# *Protibadi*: A Platform for Fighting Sexual Harassment in Urban Bangladesh

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## ABSTRACT
Public sexual harassment has emerged as a large and growing concern in urban Bangladesh, with deep and damaging implications for gender security, justice, and rights of public participation. In this paper we describe an integrated program of ethnographic and design work meant to understand and address such problems. For one year we conducted surveys, interviews, and focus groups around sexual harassment with women at three different universities in Dhaka. Based on this input, we developed "*Protibadi*", a web and mobile phone based application designed to report, map, and share women's stories around sexual harassment in public places. In August 2013 the system launched, user studies were conducted, and public responses were monitored to gauge reactions, strengths, and limits of the system. This paper describes the findings of our ethnographic and design-based work, and suggests lessons relevant to other HCI efforts to understand and design around difficult and culturally sensitive problems.

## Author Keywords
Sexual Harassment; ICTD; HCI4D; Bangladesh; Ethnography; Postcolonial Computing; Design

## ACM Classification Keywords
H.1.2. Human Factors

## INTRODUCTION
The sexual harassment of women is an extensively investigated and intensively treated social problem around the globe [26, 28, 30]. It occurs in multiple forms and locations, from domestic violence inside the home to more generalized patterns of harassment in public places. Street

harassment constitutes a form of sexual discrimination and violence that includes verbal and nonverbal behaviors ranging from whistles, leers, and winks to unwanted physical contact, catcalls, and sexually suggestive remarks [18, 38]. The experience of street harassment undermines women's security and well-being along with freedoms of choice, action, and participation in public life that are core to the basic civil and political rights of every human being [4]. It also has potentially important group-level effects: by limiting or discouraging access to public space, street harassment can serve as an additional mechanism by which women's voices and participation are silenced. While much literature and media attention has focused on more extreme forms of sexual violence (rape, domestic abuse, etc.), a growing body of work [11, 18, 23] suggests that the chronic and pervasive effects of street harassment can be just as damaging to women's security, freedom, and participation in public life.

Because the causes, effects, and basic cultural understandings of street harassment differ radically around the world, it is hard to reliably estimate its prevalence or effects. This is particularly true in locations like urban Bangladesh, where interpretations of sexual harassment are diverse and highly contested, and where few reliable mechanisms for the reporting of street harassment exist. According to local crime reports, 4,853 incidents of violence against women took place in Dhaka from October 2011 to September 2012, including 993 recorded incidents of rape. This almost certainly vastly understates the problem however, as anecdotal evidence from local newspapers [12], international media reports [36], comparative experience and our own ethnographic work suggests that incidents of sexual violence are routinely underreported, perhaps especially in the pervasive culture of shame that surrounds such incidents in Bangladesh. Indeed, many of the forms of street harassment targeted here are not considered crimes and reportable to Police in the Bangladeshi context. But these incidents can make a very deep psychological and social impact upon the victims, and can lead to isolation, depression, and even suicide, as found in a recent study by *Nahar et al.* [24].

Designing technology-based interventions services for a developing country like Bangladesh is often challenged by limited public access to electronic devices and the Internet, as previously reported in the ICTD literature [5, 21]. In recent years however Bangladesh has seen one of the fastest growing cellular networks in the world, with more than 96% of the population now under mobile coverage. The number of Internet users is also growing fast, the largest portion of whom use cell phones to access the Internet [2]. This suggests that mobile phone based applications might contribute to ameliorate deep-seated problems of gender violence, discrimination, and inequality in Bangladesh today. In this paper we report our experience in designing and developing mobile phone and web-based applications to support women experiencing and fighting street harassment in urban Bangladesh. We also reflect on broader challenges confronting HCI efforts to understand and design around difficult and culturally sensitive problems in the gender and ICT for development space.

## BACKGROUND AND LITERATURE REVIEW

A growing body of HCI work has explored the nature of computational practice and design in non-western and post-colonial contexts. Much of this work – identified sometimes under the HCI for Development ('HCI4D') or Information and Communication Technology for Development ('ICT4D') labels – has followed an interventionist and design-oriented agenda, seeking to apply new computational tools and approaches to a series of social problems (poverty, hunger, inequality, governance, public health, etc.) confronting targeted programs of social and economic change, often in 'developing country' contexts. In many instances, such interventions target widely shared and relatively uncontroversial collective goals (even where preferred avenues to change may vary). As a low cost and increasingly prevalent system of communication, mobile phone technologies have been central and promising players in many of these interventions, supporting a wide and growing range of design interventions targeted at the problems of vulnerable individuals and communities, ranging from urban sex workers and taxi drivers, to homeless young people and farmers [9, 26, 27, 29, 32, 39].

