Usable, Acceptable, Appropriable: Towards Practicable Privacy

Aakash Gautam
Virginia Tech
aakashg@vt.edu

ABSTRACT
A majority of the work on digital privacy and security has focused on users from developed countries who account for only around 20% of the global population. Moreover, the privacy needs for population that is already marginalized and vulnerable differ from users who have privilege to access a greater social support system. We reflect on our experiences of introducing computers and the Internet to a group of sex-trafficking survivors in Nepal and highlight a few socio-political factors that have influenced the design space around digital privacy. These factors include the population’s limited digital and text literacy skills and the fear of stigma against trafficked persons widely prevalent in Nepali society. We underscore the need to widen our perspective by focusing on practicable privacy, that is, privacy practices that are (1) usable, (2) acceptable, and (3) appropriable.

INTRODUCTION
Over the past three years, we have been working with an anti-trafficking non-governmental organization (NGO) in Nepal and exploring prospects for sex-trafficking survivors living in a shelter home. Undertaking an asset-based approach [13, 16], we have worked with a group of survivors¹ to identify their existing strengths and seek ways to build upon it. One such way has involved the development and introduction of technology, and with it, we have encountered concerns around privacy and security.

¹The survivors addressed each other as “sisters”. I addressed the survivors as “sisters” as well. To match this nomenclature, I shall henceforth call the group we worked with “sister-survivors”.

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The sister-survivors’ needs for privacy around technology are different from the dominant discourse in the West due to a myriad of reasons including: (1) the sister-survivors are vulnerable, most have limited digital and text literacy, and have fewer opportunities to learn or use technology, (2) the sister-survivors have limited private physical space in the shelter home and are likely to have similar limited space after they leave the shelter home, (3) sex-trafficking survivors face stigma in Nepali society resulting in many being shunned by family and friends, and (4) Nepal, in general, can be considered a collectivist society [11] so following some of the commonly acceptable privacy practices that stem from more-individualistic Western mores may lead to ostracization.

One of the elements of strengths that the sister-survivors possessed is their strong mutual bond with one another [7]. We observed the mutual bond being manifested in the wide range of support they provided each other when working on handicrafts, a task they did as part of their skill-based training program at the shelter home. When we introduced a web application to a group of sister-survivors, we noticed that they leveraged their mutual bond to use and appropriate the technology [9]. They were also able to negotiate practices around the technology, including ways to protect their privacy (Figure 1). By leveraging their strengths, they were able to make the technology their own.

Building on the experience, we believe that there is a possibility of leveraging the sister-survivors’ mutual bond to support privacy practices around technology, even after they leave the shelter home. In particular, we see a possibility of presenting privacy, not as an individual’s prerogative which is common in the West, but rather explore privacy as a collectively-held value requiring mutual support. We are currently exploring the communal use and appropriation of technology, and examining collective practices around privacy in the shelter home. Overall, in this workshop, we hope to present some of our observations from the field, the socio-cultural influences that shape our design space, learn about other participants’ experiences, and chart out possible ways to support the sister-survivors’ privacy and security around technology.

INFLUENTIAL FACTORS

In this section, we highlight some of the socio-cultural factors that have influenced our approach and have led us to seek alternative ways of thinking about privacy.

Limited Digital and Text Literacy

The sister-survivors typically have limited text and digital literacy [7, 14]. Privacy vulnerability arising due to lack of digital and text literacy has been documented both in developing [3, 24] and developed countries [17, 21]. Further, English has become the de facto language for many technology applications and lack of familiarity with it adds to the barrier in making informed digital privacy decisions. Several web-based terminologies are phonetically translated in Nepali technologies with words such as “login” and “logout” being commonplace. However, these words held little meaning to the sister-survivors [8].
Proposing a set of universal set privacy practices may not be helpful. Privacy practices have to be usable considering the varying skills possessed by the targeted group, culturally acceptable so that it does not lead to ostracization, and appropriate such that groups can adapt and make the practices their own. We believe that the three conditions are critical to promoting practicable privacy, especially for those who are already in margins. In our particular context, considering that the sister-survivors hold valuable strength in their mutual bond, these three practices could inform design in the following ways:

- **Usable:**
  - Elicit and use terminologies that make sense to them; design to overcome digital and text literacy.
  - Design for collective use and support
  - Support obfuscation [7] to ensure they can have plausible deniability to protect themselves from stigma.

- **Acceptable:**
  - Align privacy practice with the local culture such as the collectivist nature of society.
  - Support multi-level group use and collaboration by making individual activities perceptible to others in the group.

- **Appropriable:**
  - Design to ensure that, as a group, they can put their knowledge together to decide the next step.
  - Build support to make it easy to get started and encourage multiple ways of doing things.

