we obtained scores for emotional and language features from each of the video transcripts. The scores on individual video transcripts further guide our qualitative observation for tracing the correlation between a particular score and the type of discussion in the sermon. Although most of the time, our intuitive assumptions about particular video locations mapped reasonably well to the scores returned by the tone analyzer, sometimes we needed to take some excerpts out and manually check that in the IBM Watson's page for accuracy. Through such a mix of qualitative observation guided by scores from the tone analyzer, we found correlations between the preachers' emotion and the topics of discussion. In addition, we took notes of the type of expressed emotions while exhibiting certain bodily, gestural, and affective performances of the preachers.

4 FINDINGS

4.1 Social Roles and Norms

The prominent topic of discussion by preachers in our video corpus is related to social norms, values, and morality. The preachers discuss what people should or should not do in their everyday life. They complain about the existing and emerging norms that conflict with Islamic values. With such discussion about Islamic values, the preachers call their audiences to change their own lifestyle and adopt norms and values guided by Islam. The sermons also ask audiences to resist values and norms that don't go with Islamic values.

The most frequently used pair of words in our video corpus is "jaiz - najaiz". The preachers use this set of Urdu words to categorize between permissible and non-permissible activities for Muslims. The most common set of social issues discussed in the sermons are family and social bonds, gender issues, economic activities, and moral education. While talking about each of the issues, the preachers take the prophet Muhammad (sm) as the benchmark. The preachers discuss how the prophet disciplined a chaotic Arabic society through reforms, created a sense of bonds among believers in the society, and established a set of social values. Such a discussion often leads to the mode of discussion where preachers show their disappointment because of the society's

current distance from Islamic values and norms. Through some common themes of discussion–men and women's bodily attires, corruption in business activities, moral depredations of youths, and adoption of Western norms–the preachers occasionally make an argument that the current societal norms are the sign of the extinction of the universe (*qiamah*). One preacher in our video corpus was explaining the signs:

> "Dear brothers and sisters, do you ever look around? Do you see all the signs of *qiamah*. How could you [smiles jokingly], you never read anything other than novels! People have become materialistic; they barely remember Allah. Women are doing many things that they were prohibited from doing in the Quran. Men are earning money through corruption! Do you identify the signs of quimah in this chaotic situation? Society is rotten now, I can even smell it!

To categorize daily activities, the preachers draw from Islamic holy books and local and global Islamic histories, local culture, and, lately, current socio-economic situations. While some of their categorizations often directly come from their holy books, many categories of permissible (*jaiz*) and non-permissible (*najaiz*) activities come from the preachers' own judgement and interpretation of holy books.

Within the Islamic communities, there are several traditions, primarily based on the type of education received by the preachers. There are two main traditions of Islamic education in Bangladesh, *Qawmi* and *Alia*. In Alia Islamic education, preachers receive education both on religious holy books and traditional sciences. But Qawmi madrasahs provide education only on religious holy books. The preachers' categorization of permissible (*jaiz*) and non-permissible (najaiz) activities also vary based on which Islamic tradition the preacher is coming from. We have found from our analysis that preachers from the two traditions confront each other every now and then. People from Qawmi traditions often complain that preachers coming from Aliya traditions lack depth in Islamic knowledge. On the other hand, preachers from Aliya traditions dismiss many of Qawmi's traditional categories of permissible and non-permissible activities because they evaluate the categories as lacking contextual nuances.

The preachers' discussions on social norms, code of life, and opinion on permissible and non-permissible activities could be broadly discussed in three categories: (a) the preachers discuss how the processes of modernization and westernization are deviating Muslims from divine guidelines, (b) how popular culture, especially TV and social media are polluting Islamic minds, and (c) advocating for infrastructural reforms in different sectors of social life.

4.1.1 Modernization and Westernization. All preachers in our video corpus discussed the sorts of contemporary topics and local Islamic histories that we can collectively describe as modernization and westernization of Bangladeshi social life. The preachers mention contemporary events, culture, and norms in the West as an example of how a non-Islamic culture looks. Through such mentions, the preachers try to achieve primarily two goals. First, they describe what norms a Muslim is not supposed to embrace. In this line of argument, the preachers often position Islamic culture as opposed to modern and western culture. Second, why Muslims should not mix their norms with non-Muslims, and that Muslims should avoid going to the West and living a life there.

Most preachers in our video corpus present any contemporary norms that do not comply with Islam as something recruited from the West. On top of their list are clothing, food, music, and movies. We have found the preachers use the phrase, "[something] from ihudi (Jews) - Nasara" almost as a synonym to describe something recruited from the West that they find non-compliant to Islam or Bangladeshi culture. To make their arguments convincing about the West and modernization, the preachers often mention their own experiences from their visit to the West. Some preachers in our analyzed videos also narrated mythical and anecdotal histories to convince the audience how the

colonizers infused norms and culture in the name of modernization in Bangladeshi society. Through the storytelling in the sermons equipped with anti-modernization emotion, myth, histories, and personal experiences; modernization and westernization are sensitized as an imagined enemy of Bangladeshi Islamic culture. One such preacher was explaining how a colonizer normalized making friendship with a non-Muslim community:

> "Do you know what happened before your birth? Some people were trying to build a market. They said, we want to build a market. The British gave a condition. There must also be prostitution [ethnographer did not find a source of such]. Astagfirullah! Because they knew adultery [Zeena] works beside usury."

The quote above follows a preacher's explanation of how usury has been normalized in Bangladeshi culture by a colonizer country. In making such a narrative, the preacher described that prostitution was used to popularize many businesses that involve usury.

Another group of sermons in our analyzed video describes why people should not go abroad for better jobs or education. Many Bangladeshi people go to Western countries for better jobs and studies. The preachers find this very disturbing and urge people not to go abroad. To persuade people, they bring examples to show that the Muslim lifestyle is not appreciated and even discouraged in the West. In our analyzed videos, we have seen preachers talking about how Islamic attires are met with discomfort, how performing rituals publicly is not welcomed, how hard it is to find permitted foods and clothes (halal), and how Muslims are killed in the West. Preachers often make them even more persuasive by mentioning their own experience of living abroad or bringing examples from their friends. One preacher in our corpus was discussing why is it not permissible (*haram*) for Muslims to live abroad:

> "Is living and studying in non-Muslim countries legal [by legal, the preacher meant legal in Islamic law]? Some indications of non-Muslim countries are where adhan (Mosques' calls to prayers) can't be given explicitly, qurbani (sacrificing animals in the name of Allah) can't be carried out; remember these rules, these might sound trivial to you. But these are not trivial, where you can't pray Jummah (special prayer on Friday noon), where you have to follow these rules like a thief. It is haram (non-permissible) to live in those countries."

This and many other examples of our video corpus show how the preachers made an anti-Western and anti-modern sentiment by describing their norms as contrasting to Islam. By doing this, the preachers separate the Islamic culture from the Western ones and glorify the Islamic culture and heritage.

4.1.2 Pop-Culture: TV and Social Media. One of the most discussed topics in Islamic sermons is pop culture. The preachers discuss at length the popular sports, entertainments, fashion, and technologies. They bring the topics in humorous ways and draw the followers' attention to the issues related to feminism, music, dresses, family planning, child marriage, local history, and other contemporary social and moral issues. In doing so, the preachers frequently compare the contemporary pop culture with Islamic histories to show the clear contrast and bring the moral degradation brought by the current pop culture.

The preachers talk mostly about TV culture and social media in Bangladesh, among other forms of entertainment. The attitude and rhetoric of discussion surrounding the television culture among Bangladeshi Islamic leaders have been changing. Previously, religious communities used to question whether or not it is permissible to watch the TVs [73]. Our analysis shows the preachers are increasingly becoming open to watching TVs in general. However, preachers have particular opinions on what TV channels are permissible to watch (*halal*) and which are not (*haram*). In

recent times, Bangladeshi cable TV providers broadcast many TV channels from the neighbouring countries. The sermons see them as a cultural intrusion not only to the Islamic culture but also to the traditional Bangladeshi culture. At the same time, many sermons mention that this intrusion is causing economic loss to the country. One preacher mentions this in his video:

> "There are 36 satellite channels from India in our country [ethnographers did not cross-check this information]. How many [asks the audiences]? Speak loudly (the preacher screams)! Three crores [30 million BDT] are spent. You tell me, three crores are spent on these 36 channels, what do you learn from them except for the evil gossiping [the preacher is talking about daily soaps] about one another, breaking up the families? [smiles jokingly]"

In the quote above, the preacher is talking about daily soaps broadcasted on the foreign TV channel. At the end of his video, he indicates through a joking smile that he does not have the freedom to talk about this issue in his sermon openly, as talking about this foreign policy of broadcasting TV channels will upset the government.