But these early forays have also revealed, sometimes by tripping on them, a number of distinct challenges facing design-based HCI work in this space. 'Universal' principles of design may turn out to be anything but conflicting with locally held aesthetics, metaphors, and assumptions [22]. Taken for granted infrastructures ranging from reliable power supply to stable systems of law and governance may be absent, undermining design or project-level efforts [10]. Expectations around user or community engagement may differ, dictating new modes of engaging local actors. And the fault lines and divisions of local culture and power may be misunderstood, leading to non-adoption, suspicion, or simple indifference to HCI design and system-building efforts [17].

These complexities only multiply when the matters of collective concern at the heart of HCI interventions are themselves unsettled and subject to ongoing processes of cultural negotiation, contestation, and dissent. Under such conditions, HCI work confronts a deeply agonistic field in which basic cultural propositions are being worked out in conjunction with the design and use of tools and systems themselves, and the deeply value-laden nature of HCI intervention emerges with particular force and clarity. As discussed later, this complicates the process while raising the stakes of ethnographic fieldwork and design, and poses challenging questions around the positionality of HCI research and researchers vis-à-vis the worlds they engage.

Such insights are central to a growing body of theoretical work in the feminist [3, 6, 18] and post-colonial [17] HCI space, along with several of the specific design methodologies (e.g., adversarial design [10]) meant to reflect and accommodate these principles. As this work makes clear, design and ethnographic interventions often (always?) occur against the backdrop of cultural currents that run deeper than our typical instruments for producing understanding and explanations of the world we engage can plumb. This fact becomes all the more true as we move towards interventionist modes of engagement, and towards spaces of deep cultural contestation and dissent. Responsibility in this space cannot be discharged or avoided behind a simple instrumentalist stance. Nor can it be decided by reassuring reference to a world of user or system needs decided 'out there,' according to reliable and uncontroversial social processes from which we remain somehow disconnected. Rather, the fields of feminist and critical HCI4D are likely to occupy fundamentally agonistic spaces, in which HCI researchers are necessarily implicated. In such a world, the principles of pluralism, participation, advocacy, embodiment, self-disclosure and ecological awareness characterizing feminist and many post-colonial research stances become simultaneously more important and more complicated to practice [3, 17, 18].

Beyond such theoretical insights, our project also learned from design-based HCI interventions that have sought to deal with problems of gender violence and discrimination through the development of systems and applications designed to improve women's safety, security, and freedom of movement in public space. Work by *Satchell et al.*, for example, has investigated the potential for mobile technology to help users manage their personal safety concerns in the city at night [33, 34]. They found that mobile devices may provide users with a sense of security and real time protection via connectivity to closely co-located persons, and that mobile social networking systems are not only integral for bringing people together, they can help in the process of users safely dispersing as well.

Other works have sought to raise awareness around problems of public sexual harassment similar to the ones

tackled here. One such initiative is *"Hollaback!"* [16], an initiative to raise awareness through grassroots photo-blogging and public documentation of harassment (and harassers). Through the system, now operating in 25 countries and in 12 different languages, users post photographs and narrative accounts of individual encounters with offenders. Another noteworthy initiative is *"Harassmap"* [14], a volunteer-based initiative with a mission to end the social acceptability of sexual harassment in Egypt. In this system, women can report of any harassment they experience or observe around them through mobile phones or the website. There are still other mobile applications that have been built to offer support to victims or potential victims of sexual harassment. For example, the app *"Circle of Six"* [6], allows women to call friends with pre-programmed texts, which can alert them in real-time to problems or incidents that may be occurring. *"On Watch"* [25] forwards a GPS coordinate to friends if a situation goes bad.

Our study builds on these insights and design approaches while extending them to problems of public sexual harassment in Bangladesh. The paper that follows describes our efforts to understand the forms, prevalence, and experiences of public sexual harassment in urban Bangladesh. We communicated with university-aged women through written and online questionnaires and face-to-face interviews and focus groups in order to better understand the prevalence and impact of public sexual harassment, and source the women's own ideas about possible systems and applications that might help. On the basis of this input, we designed *"Protibadi"* (a Bangla word meaning "one who protests"), a system that allows women to quickly inform emergency contacts when situations of harassment occur, document the location and nature of incidents, and enter descriptive blogs and narratives that share the experience of sexual harassment in a collective way. We conclude with reflections on distinctive challenges confronting HCI research and design interventions around culturally sensitive problems in the gender and ICT for development space.