This reflects on practices around privacy as well. There is no Nepali word or phrase that encapsulates ideas of privacy, that is, of ownership and flow of data. The closest words refer to secrecy, seclusion, or insulation. Thus, even before presenting potential technical approaches, we see a need for building common ground such as by engaging in participatory approaches so that the participants can define and act upon their own idea(s) of ownership and flow of data.

**Collectivist Values and Lack of Power**

Research already shows that people who are marginalized face great privacy vulnerability. Studies conducted in the United States have shown how technology places the poor [10, 15, 20], elderly [4], and disabled people [4] at risk to be scammed, subjected to fraud, stalked and impersonated. The interaction of two or more social disadvantages results in even greater digital vulnerability [12]. A contributing factor is that people with lower digital skills and socioeconomic standing (SES) have limited opportunity to learn about or seek support towards digital privacy [21].

The disadvantages discussed above are more pronounced when we look at privacy vulnerabilities in the Global South but so too are communal practices. Societies such as in Nepal, India and many countries in the Global South could be considered being more collectivist [11]. Mobile phones are seen less as individually-owned information devices and more as shared communication devices. It raises several privacy-related concerns (e.g., [1, 22, 23]). A significant part of information gathering in Nepal’s context involves interactions with local people, friends, and families. Anecdotally, it is fairly common for either of my parents who are native Nepali, fairly well-educated and digitally literate, to hand over their phone to an employee in a mobile (repair) store and request help without encrypting or locking applications.

Desiring for privacy could lead to being ostracized. The sister-survivors mentioned that doing something different than their family led them being “othered”, with them being labeled as “a haughty person who thinks she is better than us [family members]” (S2). Fear from such ostracization is commonly held by the sister-survivors and is further accentuated by their fear of raising suspicion or being identified as a trafficked person. The sister-survivors have limited power to negotiate such societal practices. Seeking privacy, particularly around technology, is othered by the sister-survivors. This othering resonates with Sambasivan et al.’s study of women in South Asia who believed that privacy was “for those rich women” [22].

**OUR PRIOR ATTEMPT AND NEXT STEP**

**Fear-Driven Practices**

Following the introduction of a web application connected to a local server, the sister-survivors expressed an interest in learning about and using the Internet. We discussed how the Internet works
and the various ways in which we can use it to access information. Following that, we asked what steps they took to keep themselves safe in their day-to-day life. In this group elicitation session, they mentioned practices such as “do not talk to strangers”, “do not go to unfamiliar places”, and “keep an eye out for danger”. We discussed and drew parallels to practices in the digital world. Synthesizing their day-to-day practices and extending it to the digital world led to a set of four easy-to-follow rules to remain safe while using the Internet (see sidebar).

The rules were formulated ad hoc and they all suggest a fear-driven approach to privacy. They do not convey positive values around the use of the Internet, and, more critically, could hinder adoption and appropriation moving forward. In that sense, they are not practicable in the long run.

Towards Collective Privacy Practices
We noticed that the sister-survivors were supporting each other while using the Internet. These include reminding others of the four rules, suggesting ways to navigate out of unsafe sites, and finding whether the website is safe or not. These lead us to believe that there is a possibility, in this context, of promoting privacy as a collective practice.

Prior work has shown the value of social relationships in promoting learning of security and privacy practices (e.g. [5, 6, 19]). For example, Pierce et al. 2018 found that most security tool were designed for individual users. They posit that security and safety are socially contingent and hence there is a need for security and privacy that support collective action [18].

However, it is worth noting that collective action within a limited group may not be sufficient. This is especially true for people with limited digital literacy who may have fewer people in their network to clarify and support in technology-related concerns, and they may develop mental models that hinder their privacy decisions [2, 25]. Thus we are exploring the possibility of multi-level groups defined by the user – friends and families, locally situated individuals, NGO staff members, and external experts and curated resources – to support collective privacy practices.

CONCLUSION: TOWARDS PRACTICABLE PRIVACY
The sister-survivors’ limited digital and text literacy skills and their fear of being stigmatized in society being identified as a trafficked person, defines our design space. Further, we have to be cognizant of broader society’s values and orientation. In our case, Nepali society is collectivist to a large extent and we observed similar orientation among the sister-survivors [9].

We hope to call for privacy practices that vulnerable populations can use without fear of social exclusion and can modify it to adjust it to their needs and values. This leads us to three critical conditions that we believe are required in any socio-technical systems to promote privacy: (1) usable, (2) socially acceptable, and (3) appropriable. While these conditions are not exhaustive, we believe that they will help create practicable privacy for vulnerable populations.
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