The preachers often describe how the moral compasses are changing in the Islamic communities due to the access of TV channels from the countries with non-Islamic culture. Their speeches illuminate how mass media are replacing Islamic authorities. With increased access to TV channels from around the world, people are being exposed to various news sources and different interpretations of what is right or wrong. As a result, as sermons often suggest, people are becoming skeptical of the traditional Islamic authorities; rather, people are re-assessing everything through the lens of whatever they learn from mass media.

On the contrary, where preachers are often negative about foreign TV media, some preachers take this technology as an opportunity to spread their sermon videos easily and quickly (*dawah*). Some preachers in our analyzed videos mention some popular TV channels, which have become parts of the Islamic daily routine for many. Some preachers describe the Islamic channels as fighting with *haram* channels worldwide. The preachers explain, as more channels and TV content for Muslims are introduced, Islamic communities will be more motivated to avoid the non-permissible *haram* channels while embracing the Islamic ones.

Along a similar line of mixed attitudes towards TVs, preachers are both critical and positive about social media. The primary target audience for the preachers about this topic is the youth and females. In our analyzed videos, we have found that preachers often hold social media accountable for the youths' moral degradation. They describe how excessive use of social media is eating up the youths' time and breaking up their daily schedule. Because of such an adverse change in the youths' lifestyle, the preachers often lament how the youth miss regular Islamic rituals, such as daily prayers. In one of the videos, one preacher was almost crying while describing this to his audiences:

> "Hey youth, hey youth! [the preacher takes a pause with his head down]. Do you know what the most valuable time in your life is? This is now! I have gone old. I cannot move properly. You do! Why do you invest your time on Facebook now? You stare at your phone for hours. You chat with ladies. What do you get in return? You keep awake the whole night. You miss your Fazr [the morning prayer]. Have you noticed how far you have gone because of this thing [social media]? Wake up! Wake up!"

The second target audience for speeches about social media is women. In our analyzed videos, we have found many examples of sermons prohibiting women from being active on social media. Their first objection is that social media disrupts their purdah through profile pictures and chatting with people of the opposite sex. The preachers describe the incidents as serious sins. We have found in the sermon videos that preachers hold women more accountable than men for the kinds

of sins they describe for participating in social media. Some preachers in our videos talk about a kind of future where both Islamic and cultural values will vanish due to the dominant role of social media and because of women's participation in them. The sermons caution that if the recent trend of social media use continues in the name of modernism, the youth will lose their Islamic moral character.

In summary, the preachers' discussion about pop culture invokes issues related to Islamic values, local culture, morality, feminism, youth, and global politics. On the one hand, TVs and social media allow preachers to spread their sermons easily and quickly. This makes the preachers hopeful as they believe if there is enough Islamic content on social media, Islamic communities will not watch prohibited content (haram). On the other hand, the sermons constantly remind the Islamic communities of the vulnerability of Islamic norms and culture accelerated through TV and social media.

4.1.3 Infrastructure. Discussing financial and health infrastructure is among the popular topics in Islamic sermons. Our analysis shows that Bangladeshi preachers popularly talk about usury, the banking system, financial corruption, and wealth sharing among Muslims in society. Many people are still suffering from resource scarcity in Bangladesh because of adopting the secular economic system, in preachers' opinion. As an example, the preachers remind of the interest-based banking systems, various kinds of usury still prevalent in rural Islamic societies, and financial corruption in various bureaucratic sectors. The preachers argue that the secular economic policies are only distressing the poor and making the rich richer. As an opposition, the preachers frequently remind the sermon attendees of the Islamic financial infrastructure based on resource sharing. They talk at length about the Islamic rules for resource sharing (such as *Zakat*[3]) and guide their audiences to appropriate resources where they can do it properly. One preacher was talking about Islamic resource sharing in one of the videos:

> "Why do you think so many people are still in distress...not only the poor, but you will find many rich people suffering from deadly diseases. This happens when you are so greedy, do interest-based business, save your money in the banks to get interested instead of sharing some [money] with the poor. As long as our economy is not built on Zakat-based economy, as long as the interest-based economy goes on, Allah shall not open his doors of blessings."

In a similar line, the preachers show their worries about health infrastructure in Bangladesh. Our analysis shows how preachers describe various health problems either as a test from God or from a deviation from Islamic norms. A counter-intuitive finding from our analysis is that, while some preachers are ambivalent about modern medical sciences, most preachers suggest going to the doctors and getting proper treatments. However, the preachers caution the attendees about being mindful of the Islamic guidelines while seeing a doctor of the opposite sex.

4.2 National and International Politics

4.2.1 National politics, the role of the government, and political atrocities. Islamic preachers in Bangladesh are one of the dominant groups that criticize and discuss national and international politics. Their discussion blends with their political wish of establishing Islamic norms in the state. As a result of this and the state policies of liberal secular democracies, the Bangladeshi government and the preachers often confront each other on various issues. Because of the large follower base of the preachers, those issues get so much public attention, that national and international media often cover them.

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[3]The Islamic ritual of sharing a percentage of money with whoever needs it.

Our analysis shows that preachers start their political discussion by blending politics into everyday Islamic lifestyle as the first step of their political engagement. To do so, they cite Islamic laws and discuss Islamic figures to discuss how ideal politics and political leaders should be in Islam. One preacher in our video corpus connects a core Islamic concept, creed (Aqidah), with our everyday political life:

> "Islam Aqidah, Islamic laws, and the Islamic system of governance are Islam altogether. Islam is not without any of those. Our problem is that we prioritize one over the others. Furthermore, we leave some. We think some of them are unimportant. This is our problem."

The preachers carry on their discussion by comparing the Islamic figures to the present-day politicians. Notable among the Islamic figures that they describe as ideal political men are the prophet Muhammad (sm) and Hazrat Umar. The preachers describe how these political men led a simple lifestyle yet managed their state with proper social justice. In contrast, they pick on ongoing political debates and show how the present-day political men are often corrupted and ignorant of the greater good of Islamic society (ummah). Their discussion of state politics goes through the emotions of ridicule, anger, disappointment, and hope for future Islamic politics.

Calling for political actions to adopt Islamic norms is very common in our video corpus. Such calls are made for changes both at local and national levels. Many calls are made to the head of the government in Bangladesh. In making such calls, preachers mention the density of the Islamic population in the country and draw the government's attention to conform to Islamic norms for state policies. In our video corpus, we have found preachers discussing the national educational curriculum and their reforms, creating more job opportunities for graduates with madrasah educational background, foreign policies with the neighbouring countries, among other contemporary issues.

Our analysis shows that the preachers remind the government that they should be knowledgeable both about the constitution and the Qur'an. They must know whether or not a policy conforms to the direct orders of the Qur'an. The preachers also indicate that the Islamic interest is the dominant public interest, which should be considered.

Our video corpus shows that a common topic of discussion is the political atrocities happening in the country. The preachers condemn the parties that are responsible for the atrocities. The preachers do not only criticize the violent political event inside of the country, but they also mention political atrocities around the world. By describing the atrocities, the preachers interpret that much political chaos is the consequence of deviation from Islamic political tradition. Sometimes the preachers describe the atrocities as imported from foreign political culture, as one preacher describe below,

> "Islamic politics is not burning cars on the street, or calling frequent strikes, or these types of activities. These are not Islamic politics. These are games for power. These never existed [in Islamic politics]. 1400 years have passed. These principles were never followed by Islam. This principle is adopted from the Jews, adopted from the Christians [*ihudi - nasara*]. This principle is borrowed from atheists. Islam never recommends this."

In the quote above, the preacher is describing how Islamic religion is peaceful in nature and does not allow the kind of atrocities in contemporary politics. However, in condemning the national political problems, the preacher is implicitly holding the other religious groups (*ihudi-nasara*) accountable.