**FIELD STUDY:**
We began our work with a three-part field study designed to develop a better understanding of the prevalence, severity, and consequences of sexual harassment among female university students in Dhaka. Our choice of university women was dictated by three basic factors. First, most of them had access to technology like mobile phones and Internet, and so were more obvious first targets for an experimental system that made use of such tools. Second, in large part because of their education and socioeconomic standing, university women in Dhaka are often more attuned to problems of gender discrimination and sexual harassment, and more receptive to systems that combat it. Finally, as the inclusion of university-educated women in public life is often identified as a step towards gender participation and equality more generally, their exclusion from public space and participation through instances of harassment may be particularly insidious and damaging to the broader goals of gender equity and participation in public life. The decision to focus the study in this way poses obvious limits to the generalizability of the findings and designs that result. We hope to address these through additional study and future iterations of the system.

*Online Survey*
At the outset of our study, we wanted to develop a broad understanding of the forms and prevalence of sexual harassment as experienced by our target group. We made and circulated a small online questionnaire for university students asking if they had any direct or indirect experience of being harassed in a public place, and if they had witnessed such events. The participants could respond to this survey anonymously. We shared the link to this survey through the Facebook groups of three different universities and requested students to participate in the survey. We received 121 responses, including from 51 women and 42 men (the remainder did not disclose their gender). Following the survey, 7 women and 2 men contacted the investigators individually and shared additional information via email, telephone conversation, or face-to-face meetings. Every female respondent reported direct or indirect experience of being harassed in public places, with 32 saying they had experienced such harassment more than once. All of the participants said that they had seen women harassed before them in public places. Broken down by location, 72 participants reported incidents of harassment that took place in public vehicles (e.g., buses), 21 reported harassment while walking on public streets, and 30 reported incidents that took place in public gatherings such as rallies or concerts. All of the respondents identified public sexual harassment as a common and damaging experience of contemporary life in urban Bangladesh. As one woman wrote,

"Yo*u will hardly find any Bangladeshi girl who traveled on the streets and has not experienced sexual harassment. Some women are brave enough to talk about it, while others remain silent for many reasons."*

Another respondent explained the impact of such activities:

*"Everyday I walk in the park. My mother often comes with me but at a much slower pace. When I am alone, some boys at the park laugh at me, tease me. I say nothing. I want to keep walking. Sometimes I can ignore them, sometimes I cry alone at my room. It's not my dress – I wear a hijab (Islamic head scarf), it's just me being a female."*

*Focus Group Discussion*
Next we arranged a focus group discussion conducted by a female faculty member at one of our three participating universities. To organize this, we sought help from a volunteer organization named *"Community Action"*, which issued invitations to female students at the three universities

to participate. The discussion took place in a closed room in one of these three universities. Thirteen women participated in the focus group, which lasted for about three hours.

The women in the discussion shared their difficulties and deep feelings of anger and vulnerability around sexual harassment, and identified three public situations in which they found themselves most vulnerable: i) public buses, ii) crowds in markets and concerts, and 3) lonely or isolated places after dark. Although it was an oral discussion, some women found it too difficult to speak about these experiences, and preferred instead to write them down, which were then handed to the female faculty member who was conducting the discussion. One of the women, for example, shared the following experience:

*"The more I was moving towards the window in a public bus, the more that man beside me was pushing me with his legs and then he put his hand on my lap. I asked him to behave several times. He was not listening to me and was pushing me more and at that point, I slapped him."*

The women described not only how badly they were treated in public places, but also spoke about painful incidents in which relatives or friends had harassed them. This brought out strong feelings of shame, sadness, and regret, but also defiance, anger, and a strong resolve towards change. As one participant explained, *"My mother taught me to stay quiet. But I will ask my daughter to carry a knife."*

### One-on-One Interviews

Next we conducted semi-structured interviews of women at the three universities. Due to participant sensitivity, the interviews were conducted in private in the offices of female faculty members associated with the study. The interviewers asked the women about their understandings and experiences of sexual harassment, and their priorities for any design intervention that might address such problems. Participants were invited through paper flyers posted on university notice boards, and through advertisements at different student groups on Facebook. A total of 11 women responded, 9 opting to speak with the faculty member at their own university and 2 requesting an interviewer from a university other than their own.