In recent times, the Bangladeshi government and the sermons have confronted each other. The government has been complaining that many sermons are the sources of spreading hate speech against the government; the preachers directly criticize constitutions and judicial systems

in Bangladesh, which the government sees as a violation of the national constitution. There has been widespread sharing of sermon videos online where local political leaders and preachers are found confronting each other resulting in heated verbal exchanges. Some preachers have gotten arrested in the last few months due to their anti-government and anti-state speeches [85].

In response to the government criticisms about the sermons, some preachers in our analysis complained that their videos are downloaded and edited so that they often do not show their whole contextual discussion. As a result, the government and others misunderstand some of their discussion and blame them, which they think they do not deserve. Because of such phenomena, we have seen some preachers taking cautious positions of letting people videotape them and circulate the recordings through YouTube. At the beginning of a sermon, one preacher was cautioning people about his concerns,

> "You are taking my videos, fine. Allah has given me the wisdom, and you are disseminating it. Allah will reward both of us. But son, do not make videos and memes out of them. If an Islamic scholar (*Ulama*) gets ridiculed, the sins will be yours. Do not cut videos and make the government misunderstand us. I am here just to spread Allah's words."

As the copyright issues of the sermon videos are not maintained strictly, even the video uploaders do not have much control over the uploaded contents. As a result, many preachers do not allow others to take videos from their preaching.

4.2.2 Global Islamic solidarity. Expressing solidarity with Muslims around the world is a common feature of our video analysis. The preachers show their concern and empathy for the Muslims who are suffering from war, racial violence, and Islamophobia all over the world. At the same time, the preachers discuss the global situation at length to inform their audience and call their attention to the global issues. There are several characteristics of how the sermons show their solidarity. The preachers discuss Islamic histories around the world, refer to holy books to emphasize Islamic brotherhood, discuss contemporary world politics to depict Muslims worldwide as victims, and end their discussion with a call to their audiences to show empathy towards Muslims around the world.

The preachers discuss Islamic histories worldwide that create a mental connection of the audiences to the places they describe. Popular among the places are the countries in the middle east, especially Saudi Arabia, which they present as 'holy lands' for Muslims. While talking about the places, the preachers describe how the places look like, how the prophets and their companions (*sahabis*) used to adapt to the people and places, how places have been glorified in Islamic holy books, and how Muslims are the world should show respect to these places. Through the historical narratives, myths, and obligations for Muslims for these places, the audiences make a mental connection to the people and places. Such a mental connection carries through the rest of a sermon and makes the audiences feel a sense of a global community.

To demonstrate the connection among all Muslims worldwide, the preachers most frequently draw on the holy book to highlight the oneness and uniqueness of God, and we all descend from one prophet. By highlighting this, the preachers emphasize the brotherhood among Muslims irrespective of geographical locations. Addressing the audiences by "community" (*ummah*) is where the Islamic sermon differs from other forms of public speaking. By addressing audiences as "ummah", the preachers draw attention in a sermon to the worldwide Muslim communities. By making such a sense of global community, the preachers bring awareness among the audiences of the issues related to Muslims being victims because of war worldwide. One preacher was screaming to the sermon attendees in one of the videos in our corpus and saying:

> Hey ummah, hey ummah [the voice got louder with each chant]! Look what is happening around the world to your brothers and sisters. Look at Palestine now. Are not you watching TVs? What do you do on social media? Don't you see the kids crying in Palestine? Don't you see how your brothers and sisters are being tortured to death around the world? Are you still quiet? You will be accountable for being quiet on judgement day. Allah will ask you what did you do when your brothers were being killed. The Muslim brotherhood (ummah) around the world is like a single body. If your hands get hurt, your feet will know that. Do something. Talk to the UN and other powerful countries who work with world peace. Pray to Allah for saving the ummah!

The above and the other examples show how the preachers try to create global solidarity among Muslims around the world. The preachers do so by drawing on the holy books and Islamic histories, and myths. The preachers show their passions, emotions, care, and empathy through their performance of speech before the sermon attendees.
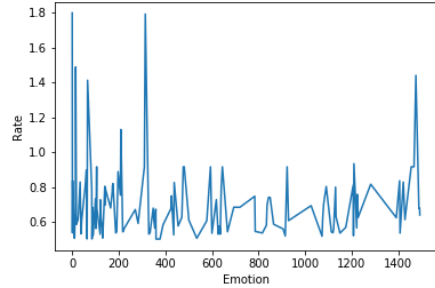
4.3 Performances of Islamic Preachers

In the section above, we have demonstrated that preachers in Islamic sermons discuss religious topics and engage with various social, political, and cultural issues. The engagement of such issues in the sermons is both expressive and persuasive. Popular and successful preachers demonstrate a range of emotional and bodily performances in Bangladeshi sermons [87]. With such performances, the preachers' role is not only confined as a speaker but often as an actor who engages with audiences through a range of bodily and emotional acts. The acts involve performing different gestures, chanting, singing, switching vocal codes, crying, screaming, among other vocal and bodily acts. Through the performances, the preachers often turn a religious public speech into a counselling experience for audiences.

4.3.1 A typical Sermon. A typical sermon starts with an announcer announcing the name of the preacher. The announcer uses a lot of adjectives about the preacher before actually pronouncing the preacher's name. For example, one sermon starts with the announcer announcing *"dear brothers and sisters, now is the time for the internationally familiar speaker (antarjarik bokta), the famous Islamic scholar, the pride of our district, Hazrat Maulana [the speaker's name]."* The announcement is loud, almost like screaming. The announcer asks the audience to chant *"narayen takbir, Allahu Akber."* The meaning of this chanting is unimportant for the audiences; instead, it awakens the audience and prepares them for the upcoming speech. On the other hand, the speakers take the chanting as praise and inspiration for the rest of their speech.

The preachers start the sermon with some ritual activities. Most sermons begin with the preachers praising Allah. Then the preachers start making prayers and reciting durood (*dua and durood*). The audiences remain quiet when the preachers recite *durood* in a melodic voice. Within a few minutes, the preachers engage the audiences by reciting a durood together for about two to three minutes. While reciting the durood, the audiences will keep up the similar pace and melodic voices with the preacher. This whole process from the preachers' arrival to the finishing of the *durood* at the beginning of a sermon takes about five to six minutes. The recitation happens in Arabic. After this ritual, a preacher speaks in Bengali for the first time by asking audience how they have been doing. Most preachers laud the audiences for joining the sermons and request them to stay for the duration of the whole sermon, typically a night-long program. Some preachers further connect to the audiences using different strategies. In our video corpus, we have seen preachers mentioning the audiences' city's name and discussing an event that recently happened there. Some preachers started talking in local dialects to connect with the audience. Praising the city where the sermon is happening is common among the preachers.
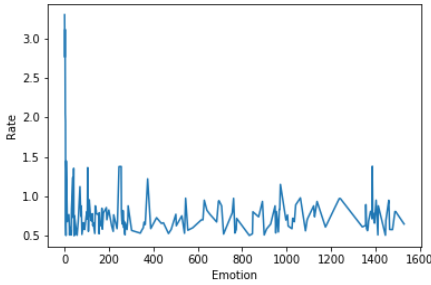
(a) Changes of "joy" in a preaching video.
(b) Changes of "sadness" in a preaching video.

Fig. 2. Changes of emotions in a sermon video.

In the rest of the sermon, the preachers typically talk about a particular topics or particular excerpts from the Quran. This is the time when the preachers express their emotions and engage audiences in such a way as if the audiences themselves are taking part, with audience acts expressing agreement, chanting, praising Allah, laughing, crying, and clapping. We describe the emotions expressed by the sermons in the section below. The sermon ends with the preacher trying to counsel audiences about the topic of the sermon. The preachers often end the sermon with an approach to persuade audiences to adopt Islamic moral values and perform rituals for religious rewards in the after-world.

4.3.2 Emotions in Sermons. The sentiment analysis of our analyzed videos shows the occurrences and changes of various emotions in the sermons. The most frequently and intensely shown emotions are joy, sadness, and anger. The emotions persist over the whole speech length for a speaker, although the intensity of the emotions changes over time. In addition to analyzing the emotion scores from the IBM Watson tone analyzer, we referred back to the transcripts and videos to find out what types of activities and expressions generate the intensities and changes of emotions.

The most common emotion in our video corpus is "joy" (fig. 2(a)). The joy scores for the videos with both low and high numbers of views on YouTube are most frequent and intense. Most videos start with a high joy score. This is due to the opening phase of the sermons, where the arrival of the preachers is celebrated with slogans, claps, chants, and other joyous expressions. As the beginning phase of the sermon passes, the joy scores become steady and less intense but appear routinely. This is due to the preachers' intentional effort to keep engaging the audiences in cheerful ways in the sermons. We have seen visible effort from the preachers who routinely make humorous jokes, ask audiences to say praising words to Allah, laugh, make bodily gestures that embed fun, sing Islamic songs, and often recite Bengali poems. The tones and voices change based on whatever the preacher is doing. For example, when a preacher talks about heaven and the afterlife, they often mix melodic narration and recitation from holy books. Such contextual performances throughout the sermon bring dramatic and joyous moments for the sermon attendees.

"Sadness" is equally prominent in our analysis of our video data set (fig. 2(b)). This score is often correlated with the "fear" scores of the videos. Our qualitative observation to find this correlation demonstrates that as long as the introductory part of a sermon is over, the preachers start addressing issues of disappointment about societal norms, disgust on political situations, resentment of moral wrongdoings, fear of the after-worlds–all that invoke the feelings of "sadness". Some such "sad" instances of discussion are short-lived, often sudden, and end with a call from the preachers to the attendees to ask for forgiveness from God. Other issues of "sad" segments span for a more

extended amount of time. For example, in one of the videos, the preacher discussed at length the sufferings that prophet Muhammad (sm) had to go through in the early days of Islam. The choices of words, the melodies of narration, the performances of gestures, mimicries, the switching of voice intensities, the engagement with the attendees, and the overall delivery of the speech is such that it almost seems like a thoughtfully designed plot. Such longer "sad" discussions in a sermon end with weeping, sobbing, crying, chanting, recitation of dua, and lastly, call from the preachers to learn from the topics they describe.

Similar to the "joy" score, the "sadness" scores appear intensely and more frequently at the beginning of a video and become steady throughout the rest of the speech. In other words, The feeling of "joy" and "sadness" appear almost in parallel throughout the video, with almost similar intensities. This shows another aspect of the sermons: the preachers stir a range of positive and negative emotions concurrently throughout the sermon and switch between them regularly. We believe that such switching of emotions makes the audience more engaged and helps overcome the monotonousness of a public speech.

Among the language scores (analytical, tentative, and confidence), the "analytical" scores appear more frequently with greater intensities. It represents the reasoning made by the preachers in sermon videos. Our qualitative analysis demonstrates that the preachers make various moral reasonings throughout the sermon. The preachers discuss what is right and wrong in various actions, including political, social, and ritual activities. What is right or wrong in ritual activities is a public social discourse in Bangladeshi Islamic communities. Muslims are often seen discussing how they should say their prayers, what is permissible and what is not in fasting during Ramadan, how to perform hajj, among other Islamic rituals. The preachers analyze various mistakes that people usually make and how to do them right. The types of discussion above accompany "analytical" reasoning drawn from the preachers' everyday experience, holy texts, and Islamic histories.

Performing moral duties to other people in society is a popular topic of discussion in our analyzed videos. In talking about moral responsibilities, the preachers sometimes try to draw on modern sciences and show how some of their recommendations go in line with scientific arguments. One such popular topic for the reasoning of Islamic meaning is fasting; several preachers in our video data set described how modern sciences show fasting as beneficial for human bodies and minds. By drawing on sciences and providing reasons for Islamic moral values, the preachers discuss their feeling of pride by mentioning that what science is discovering now is suggested by Islam many years ago (the ethnographers did not verify the ' authenticity of such claims made by the preachers). Although the sermons show a frequent presence of analytical scores, the preachers deliver their reasoning in a fluid, easy, and humorous way designed to make the general audiences (sadharon manush) understand them. In such moments of reasoning, the preachers display "analytical" skills for convincingly making their point.

Alongside the analytical score, tentative scores show that preachers also show their doubt and hesitation on various issues. Our qualitative observation shows the sources of such tentative scores are the preachers' doubts on many modern values, scientific claims, and political issues. Contemporary political issues are where the preachers bring their creativity of strategically using their words. The preachers strategically choose the kinds of words that show their disagreement and disappointment with a government policy, while at the same time, they are cautious so that they do not offend the government. In recent years, the government and preachers have confronted each other on various issues. Many preachers have ended up going to jail with the allegation of offending political leaders and government policies. As a result, the careful choice of "doubtful" words might have increased the tentative score in the sermon.

The least frequent score in our analysis comes from the "confidence" category, although our qualitative observation shows that the preachers show a reasonable amount of confidence in their

sermons. We do not have any strong reasoning to explain this discrepancy between our qualitative observation and quantitative reasoning. Although, it is safe to say that the tone analyzer we used–while reasonably captures other forms of emotions and languages–has not worked in the case of detecting the "confidence" of the preachers. We believe that only relying on the vocabulary might not be enough to analyze the "confidence" category, as the sermon languages and mode of expression are different from other forms of natural languages. We argue for more in-depth research to automatically detect "Islamic" (or religious in general) natural languages.

5   DISCUSSION AND CONCLUSION

In the section above, we have presented the topics most discussed in Bangladeshi Islamic sermons. We have informed how the Islamic sermons become an informal space for the sermon attendees to get instructions about what is permissible and non-permissible in everyday social life. We have analyzed how preachers present various norms from other religions and the West as examples of what Muslims should not adopt. By doing this, a few preachers often create an anti-western and anti-modernist sentiment among Bangladeshi Muslims. We have explicated the views and opinions of preachers about various elements of pop culture, including popular sports, entertainment, fashion, and technologies. We have shown how preachers use pop culture in humorous ways to discuss how Islamic culture has deviated historically towards an immoral direction. We have analyzed how preachers participate in national and international political discourses. We have discussed how the political participation of speakers leads to various consequences, including conflicts with the government, playing a part in forming Islamic political parties, and building global solidarity. Lastly, we have analyzed the sermons to show various sentiments and their flows in typical preaching. In the remainder of this section, we discuss the key takeaways from our findings to the CSCW and related communities.

5.1   Public Speaking in the Context

We contribute to the literature of public speaking by foregrounding the performative, value-centred, cultural, and contextual features of Islamic sermons. The distinctive sort of public speech we study in this paper problematizes various assumptions on the previous studies in CSCW and related fields as well as opens up new avenues for future public speaking research. Previous studies in CSCW and related areas assume that various skills in public speaking in CSCW and related fields are universal. For example, voice-based technologies assume a specific range of loudness and speaking rate to categorize a "good" speech [96]. Training technologies in virtual environments encode speech quality, content coverage, audience orientation, gestures, and other behavioural features to give feedback to the presenters [98, 101, 108]. On the contrary to these universal assumptions, we have shown in our study that public speaking behavioural skills are locally and culturally constructed (also, see [87]). We have shown how the emotions and body language of a typical preacher change in accordance with the topic of discussion, the sensitivity of the topic, the type of the audience, and even the geographical location of the speech. We have discussed how the preachers design the contents of their speech that add many cultural elements to it, including melodic narration, poetic recitation, code-switching of languages, humour, metaphors, myths, and local histories. Many of these cultural elements even go back farther into the local and Islamic histories. For example, chanting, multilingualism, and other aesthetic features that preachers use in their sermons are rooted in South Asian Bengali history [87, p. 9–28] [86]. We have also shown that engaging audiences in the speech is a function of how efficiently the preachers deliver their speech and how strategically they interact. We have demonstrated that the preachers use different means, including asking questions, chanting together, calling for asking for forgiveness from God (dua), among other non-monotonous ways. Overall, the fine details of the preachers' performance and

the distinctive features of an Islamic sermon suggest that existing CSCW tools might be inadequate or even misleading to help public preachers in various environments, at least at the one we studied.

This observation calls for broadening the scope of CSCW studies about public speaking beyond the convenience of the lab and controlled settings. The re-allocation of focus out of the virtual environment will force us to acknowledge the behavioural, cultural, contextual, and value-centred nuances of a public speech rather than taking them for granted. As opposed to the efforts of finding simplistic solutions that people prefer–such as creating a virtual environment that participants find "non-judgemental" and more favourable [108]–we suggest CSCW and related fields admit the messiness and challenges that a speech environment might come up with. Broadly, public speaking anxiety is often intermingled with social anxiety [16, 30], which makes it even more challenging to design technologies to address public speaking anxiety. For an effective technology solution, we call for further CSCW research that explores both methodologies to incorporate nuances of public speaking as well as explore various speeches in different contexts to help the speakers in those environments better. We contribute towards this goal by deeply informing the Islamic sermons and the preachers' performances.