Ten women participated from two of the three universities, five from each. Only one woman participated from the third university before the study was halted there for reasons described below. In general, however, participation was low across all three universities. Many women responded and set up a time for the interviews, but did not show up. In some cases, the women came and started talking to the interviewers, but then became uncomfortable and left in the middle of the interview. In such instances and at the request of the participants, notes and recordings were destroyed and no further record was retained. In one case, two women came together and one helped the other to tell her story. In some instances, participants refused to be audio-recorded, so the interviewers took hand-notes. In one case, a participant agreed to be interviewed and recorded, but asked that recordings and notes from the session not be shared with male members of the study team. All such requests were honored, and recorded interviews were subsequently translated, transcribed and analyzed by two independent coders, both of them native Bangla speakers.

Our participants offered different definitions of sexual harassment, some very broad and others more precise. One participant explained for example that

*"By 'Sexual Harassment' I understand any sort of activities or words that force me to feel that I am a girl even before I am a human being. It can also be true for boys, too. In these cases, we get a stronger feeling of being 'boys' or 'women' than being human beings. When these feelings are created inside me in a negative way – that is sexual harassment."*

In contrast, another participant defined sexual harassment simply as, *"Physically abusing someone without permission."*

The participants shared stories of harassment that they had either experienced themselves or had directly witnessed. The public places where such incidents had occurred included public buses, crowded concerts, crowded market places, lonely streets, and while riding on rickshaws. The harassments ranged in form from catcalls, leering, staring, ridiculing, and making faces, to incidents of following, stalking, and touching. All of the participants said that there was no single time or place that they could mark as absolutely safe, though eight of them mentioned feeling more insecure in dark and isolated places. However, they all said that harassments are very common at crowded places.

Many participants described both immediate and enduring sense of fear associated with experiences of public harassment. One woman, for example, shared the following story:
*"The incident happened while I was returning home. A boy blocked my way. He then started talking about some big brother who liked me. So, he was not letting me go. Then, I slapped him in the face. He also raised his hand on me. It was near the Penaung restaurant. I quickly left the place and returned home. I almost ran half of the way. Later I made a General Report at the police station about this incident. But I didn't see those guys afterwards. After this incident, I always took rickshaw on that route, as I had to cross that place to reach my university. So, I stopped walking and always took a rickshaw after that incident."*

Others spoke of the feelings of powerlessness that harassment produced. As one participant recounted,
*"My parents used to escort me to my school. So, I didn't notice any particular teasing or harassing incident when my parents were around. But then I started going to college by myself. Sometimes, I noticed some boys were singing at me. The songs were intended to me in a bad way. But there*

*was nothing I could gain by challenging them. Noticing them would only give them more importance."*

Beyond the immediate pain and difficulty caused by these experiences, women also reported direct and negative consequences on ability or willingness to navigate public spaces following the incident, whether self-chosen or imposed by family members. As one participant explained to us,

*"It definitely causes confinement. If something happens to you then you will want to avoid those places afterwards. Like the incident that happened to me during shopping ... I do not want to go there again in order to avoid those incidents happening again. Besides, it is really very irritating to take the local buses. And going outside after 9pm/10pm is really impossible."*

While all of the participants reported feeling better after having shared their experiences with others, they also described deep embarrassment, anguish, and senses of shame attached to the telling of their stories (including with family members and sometimes friends); this sense of shame and embarrassment was indeed described as one of the most serious and pervasive consequences of the sexual harassment experience (and contributes directly to public silence and underreporting of the issue as described above and returned to in the discussion section below). One participant told us that;

*"I shared these stories with my family only a long time after the incident. After one and half year ... I could not share that much with friends either because I was not sure how they would think about me after hearing these ... But finally I had to share these with one of my friends, because I wanted to live my life."*

**DESIGN AND DEVELOPMENT**

From the online survey, interviews, and focus group discussions, we came to understand that incidents of sexual harassment are a widespread and consequential problem in contemporary Dhaka. Although many women experience harassment every day, these incidents remain generally silenced within the social context of Bangladesh. However, the impacts of harassment may be severe and painfully felt, both by individual women and for the wider problem of women's participation in public space and the public sphere. To address these problems, informants in individual interviews and focus group discussions identified three potential features or attributes of any prospective design intervention in this space.