Following the above, our study has several implications for public speaking research within CSCW. First, we argue for avoiding universal standards of public speaking within CSCW research, which is dominantly based on Western and secular public speaking traditions [27, 98, 101, 108]. Such an agenda will open up opportunities for the inclusion of diverse categorical, material, cultural, contextual, and aesthetic aspects of public speaking. The existing research within CSCW centers around some assumptions of some "standard" performative and material aspects of a public speech. For example, a few studies in CSCW have suggested what a "good" range of speech volume is [96]; how should a speaker's body languages look like [98]; how fast or slow a speaker should speak [96]; among other characters. Although the studies are conducted with particular audiences and in particular contexts, the insights are nevertheless presented in a manner that hardly acknowledges the limitations of the place, time, and culture associated with them. Our paper joins the decolonizing movement within CSCW and related fields to challenge the universalizing of those findings [33].

With the goal of broadening the scope of public speaking research, we suggest designers to go beyond behaviour-centred and expertise-based standard training and recognize and include other informal ways of training public speaking skills. Our study shows such an example of training through an apprenticeship [87]. In our study, we have not found any technology to train the Islamic public speakers of Bangladesh that would be culturally appropriate. However, as our findings show, these Islamic public speakers have no dearth of performative skills, contextual mannerism, and knowledge of cultural sources for engaging and entertaining the audiences. Further, these skills are hard to be described through a "standard" list of expertise; rather, different speakers have their own ways of mastering the art and craft of lecturing. We argue that an overt emphasis on universalizing the standard the public speaking sidelines the richness of performative skills and cultural aspects of public speaking. A shift of focus to informal training may overcome such limitations of public speaking research within CSCW and related fields.

5.1.1 Faith-based Performances Over Digital Media. Historically, Bangladeshi Islamic religious leaders have shown disinterest in using digital technologies. Such disinterest is due to the community's prejudice and myths about technologies [73], the fear of confronting prohibited contents [74], and difficulties in conforming with seclusion rules in Islam [74]. As opposed to the previous studies, our findings in this paper show that Islamic leaders and religious preachers are increasingly interested in creating content online. This openness of Islamic preachers to digital media deserves appreciation and support from CSCW communities in various aspects.

We have shown in our findings that many preachers are concerned that their videos might be edited to ridicule them or to disseminate their partial comments on a subject matter. Such editing of their videos may reinforce the Islamic communities' historical fear about the adverse impact of technologies. More strict copyright policies on YouTube videos and other social media content may assure the preachers to participate in digital media by creating more content. There even might be a lack of knowledge and awareness about the copyright issues among preachers and content creators. Literacy programs to inform preachers and content creators about this may help preachers to overcome their fear.

5.2 Islamic Digital Sermons, Politics, and Development

Besides our contribution to the public speaking literature, we build on our findings on the Islamic sermon topics to make two other important contributions to the CSCW and HCI communities. First, our work advances the literature on the use of religious sentiments for international development. Previous studies have shown how religious institutional forces and religious values can help development projects where religious and secular goals align [73]. The studies show that Islamic community leaders and preachers play an important role in the adoption and use of digital technologies. We advance this line of works of the role of Islamic sermons for international development.

An implicit and long-term consequence of the proliferation of Islamic sermons through the Internet lies in the ways the preachers are guiding "pious" sentiments on various issues. We have shown in our findings that preachers discuss concerns related to gender, politics, youth development, financial infrastructure–some of the very same issues that many development projects often refer to [4, 7, 32, 46, 50, 59, 60, 69, 89, 102]. The preachers also address issues involving privacy, infrastructure, discrimination, and governance that many CSCW and ICTD studies are concerned of (see [5, 6, 8, 44, 53, 75], for example). The above observations suggest that the Islamic sermons and the preachers in the sermons can be strategic partners of ICTD projects in developing countries. The preachers can promote ICTD projects by explicating religious values inherent in the projects, generating public opinion about adopting certain projects and policies, connecting development experts to people at the community level, and even partnering with the projects starting from the design to the deployment of a project. As previous studies suggest [73], such a partnership might take a long time to negotiate the value preferences of the Islamic preachers and finding the goals of a project that are in consensus with other interested parties (such as the government) of the development projects.

Although the CSCW scholarship is still diffident about strongly engaging with religious sentiments related to development projects (except for a few), many international development agencies have already made progress on partnering with faith-based leaders and organizations. For example, USAID has a program for partnering with religious authorities in their development projects [104]. Through this program, USAID establishes communication with people at the local level and gather and analyze data to design policies based on the role and impact of religious communities [104]. We believe similar approaches from CSCW projects related to development can benefit from engaging with Islamic preachers.

Second, our findings on the sermons' engagement with national and international politics complement the existing literature on using online platforms for political activism [105]. Our findings show that preachers use video-sharing platforms to express their political position, resist government policies by often complaining about their mismatch with religious sentiments, build consensus on their political goals, and sometimes initiate political movements among their audiences. Through the activities, the Islamic preachers turn into powerful socio-political actors partly because of the large number of followers online. On the other hand, there has been a series of complaints against

digital sermons for spreading misinformation and hate speech, inciting violence, and preaching against national interests [85]. In recent times, the Bangladeshi government and the ruling political party confronted many preachers. The weak copyright issues make it further difficult to control the potential harmful sermon videos. To make the video-sharing platforms welcoming and inclusive to the religious communities while at the same time mitigating the video's harmful impact, we call for more CSCW research for moderating religious contents online. Because of the nature of the contents, such moderation will need a set of faith-based expertise and infrastructure. Besides sermons' impact on national and international politics, our findings show how the Islamic preachers use social media platforms to set the politics of discourses relating to morality, ethics, norms, and Islamic agencies. Historically, authoritative religious figures have been setting the societal and national norms in Bangladesh and other South Asian countries [66]. The Islamic preachers virtually hold the agency of discussing and suggesting ethical standards in everyday life. Our analysis of topics shows a similar disciplinary role of Islamic preachers on ordinary Muslims in Bangladesh. The preachers use the Islamic sermon videos as an ethicopolitical [47, p 207] project to set a national standard of societal norms, pop cultures, national service-providing infrastructures, among other issues. However, the social media platforms also create opportunities for ordinary Muslims to directly engage with the preachers and other Muslims (through comments, for example) to discuss and negotiate the norms. Thus, the Islamic digital sermons on the Internet also create the opportunity to democratize the religious authorities by transferring religious authorities to ordinary Muslims to some extent. We call for future CSCW research to analyze how the ethicopolitical spaces are changing through the interaction of preachers and their followers on the Internet.

5.3 Limitations

Finally, we acknowledge some limitations of our study. First, the themes and topics of discussion by Islamic preachers on YouTube sermon videos reported in this paper might not be exhaustive. There are hundreds of Bengali Islamic sermon videos on YouTube. It might not be possible to make an accurately representative list of Bengali Islamic sermons from YouTube that might give us more topics of discussion by the preachers. As a result, we offer our findings as some of the most common findings from the Islamic sermon videos on YouTube. Second, our analysis is constrained by some methodological limitations for analyzing Bengali contents. One option open to us was to conduct a quantitative analysis of a larger list of videos using topic modelling. However, unlike English preaching videos on YouTube or videos from TED[4], the Bengali sermon videos on YouTube do not come up with transcripts that we could use for an NLP method. There is no usable NLP analysis method for the Bengali language either. Because of the methodological limitations above, we conduct a mix of qualitative and quantitative analysis. For analyzing the topic of discussion in sermon videos, we solely relied on the qualitative analysis, which gave us a larger latitude than quantitative ones as we could use our contextual knowledge in the analysis. The tool we used for sentiment analysis is also primarily made for the English language. Keeping this in mind, we did not solely rely on the IBM Watson tone analyzer results. Two members in this research team individually went through the emotional trajectories resulting from the tone analyzer and used the video and their contextual knowledge to ensure that the tone analyzer had given reasonably accurate results. With the agreements of two researchers, we discarded a few results from the tone analyzer as they did not match the video contents.

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[4]A platform for sharing short videos spreading ideas on scientific, cultural, political, humanitarian and academic topics [99].