*Help on the spot*: In many cases, women pointed to the need for on-the-spot help to avoid, escape, or reduce the severity of harassment. All the women in our study reported feeling insecure in public places, and noted that the ability to alert bystanders to current incidents would make them more secure. One participant reported an incident in which her struggle with a perpetrator went unnoticed by bystanders at some distance away. Another reported an incident in which the perpetrator disappeared after seeing other people coming to the spot. These informants argued for some sort of alarm function that could call on help from nearby strangers when situations of harassment emerged. Others, however, spoke against this kind functionality, arguing that they would feel ashamed and embarrassed to become the center of attention in this way. As one explained,

*"If you call people, they will start making fun of it. They will start asking you questions like "How did that happen?", "Where exactly did he touch?", and so on ... it is even more embarrassing. It is like being harassed for the second time. This is why most of the women do not want to share their harassment experiences."*

*Reaching friends when needed*: All of the women said that they would feel better if they could reach their friends when they were in trouble. Although all of the participants had mobile phones, it was hard to make phone calls from the spot to all friends and seek help. Six of our participants said that they would not like it if their family members knew about their current location, but would feel better if their friends could be alerted to their location. As one participant explained this preference,

*"I do not want my mom to know where I am going all the time. I am a grown-up woman and I do not like my parents tracking me. I know I can face danger on the street, and I have my friends to help me. If needed, they can inform my family."*

*Sharing Experiences with Others*: All of our participants emphasized the need for a platform where they could share their experiences with others anonymously and get support. Participants described a double benefit to such a platform. First, victims could get support from other women and feel better. Second, by sharing experiences other women could learn about the incidents and make strategic choices to take precautions. As one participant explained,

*"I could avoid these incidents if I knew boys always wait in that street to harass women. I would have my friends with me."*

Others connected the sharing of stories to wider problems of public visibility. As one explained,

*"I would definitely say that all women should know about these incidents. They would understand that being harassed is not their fault, but it is a crime and the perpetrators should be punished. In our country the victims hide themselves from the society while the perpetrators move around proudly in the broad daylight."*

These three needs became the central design principles guiding our subsequent development of the Protibadi system, a web and mobile-phone based platform designed to provide timely support, access to friends and contacts,

and the sharing and public visibility of harassment experiences.

**The Mobile Phone Application**
The mobile phone application is built for android supported devices, and contains three basic tabs. The first tab has the "Save Me" button that serves the purpose of a Panic Button. The women can use this button whenever they feel uncomfortable in a public place. Upon pressing this button a loud sound is emitted from the mobile phone's speakers to draw the attention of other people around. At the same time, a text message will be sent to each of the emergency contacts of the user's profile. The text message contains the location of the user (if available through GPS) and allows the receiver to know that the user is in trouble. In the second tab, the user can add, delete, or edit the emergency contact details. In the third tab, the user can report incidents of harassment that she experiences or observes.
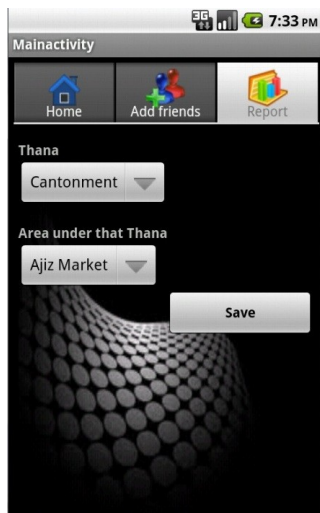


**Figure 1. Screenshot of the reporting tab of mobile phone application.**

Such reports are then stored in the system's webserver, and displayed on the "Protibadi" website described below.

**The Website**
The website consists of several components. A user can issue a request to register on the "*Protibadi*" system, which is subsequently reviewed and approved by the administrators of the website. Once registered, users can enter reports and blogs, and comment on the (anonymized) reports entered by other users. All reports are open for viewing to non-registered users.

When creating a new report, users are required to enter time and location data. This can be entered manually on the website, or sent directly from the mobile phone application entering the area or 'Thana' (district) in which the incident occurred. The system supports reporting in both English and Bangla. More generalized commentary blogs can be entered in similar ways, but don't require time and place information. Users can also mark a report as "serious" or

"suspicious" by clicking the corresponding buttons added to that post. The system then superimposes reports and associated comments on a periodically refreshed map of the Dhaka urban area, as shown in Figure 2.
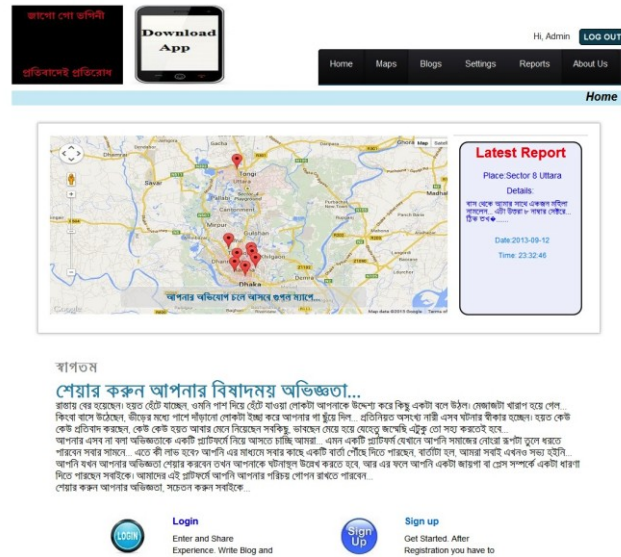