ACKNOWLEDGMENTS

REFERENCES

[1] Crystal Abidin. 2018. *Internet celebrity: Understanding fame online.* Emerald Group Publishing.

[2] Norah Abokhodair, AbdelRahim Elmadany, and Walid Magdy. 2020. Holy tweets: Exploring the sharing of the Quran on Twitter. *Proceedings of the ACM on Human-Computer Interaction* 4, CSCW2 (2020), 1–32.

[3] John Emike Acheoah and A Hamzah. 2015. Style in Christian and Islamic Sermons: A Linguistic Analysis. *American Research Journal of English and Literature* 1, 1 (2015), 23–31.

[4] Syed Ishtiaque Ahmed, Nova Ahmed, Faheem Hussain, and Neha Kumar. 2016. Computing beyond gender-imposed limits. In *proceedings of the Second workshop on Computing within Limits*. 1–7.

[5] Syed Ishtiaque Ahmed, Md Romael Haque, Jay Chen, and Nicola Dell. 2017. Digital privacy challenges with shared mobile phone use in Bangladesh. *Proceedings of the ACM on Human-Computer Interaction* 1, CSCW (2017), 1–20.

[6] 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.

[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, Nusrat Jahan Mim, and Steven J Jackson. 2015. Residual mobilities: infrastructural displacement and post-colonial computing in Bangladesh. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*. 437–446.

[9] Ahmed Al Marouf, Rafayet Hossain, Md Rahmatul Kabir Rasel Sarker, Bishwajeet Pandey, and Shah Md Tanvir Siddiquee. 2019. Recognizing language and emotional tone from music lyrics using IBM Watson Tone Analyzer. In *2019 IEEE International Conference on Electrical, Computer and Communication Technologies (ICECCT)*. IEEE, 1–6.

[10] Md Sayeed Al-Zaman. 2020. Islam and Online Piety in Bangladesh. *IJISH (International Journal of Islamic Studies and Humanities)* 3, 2 (2020), 67–73.

[11] Idris Ali, Mashrekha Anwar, and Tamanna Sharmin. 2021. Job Opportunities and Obstacles of Madrasah Graduates in Bangladesh. *International Fellowship Journal of Interdisciplinary Research* 1, 1 (2021), 36–47.

[12] Lisa Anthony, YooJin Kim, and Leah Findlater. 2013. Analyzing user-generated youtube videos to understand touchscreen use by people with motor impairments. In *Proceedings of the SIGCHI conference on human factors in computing systems*. 1223–1232.

[13] Ellen Barry and Julfikar Ali Manik. 2017. To Secular Bangladeshis, Textbook Changes Are a Harbinger - The New York Times. https://www.nytimes.com/2017/01/22/world/asia/bangladesh-textbooks-radical-islam.html. (Accessed on 07/15/2021).

[14] Genevieve Bell. 2006. No more SMS from Jesus: Ubicomp, religion and techno-spiritual practices. In *International Conference on Ubiquitous Computing*. Springer, 141–158.

[15] Md Momen Bhuiyan, Michael Horning, Sang Won Lee, and Tanushree Mitra. 2021. NudgeCred: Supporting News Credibility Assessment on Social Media Through Nudges. *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW2 (2021), 1–30.

[16] Anke W Blöte, Marcia JW Kint, Anne C Miers, and P Michiel Westenberg. 2009. The relation between public speaking anxiety and social anxiety: A review. *Journal of anxiety disorders* 23, 3 (2009), 305–313.

[17] Mark Blythe and Paul Cairns. 2009. Critical methods and user generated content: the iPhone on YouTube. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. 1467–1476.

[18] Bruce M Borthwick. 1967. The Islamic sermon as a channel of political communication. *The Middle East Journal* (1967), 299–313.

[19] Lia Bozarth and Joyojeet Pal. 2019. Twitter discourse as a lens into politicians' interest in technology and development. In *Proceedings of the Tenth International Conference on Information and Communication Technologies and Development*. 1–5.

[20] Elizabeth Buie and Mark Blythe. 2013. Spirituality: there's an app for that!(but not a lot of research). In *CHI'13 Extended Abstracts on Human Factors in Computing Systems*. 2315–2324.

[21] Elizabeth Anne Buie. 2018. *Exploring techno-spirituality: Design strategies for transcendent user experiences*. University of Northumbria at Newcastle (United Kingdom).

[22] Heidi Campbell. 2010. *When religion meets new media*. Routledge.

[23] Heidi A Campbell and Mia Lövheim. 2011. Introduction: Rethinking the online–offline connection in the study of religion online. *Information, Communication & Society* 14, 8 (2011), 1083–1096.

[24] Kathy Charmaz. 2006. *Constructing grounded theory: A practical guide through qualitative analysis*. sage.

[25] Lu Chen, Ingmar Weber, and Adam Okulicz-Kozaryn. 2014. US religious landscape on Twitter. In *International Conference on Social Informatics*. Springer, 544–560.

[26] Mathieu Chollet, Pranav Ghate, Catherine Neubauer, and Stefan Scherer. 2018. Influence of individual differences when training public speaking with virtual audiences. In *Proceedings of the 18th International Conference on Intelligent Virtual Agents*. 1–7.

[27] Mathieu Chollet and Stefan Scherer. 2017. Assessing public speaking ability from thin slices of behavior. In *2017 12th IEEE International Conference on Automatic Face & Gesture Recognition (FG 2017)*. IEEE, 310–316.

[28] Mathieu Chollet, Torsten Wörtwein, Louis-Philippe Morency, Ari Shapiro, and Stefan Scherer. 2015. Exploring feedback strategies to improve public speaking: an interactive virtual audience framework. In *Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing*. 1143–1154.

[29] Kevin J Christiano, William H Swatos Jr, and Peter Kivisto. 2015. *Sociology of religion: Contemporary developments*. Rowman & Littlefield.

[30] Meghan W Cody and Bethany A Teachman. 2011. Global and local evaluations of public speaking performance in social anxiety. *Behavior Therapy* 42, 4 (2011), 601–611.

[31] Dipto Das, Carsten Østerlund, and Bryan Semaan. 2021. " Jol" or" Pani"?: How Does Governance Shape a Platform's Identity? *Proceedings of the ACM on Human-Computer Interaction* 5, CSCW2 (2021), 1–25.

[32] Nicola Dell and Neha Kumar. 2016. The ins and outs of HCI for development. In *Proceedings of the 2016 CHI conference on human factors in computing systems*. 2220–2232.

[33] Paul Dourish and Scott D Mainwaring. 2012. Ubicomp's colonial impulse. In *Proceedings of the 2012 ACM conference on ubiquitous computing*. 133–142.

[34] Nabil Echchaibi. 2011. From audio tapes to video blogs: the delocalisation of authority in Islam. *Nations and Nationalism* 17, 1 (2011), 25–44.

[35] Patrick Eisenlohr. 2009. Technologies of the spirit: Devotional Islam, sound reproduction and the dialectics of mediation and immediacy in Mauritius. *Anthropological Theory* 9, 3 (2009), 273–296.

[36] Patrick Eisenlohr. 2017. Reconsidering mediatization of religion: Islamic televangelism in India. *Media, Culture & Society* 39, 6 (2017), 869–884.

[37] Shaimaa El Naggar. 2018. 'But I did not do anything!'–analysing the YouTube videos of the American Muslim televangelist Baba Ali: delineating the complexity of a novel genre. *Critical Discourse Studies* 15, 3 (2018), 303–319.

[38] Matthew Engelke. 2010. Religion and the media turn: a review essay. *American ethnologist* 37, 2 (2010), 371–379.

[39] Steven Feld. 2012. *Sound and sentiment*. Duke University Press.

[40] Enora Gabory and Mathieu Chollet. 2020. Investigating the Influence of Sound Design for Inducing Anxiety in Virtual Public Speaking. In *Companion Publication of the 2020 International Conference on Multimodal Interaction*. 492–496.

[41] Patrick D Gaffney. 1988. Magic, miracle and the politics of narration in the contemporary Islamic sermon. *Religion & Literature* (1988), 111–137.

[42] George Gallup Jr. 1985. Religion in america. *The annals of the American academy of political and social science* 480, 1 (1985), 167–174.

[43] Jessica Hammer. 2020. Envisioning Jewish HCI. In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–10.