**Figure 2. Screenshot of the homepage of the website.**

The Protibadi website (www.protibadi.com) and mobile application were launched publicly in August 2013, and advertised via the Facebook pages of student groups at local universities. A corresponding Facebook page (https://www.facebook.com/protibadi) was subsequently created which system administrators periodically update with reports and blogs generated by Protibadi users.

While the system described above draws ideas and inspiration from past HCI applications in the sexual harassment space, there are also important differences between these systems and our own. *Hollaback* [16], *Harassmap* [14], *ComfortZones*, and *Safetipin* allow users to share experiences of harassment with friends, neighbors, family or social media, but contain no support for emergency help at the spot. *CircleOf6* [6] and *Fightback* [12] offer emergency help, but do not provide opportunities to share and report on incidents of harassment. Based on needs identified through our ethnographic fieldwork, Protibadi combines these functions in a single unified platform. Additionally, because we wanted to produce a system built with community participation and input from the ground up, it was important *not* to simply import systems developed elsewhere (though we learned from those systems in developing our own).

**USAGE, FEEDBACK AND PUBLIC RESPONSES**
Three months after releasing the website, there were 110 registered users on the site, 20 self-identified as men and the rest women. Users had entered 24 reports from different parts of Dhaka city, and a total of 618 people subscribed to

the Facebook page, with posts viewed by more than 350 users on average. Reports described a range of harassment experiences shared by users of the system, with the following a fairly typical example:

*"yesterday i was going by rickshaw. it was going through a crowdy road. because of the crowd the rickshaw was going slowly. suddenly i felt that someone grabbed my thigh. i was shocked, i tried to find out who it was, then i saw a figure rushing towards the crowd. it was totally unexpected and really horrible..it happened near shyamoli area."*

Users had also made 12 blog posts, many of which spoke about issues of harassment in a more general sense (rather than reporting or describing a specific incident). For example, one user posted a blog titled, "*Eve Teasing-Primal Instincts Coming to Surface?*", where she wrote,

"*Bangladesh is a society in transition where centuries old cultures, practices, and social beliefs are undergoing transformation. It is a tumultuous time, a stormy phase. Yet despite these changes, one fact remains consistent and true: Sexual violence and harassment of women exists, and it is rampant as a disease even in our current times.*"

### User studies:
To understand early experiences and responses to the system beyond content and basic usage data, we conducted semi-structured interviews with 10 Protibadi users (contacted by site administrators via Facebook messages and conducted by female interviewers) regarding their experience of using the website and the mobile phone application. General responses to the system were positive, with several respondents noting the deep need and value for such a system (though also noting that it represented a small and limited intervention in relation to the pervasive problem of public sexual harassment). Six of the ten respondents cited the value and comfort provided by the instant messaging system, and the sense of security provided by one-touch access to emergency contacts. As one participant explained,

"*The SMS system is very useful, because your information along with your location is instantly sent to an emergency contact person. Now you know you can get help anytime you are in trouble.*"

Participants also praised the reporting function, and mentioned the blog entries of other users as important sources of learning, sharing, and publicizing incidents of harassment. Users reported being generally happy with the overall aesthetics and usability of both the mobile phone and web-based system components.

Other of our design interventions were less successful or received more mixed reviews. None of our participants for example had used the "Save me" button at the time we conducted the interviews. Six of them said that they would have used this if they faced any such situation, while four of them (echoing findings in the earlier focus group and interview studies) said that they would never use this since it would only attract public attention and embarrassment. One respondent criticized the lack of integration of the site into systems of Police crime reporting, arguing that better integration with systems of enforcement would enhance women's motivation and willingness to contribute. Another argued that the site's primary focus on incidents of street harassment should be expanded to address other forms of sexual harassment, including the growing problems of stalking and harassment through social media. As this user explained,

"*Eve teasing is not limited to the physical level anymore. It has started even virtually. There are pages on Facebook, where bad comments and pictures about women are posted. Often times one's pictures are being used in a very abusive manner without one's permission. So, events like this should also be reported on the website and awareness about it should be made.*"

Still another participant urged us to integrate the site more directly with Facebook (as opposed to manually porting system content to Facebook as described above), as this was the one social media site that she and her friends routinely and actively engaged.

This user feedback suggests a number of immediate design recommendations moving forward. First, though interested in and supportive of our system in general, users were reluctant to add yet another site to their regular social media routine. Accordingly, users were more responsive in reading and commenting on reports and blog posts when shared over Facebook than when on the original website.

Second, while supporting the system's general information sharing and awareness functions, users also described wanting to see some kind of immediate reaction to their posts. Especially in case of reporting, the victims often wanted to get support, or see the offender punished through their action. Mere sharing of the information was not always a strong motivation for users to report. Connecting the system to law-enforcement agencies or human-rights groups might therefore extend functionality and enhance motivation for site users (though we note that many of the harassment incidents reported through the site do not meet existing categories of offense under Bangladeshi law).

Third, users reported not wanting to limit themselves to reporting only sexual harassment in public places, and preferred instead a platform where they could talk about any sort of harassment or discrimination in general. This indicates the fact that this system is actually supporting an emotion of the users that is spread across a wide range of feelings they have. Hence, the users should be given the liberty to disclose all those feelings here and the users will not appreciate any restriction applied to that.

*Public controversies:*
Beyond the confines of our user study, some deeper issues around our design were reflected in a series of more public reactions to the site, including a number of controversies and debates that played out through the project's associated Facebook page. In one case, a user reported that she felt bad when an unknown man on the street asked her and her friend to cover their heads during the holy month of Ramadan. When this report was picked up on the Facebook page, a number of subscribers to the page reacted. They argued that the man did the right thing by asking two Muslim women to cover their heads, because that was what Islam suggested. One member said in his comment,

"… *Any person can say to another woman to wear hijab and veil becoz it's farz for women. If you don't admit it, then it's your mental problem".* ["*farz*" means "must do" in Islam]

Other followers responded to defend the original post, and the debate continued across a total of 34 comments, some defending the man and his actions, and others the original commenter's position.

In another example, the user expressed her frustration around the way staff and male passengers had behaved on a public bus, demanding full fare from the female students but only half from the male students. She also discussed situations in which male passengers took advantage of crowded buses to touch women inappropriately in public. In response, one member commented,

"*Islam says there must be a place preserved for women in any kinda vehicle where men aren't allowed. there must be a rigid partition to separate males and females. and all the fair must be collected from her mahram male companion (as women aren't allowed to go to and fro freely without mahram males) or in special case if the girl is alone ,fare must be taken outside of the partition. so why r u fussing around with your so called faminism without rules of Shari'ah?*" ["*mahram*" to a girl means the person who is not allowed to marry her]

In a third more sympathetic but also challenging example, a commenter pointed out that:

"*This is a great initiative, but there is a weakness in their intention. They are making this so that women can avoid the places where eve teasing takes place. If this continues we have to keep the women inside an almirah after a few days. They should instead post the pictures and profiles of the perpetrators.*"

*Next steps and future directions:*
At the time of writing, the Protibadi system remains a work in progress. The site retains a small but active group of users, with a somewhat larger and more mixed audience through its associated Facebook page. The design team is working to weigh and incorporate some of the design considerations stemming from early stage usage and user feedback. Responsibility for long-term maintenance and development of the system is also in process of being transitioned to a local women's rights organization who have approached the research team to support and maintain the site over time, and potential interest in expanding it to support forms of harassment reporting among female workers in the textiles industry – a dominant and reputedly problematic employer in this regard. A second non-governmental organization has initiated discussions around modifying the system to support forms of harassment reporting in rural parts of the country (possibly building on Grameen Bank-inspired models of local system contacts after the 'village phone lady' model). In December 2013, the Protibadi system was featured in a report on national television and has attracted growing levels of attention since then.

**DISCUSSION**

But these immediate questions of system design and immediate project trajectory represent only a part (and arguably the smaller part) of potential lessons and implications that can be drawn from the wider Protibadi experience. At the most immediate level, ethnographic portions of our study make clear the seriousness and consequences of sexual harassment in Dhaka today. While our study can make no claim to statistical representativeness (and there are obvious selection effects that may shape people's elective participation and non-participation in the study), it was striking to us the ease with which experiences of harassment could be called up by all members of our survey, interview, and focus group studies. As our participants accounts made clear, experiences of harassment as detailed here are part of the real and regular experience of university-aged women in Dhaka today.