[44] SM Taiabul Haque, Pratyasha Saha, Muhammad Sajidur Rahman, and Syed Ishtiaque Ahmed. 2019. Of Ulti,'hajano', and" Matachetar otanetak datam" Exploring Local Practices of Exchanging Confidential and Sensitive Information in Urban Bangladesh. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (2019), 1–22.

[45] Mubashar Hasan. 2009. The geopolitics of political Islam in Bangladesh. *Harvard Asia Quarterly* 14 (2009), 1–2.

[46] 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.

[47] Charles Hirschkind. 2001. The Ethics of Listening: Cassette-SermonAudition in Contemporary Egypt. *American ethnologist* 28, 3 (2001), 623–649.

[48] Charles Hirschkind. 2012. Experiments in devotion online: the YouTube khuṭba. *International Journal of Middle East Studies* 44, 1 (2012), 5–21.

[49] Samia Ibtasam. 2021. For God's sake! Considering Religious Beliefs in HCI Research: A Case of Islamic HCI. In *Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems*. 1–8.

[50] Samia Ibtasam, Lubna Razaq, Maryam Ayub, Jennifer R Webster, Syed Ishtiaque Ahmed, and Richard Anderson. 2019. " My cousin bought the phone for me. I never go to mobile shops." The Role of Family in Women's Technological Inclusion in Islamic Culture. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (2019), 1–33.

[51] Linda G Jones. 2016. 9. Bodily Performances and Body Talk in Medieval Islamic Preaching. In *The Ends of the Body*. University of Toronto Press, 211–236.

[52] Lily Kong. 2001. Religion and technology: refiguring place, space, identity and community. *Area* 33, 4 (2001), 404–413.

[53] Sufian Latif, KM Rakibul Islam, Md Monjurul Islam Khan, and Syed Ishtiaque Ahmed. 2011. OpenStreetMap for the disaster management in Bangladesh. In *2011 IEEE conference on open systems*. IEEE, 429–433.

[54] Zhicong Lu, Michelle Annett, Mingming Fan, and Daniel Wigdor. 2019. " I feel it is my responsibility to stream" Streaming and Engaging with Intangible Cultural Heritage through Livestreaming. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. 1–14.

[55] Zhicong Lu, Michelle Annett, and Daniel Wigdor. 2019. Vicariously experiencing it all without going outside: A study of outdoor livestreaming in China. *Proceedings of the ACM on Human-Computer Interaction* 3, CSCW (2019), 1–28.

[56] Birgit Meyer. 2009. *Aesthetic formations: Media, religion, and the senses*. Springer.

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

[58] Nusrat Jahan Mim and Syed Ishtiaque Ahmed. 2020. Others' Images: Online Social Media, Architectural Improvisations, and Spatial Marginalization in Bangladesh. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–14.

[59] 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.

[60] Srihari Hulikal Muralidhar, Claus Bossen, and Jacki O'Neill. 2019. Rethinking financial inclusion: From access to autonomy. *Computer Supported Cooperative Work (CSCW)* 28, 3 (2019), 511–547.

[61] Maryam Mustafa, Kimia Tuz Zaman, Tallal Ahmad, Amna Batool, Masitah Ghazali, and Nova Ahmed. 2021. Religion and Women's Intimate Health: Towards an Inclusive Approach to Healthcare. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. 1–13.

[62] Yamini Narayanan. 2015. *Religion and urbanism: Reconceptualising sustainable cities for South Asia*. Routledge.

[63] Max M North, Sarah M North, and Joseph R Coble. 1998. Virtual reality therapy: an effective treatment for the fear of public speaking. *International Journal of Virtual Reality* 3, 3 (1998), 1–6.

[64] Xavier Ochoa and Federico Dominguez. 2020. Controlled evaluation of a multimodal system to improve oral presentation skills in a real learning setting. *British Journal of Educational Technology* 51, 5 (2020), 1615–1630.

[65] Teresa K O'Leary, Elizabeth Stowell, Jessica A Hoffman, Michael Paasche-Orlow, Timothy Bickmore, and Andrea G Parker. 2021. Examining the Intersections of Race, Religion & Community Technologies: A Photovoice Study. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. 1–19.

[66] Filippo Osella and Caroline Osella. 2008. Islamism and social reform in Kerala, South India. *Modern Asian Studies* 42, 2-3 (2008), 317–346.

[67] Kerry Pellett and Syed Fawad Mustafa Zaidi. 2019. A framework for virtual reality training to improve public speaking. In *25th ACM Symposium on Virtual Reality Software and Technology*. 1–2.

[68] Hawra Rabaan, Alyson L Young, and Lynn Dombrowski. 2021. Daughters of Men: Saudi Women's Sociotechnical Agency Practices in Addressing Domestic Abuse. *Proceedings of the ACM on Human-Computer Interaction* 4, CSCW3 (2021), 1–31.

[69] Nimmi Rangaswamy and Edward Cutrell. 2012. Anthropology, development and ICTs: slums, youth and the mobile internet in urban India. In *Proceedings of the fifth international conference on information and communication technologies and development*. 85–93.

[70] Asha Rao. 2012. Managing diversity: Impact of religion in the Indian workplace. *Journal of World Business* 47, 2 (2012), 232–239.

[71] Pew Research. 2017. World's largest religion by population is still Christianity | Pew Research Center. https://www.pewresearch.org/fact-tank/2017/04/05/christians-remain-worlds-largest-religious-group-but-they-are-declining-in-europe/. (Accessed on 07/15/2021).

[72] Ali Riaz. 2020. *Religion and politics in South Asia*. Routledge.

[73] Md Rashidujjaman Rifat, Jay Chen, and Kentaro Toyama. 2017. Money, God, and SMS: Explorations in Supporting Social Action Through a Bangladeshi Mosque. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*. 5941–5953.

[74] Mohammad Rashidujjaman Rifat, Mahiratul Jannat, Mahdi Nasrullah Al-Ameen, SM Taiabul Haque, Ashad Kabir, and Syed Ishtiaque Ahmed. 2021. Purdah, Amanah, and Gheebat: Understanding Privacy in Bangladeshi" pious"Muslim Communities. In *ACM SIGCAS Conference on Computing and Sustainable Societies (ACM COMPASS 2021)*. Association for Computing Machinery, Inc (ACM).

[75] Mohammad Rashidujjaman Rifat, Hasan Mahmud Prottoy, and Syed Ishtiaque Ahmed. 2019. The breaking hand: Skills, care, and sufferings of the hands of an electronic waste worker in Bangladesh. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems*. 1–14.

[76] Mohammad Rashidujjaman Rifat, Toha Toriq, and Syed Ishtiaque Ahmed. 2020. Religion and Sustainability: Lessons of Sustainable Computing from Islamic Religious Communities. *Proceedings of the ACM on Human-Computer Interaction* 4, CSCW2 (2020), 1–32.

[77] Francis Robinson et al. 2021. Islam and muslim history in South Asia. (2021).

[78] Mohd Al Adib Samuri and Peter Hopkins. 2017. Voices of Islamic authorities: Friday khutba in Malaysian mosques. *Islam and Christian–Muslim Relations* 28, 1 (2017), 47–67.

[79] Jan Schneider, Dirk Börner, Peter Van Rosmalen, and Marcus Specht. 2016. Enhancing public speaking skills-an evaluation of the Presentation Trainer in the wild. In *European Conference on Technology Enhanced Learning*. Springer, 263–276.

[80] Jan Scholz. 2018. Dramatic Islamic Preaching: A Close Reading of Amr Khalid. *Religion and aesthetic experience* (2018), 149.

[81] Dorothea E Schulz. 2007. Evoking moral community, fragmenting Muslim discourse: Sermon audio-recordings and the reconfiguration of public debate in Mali. *Journal for Islamic Studies* 27, 1 (2007), 39–72.

[82] Rahul Sharma, Tanaya Guha, and Gaurav Sharma. 2018. Multichannel attention network for analyzing visual behavior in public speaking. In *2018 IEEE Winter Conference on Applications of Computer Vision (WACV)*. IEEE, 476–484.

[83] C Estelle Smith. 2020. *Beyond Social Support: Spiritual Support as a Novel Design Dimension in Sociotechnical Systems*. Ph.D. Dissertation. University of Minnesota.

[84] Abdoulaye Sounaye. 2013. Alarama is all at once: preacher, media 'savvy', and religious entrepreneur in Niamey. *Journal of African Cultural Studies* 25, 1 (2013), 88–102.

[85] The Daily Star. [n.d.]. 'Shishu Bokta' Rafiqul arrested from Netrakona for 'anti-state' speech: Rab | The Daily Star. https://www.thedailystar.net/crime/news/shishu-bokta-rafiqul-arrested-netrakona-anti-state-activities-rab-2073649. (Accessed on 07/15/2021).

[86] Max Stille. 2018. Communities of Code-Switching Connoisseurs. Multilingualism in Islamic Sermons in Bangladesh. *South Asia Multidisciplinary Academic Journal* (2018).

[87] Max Stille. 2020. *Islamic Sermons and Public Piety in Bangladesh: The Poetics of Popular Preaching*. Bloomsbury Publishing.

[88] Sharifa Sultana, Syed Ishtiaque Ahmed, and Jeffrey M Rzeszotarski. 2021. Seeing in Context: Traditional Visual Communication Practices in Rural Bangladesh. *Proceedings of the ACM on Human-Computer Interaction* 4, CSCW3 (2021), 1–31.

[89] Sharifa Sultana, Mitrasree Deb, Ananya Bhattacharjee, Shaid Hasan, SM Raihanul Alam, Trishna Chakraborty, Prianka Roy, Samira Fairuz Ahmed, Aparna Moitra, M Ashraful Amin, et al. 2021. 'Unmochon': A Tool to Combat Online Sexual Harassment over Facebook Messenger. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. 1–18.

[90] 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*. 1–13.

[91] Sharifa Sultana, Shaid Hasan, Khandaker Reaz Mahmud, SM Raihanul Alam, and Syed Ishtiaque Ahmed. 2019. 'Shada Baksho' a hardware device to explore the fears of using mobile phones among the rural women of Bangladesh. In *Proceedings of the Tenth International Conference on Information and Communication Technologies and Development*. 1–4.

[92] Sharifa Sultana, AKM Najmul Islam, and Syed Ishtiaque Ahmed. 2020. Fighting coronavirus with faith: religious and parareligious responses to Covid-19 in Bangladesh. *Interactions* 28, 1 (2020), 6–7.

[93] Sharifa Sultana, Ilan Mandel, Shaid Hasan, SM Raihanul Alam, Khandaker Reaz Mahmud, Zinnat Sultana, and Syed Ishtiaque Ahmed. 2021. Opaque Obstacles: The Role of Stigma, Rumor, and Superstition in Limiting Women's Access to Computing in Rural Bangladesh. In *ACM SIGCAS Conference on Computing and Sustainable Societies*. 243–260.

[94] Sharifa Sultana, Md Mobaydul Haque Mozumder, and Syed Ishtiaque Ahmed. 2021. Chasing Luck: Data-driven Prediction, Faith, Hunch, and Cultural Norms in Rural Betting Practices. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. 1–17.

[95] Sharifa Sultana, Zinnat Sultana, and Syed Ishtiaque Ahmed. 2020.   Parareligious-HCI: Designing for'Alternative'Rationality in Rural Wellbeing in Bangladesh. In *Extended Abstracts of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–13.
[96] M Iftekhar Tanveer, Emy Lin, and Mohammed Hoque. 2015. Rhema: A real-time in-situ intelligent interface to help people with public speaking. In *Proceedings of the 20th International Conference on Intelligent User Interfaces*. 286–295.
[97] M Iftekhar Tanveer, Samiha Samrose, Raiyan Abdul Baten, and M Ehsan Hoque. 2018. Awe the audience: How the narrative trajectories affect audience perception in public speaking. In *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*. 1–12.
[98] M Iftekhar Tanveer, Ru Zhao, Kezhen Chen, Zoe Tiet, and Mohammed Ehsan Hoque. 2016. Automanner: An automated interface for making public speakers aware of their mannerisms. In *Proceedings of the 21st International Conference on Intelligent User Interfaces*. 385–396.
[99] TED. [n.d.]. Our organization | About | TED. https://www.ted.com/about/our-organization. (Accessed on 07/14/2021).
[100] David R Thomas. 2006. A general inductive approach for analyzing qualitative evaluation data. *American journal of evaluation* 27, 2 (2006), 237–246.
[101] Ha Trinh, Reza Asadi, Darren Edge, and T Bickmore. 2017. Robocop: A robotic coach for oral presentations. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies* 1, 2 (2017), 1–24.
[102] Anupriya Tuli, Shaan Chopra, Neha Kumar, and Pushpendra Singh. 2018. Learning from and with menstrupedia: Towards menstrual health education in India. *Proceedings of the ACM on Human-Computer Interaction* 2, CSCW (2018), 1–20.
[103] JS Uppal. 1986. Hinduism and economic development in South Asia. *International Journal of Social Economics* (1986).
[104] USAID. [n.d.]. Faith and Neighborhood Partnerships | How To Work With USAID | U.S. Agency for International Development. https://www.usaid.gov/faith-and-opportunity-initiatives. (Accessed on 07/14/2021).
[105] Palashi Vaghela, Ramaravind K Mothilal, and Joyojeet Pal. 2021. Birds of a Caste-How Caste Hierarchies Manifest in Retweet Behavior of Indian Politicians. *Proceedings of the ACM on Human-Computer Interaction* 4, CSCW3 (2021), 1–24.
[106] Peter van der Veer. 2002. Religion in South Asia. *Annual review of anthropology* 31, 1 (2002), 173–187.
[107] Sangita Vyas and Dean Spears. 2018. Sanitation and religion in South Asia: what accounts for differences across countries? *The journal of development studies* 54, 11 (2018), 2119–2135.
[108] Jinping Wang, Hyun Yang, Ruosi Shao, Saeed Abdullah, and S Shyam Sundar. 2020. Alexa as coach: Leveraging smart speakers to build social agents that reduce public speaking anxiety. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*. 1–13.
[109] IBM Watson. [n.d.]. Watson Tone Analyzer | IBM. https://www.ibm.com/cloud/watson-tone-analyzer?p1= Search&p4=43700050290119166&p5=e&gclid=CjwKCAjwlrqHBhByEiwAnLmYUFybRj9WizK7nXVKH0FpP_ n2AXdNmJmhq9Z1QYUNOwVilHloALi3iBoCirMQAvD_BwE&gclsrc=aw.ds. (Accessed on 07/15/2021).
[110] Wikipedia. [n.d.]. Amazon Alexa - Wikipedia. https://en.wikipedia.org/wiki/Amazon_Alexa. (Accessed on 07/14/2021).
[111] Wikipedia. [n.d.]. Khutbah - Wikipedia. https://en.wikipedia.org/wiki/Khutbah. (Accessed on 07/16/2021).
[112] Lindsay Rebecca Wise. 2003. *Words from the heart: New forms of Islamic preaching in Egypt.* Ph.D. Dissertation. University of Oxford.
[113] Allison Woodruff, Sally Augustin, and Brooke Foucault. 2007. Sabbath day home automation: " it's like mixing technology and religion". In *Proceedings of the SIGCHI conference on Human factors in computing systems*. 527–536.
[114] Susan P Wyche, Paul M Aoki, and Rebecca E Grinter. 2008. Re-placing faith: reconsidering the secular-religious use divide in the United States and Kenya. In *Proceedings of the SIGCHI conference on human factors in computing systems*. 11–20.
[115] Susan P Wyche, Kelly E Caine, Benjamin Davison, Micheal Arteaga, and Rebecca E Grinter. 2008. Sun dial: exploring techno-spiritual design through a mobile islamic call to prayer application. In *CHI'08 extended abstracts on Human factors in computing systems*. 3411–3416.
[116] Susan P Wyche and Rebecca E Grinter. 2009. Extraordinary computing: religion as a lens for reconsidering the home. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems*. 749–758.
[117] Susan P Wyche, Gillian R Hayes, Lonnie D Harvel, and Rebecca E Grinter. 2006. Technology in spiritual formation: an exploratory study of computer mediated religious communications. In *Proceedings of the 2006 20th anniversary conference on Computer supported cooperative work*. 199–208.
[118] Svetlana Yarosh, Elizabeth Bonsignore, Sarah McRoberts, and Tamara Peyton. 2016. YouthTube: Youth video authorship on YouTube and Vine. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing*. 1423–1437.