This is important because many of the public and academic debates around gender violence and discrimination in contemporary Bangladesh have tended to focus on rural parts of the country, have addressed the effects of social or cultural institutions like marriage, economy or the state, or have been built around the more 'extreme' forms of gender violence (rape, incest, etc.) that women also sometimes face [1]. As our study shows, forms of violence and discrimination can also be rooted in the conditions of everyday life, can be just as real and insidious in their effects, and are powerfully present even within the relatively cosmopolitan areas of Dhaka and among the comparatively empowered group that constitutes university women. These effects are both personal and political. Incidents of sexual harassment as reported by our informants can produce powerful experiences of fear, shame, and isolation (all the more so since it can be difficult or dangerous to share these experiences with friends and family members). But they also cause women to navigate the city differently, limiting or curtailing access to public space (markets, buses, etc.) and enforcing forms of conduct and expression that may further limit effective participation

in public life. In this way, "small" incidents of harassment may produce "large" cultural consequences: mechanisms, as well as effects, of larger systems of gender discrimination and inequality.

Methodologically, our study raises important questions around the challenges of doing HCI design and ethnographic work around socially and culturally sensitive issues – a topic relevant to work in "HCI4D" or "post-colonial computing," but also the field more broadly. This showed up in painful and immediate form in challenges experienced in both the ethnographic and system building portions of our work. As noted earlier, it was difficult to get participants for focus group discussions and face-to-face interviews. Even after posting the flyers repeatedly in different places in the university campuses and inviting people on Facebook, participation remained low. By the same token, adoption of the system remained comparatively low, even where current and potential users spoke to the need and many positives of the system arrived at. This stands in stark contrast to the professed need and potential contribution of design interventions in this space.

Some of these effects may no doubt be attributed to limits in design, both of the ethnographic work and the subsequent system design. Others may be attributed to the relative newness of the system (an interpretation bolstered by recent signs of interest stemming from NGO and local media engagement). A more complete and challenging explanation however – and one offered by several of the participants in our study – may be found in the deep and long-standing culture of shame and fear surrounding sexual harassment in Bangladesh, whose weight (like all matters of deep cultural concern) will inevitably dwarf the comparatively brief and light interventions that HCI researchers are likely to make in this space.

As these examples make clear, public perceptions and even basic definitions of sexual harassment (what constitutes it, why it happens, etc.) live within a large and shifting field of cultural politics, which is no more settled in Bangladesh than anywhere else. In such a space, design interventions are likely to share and absorb the controversies of the topics they touch, with no obvious or irrefutable standpoint of truth. This brings to the fore the inevitably "agonistic" character of HCI design [10], in particular as it moves outwards from narrowly instrumental or functional concerns towards the larger interventionist ambitions that often characterize the HCI4D and feminist HCI space. Such circumstances open up ethnographic and design work to a series of ambivalences and unintended consequences, including the very real concern noted by our third commenter that calling out spaces of harassment may in fact exacerbate tendencies to avoid places marked as dangerous, and so further restrict women's navigation of public space (even while giving them new informational tools to make these judgments on a case-by-case basis). Given the depth and complexity of the cultural politics at play here, such ambivalences and unintended consequences may be a regular feature of ethnographic and design interventions around difficult, contested, and culturally sensitive problems of the sort addressed here.

They also necessarily implicate the positionality and security of HCI researchers themselves. Beyond the challenges faced by our study participants, the study also raised challenges and occasionally threats for female members of the research team. As mentioned earlier, research activities in one of our study sites was suspended after the interviewer, a faculty member at the university, started being harassed herself on the basis of her participation in the study. The faculty member was ridiculed by a number of office assistants while posting the flyers. She also received emails from unknown people who told her to advise the women to cover themselves according to the rules of Islam in order to avoid sexual harassment. At that point, the interviewer felt unsafe and the study at that university was suspended. Under such conditions, it becomes difficult to conduct research at all.

## CONCLUSION
In this paper, we described an ethnographic study designed to understand the problem of sexual harassment in the public places of Dhaka city. We developed a specific design intervention, "*Protibadi*", intended to support women experiencing and fighting harassment. And we described initial responses to our system, as gathered through preliminary user studies and more public responses to our system.

We also discussed problems of HCI intervention more generally, including as the field engages deeply contested and unsettled cultural issues of the sort addressed here. Such complexities are likely only to intensify as the feminist and HCI4D projects within HCI grow and mature. More and careful work in this space, of both theoretical and empirical varieties, may cast further light on the dynamics and challenges described here. Such work may also enhance the impact and responsibility of the field.

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