

“Someone Else Is Behind The Screen”: Visibility, Privacy, and Trust on Geosocial Networking Apps in India

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Abstract

Queer people increasingly use geosocial networking apps (GSNAs), such as Grindr and Blued, to find connections. These apps play a particularly important role in countries such as India, where being visibly queer can carry social stigma, and same-sex intercourse was criminalized until 2018. A key challenge on these apps is self-disclosing enough information to appear authentic and build trust with other users, without drawing unwanted attention, stigma, and safety threats. Careful consideration of when to share information and what to share is critical, but we have a limited understanding of how users make these decisions. Drawing upon in-depth interviews with 36 queer men in 4 smaller urban environments in and near the state of Maharashtra, India, we sought to understand how queer men think about their visibility while using GSNAs. We find that they are primarily concerned with the visibility of the actual GSNA on their phone, especially given many users in this context live with their families and assumptions common in the West, such as one person per device, may not hold. They also worry about the information they disclose on the app itself given this visibility can lead to dangerous situations. We detail how participants try to resolve the tensions around visibility and discuss our findings in relation to conceptualizations of privacy and signaling theory. We conclude with practical guidelines related to the use of these apps in the Indian context.

Keywords

dating apps, LGBTQ+, privacy, trust, visibility

Introduction

Geosocial networking apps (GSNAs)¹ have become an important resource for people seeking not just hook-up and dating partners, but also friends and social support from others with a shared identity (Dasgupta, 2017; Fox & Ralston, 2016). At the same time, users of these apps are routinely targeted and victimized for their identity (Li et al., 2017; Sinha-Roy & Ball, 2022), so uncertainty persists about the intentions of other app users who are typically strangers. Deciding what information to share about oneself can thus be a challenge. A user's queer² status is often assumed on these platforms, so merely being visible to others can create vulnerability. Consequently, users find ways to manage their visibility in many cases limiting disclosure or hiding their identity.

GSNAs are particularly important in countries where same-sex activity has historically been stigmatized or criminalized (A. Bhattacharya, 2022; Martino & Kjaran, 2019).

One such country is India, where from the nineteenth-century British colonial rule until 2018, Section 377 of the Indian Penal Code condemned and criminalized same-sex relations. This, along with negative attitudes to non-hetero-normative gender and sexuality expressions, obscured queer identities and made people less willing to be out in public (Dasgupta, 2017), an effect that persists today. Despite this, various queer spaces have developed over the past few decades (Narain & Bhan, 2005), and India has seen a growing LGBTQ+ movement as a result of sexual health projects, pride marches, and various organizations that support queer individuals (Shahani, 2020). In a momentous 2018 decision,

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India's supreme court overturned Section 377 and decriminalized consensual same-sex relations (Kidangoor, 2018).

Alongside these initiatives in many Indian communities, increasing access to the Internet and mobile phones have also played a role in creating queer spaces. Early on, chatrooms and messaging on social networking apps became a primary way for queer people to connect (Shahani, 2008). Web-based dating platforms, such as "PlanetRomeo," were utilized in the early 2000s (Sinha-Roy & Ball, 2022). The anonymity of the Internet was a significant draw of these spaces (Dasgupta, 2017). The increasing availability of smartphones (Statista, 2021) enabled wider use of GSNAs, which connected users based on location proximity. Grindr, a gay geo-social app launched in 2009, took off in India around 2011 (Das, 2019). The use of GSNAs in India has drastically increased over the last 10 years, with Grindr becoming one of the most popular (Grindr Unwrapped, 2021). Blued, a China-based GSNA has recently expanded to the Indian market and has also gained popularity (Das, 2019).

Yet using these apps in certain countries in the Global South, such as India, can be difficult due to differing norms around phone privacy (Ahmed et al., 2017; Steenson & Donner, 2009). On top of this, users struggle with the risks of being seen even in an online queer space, as living as an identifiable queer person in India still carries risks of harassment, transphobia, stigma, and violence. GSNAs such as Grindr and Blued can exacerbate these risks (Dhar, 2020; Singh, 2021; Sinha-Roy & Ball, 2022; Steinfeld, 2020). Paradoxically, one needs to be visible to connect with others, but visibility can be dangerous (Birnholtz et al., 2020). Moreover, disclosing information about oneself on GSNAs, in other words, becoming more visible, is necessary for building trust and intimacy with others on these platforms (Towner et al., 2022).

In this article, through a qualitative study with 36 queer Indian men, we investigate how they think about their visibility in relation to their use of GSNAs. We look at (a) their visibility in their immediate context and (b) their visibility on the app. We also examine strategies that they use to manage tensions around visibility. Researching the use of GSNAs in an understudied context may yield important insights not accounted for in extant work (Moitra et al., 2021).

Background and Literature Review

Visibility in the Indian Context

Mowlabocus (2016) argued, "Coming out' is about making oneself visible; throwing one's queerness into relief against a heteronormative background that would otherwise render it *invisible*" (p. 93). Queer people tend to go through the coming out process as "Culturally, we all work under the assumption that individuals are heterosexual (and 'male' and 'female') until 'proven' otherwise" (Gray, 2009, p. 1181). While coming out can be liberating, it can also cause stress

and be stigmatizing (Kelleher, 2009). Consequently, many queer people have historically found ways to subtly indicate their sexual and/or gender identity. This predated the digital age through the wearing of certain color handkerchiefs, particular tattoos and piercings, and/or specific dress, speech, and style codes that helped the LGBTQ+ community recognize each other (Chauncey, 1994; Urbach, 1996).

Concerns around the stigma of coming out are not unique to India, yet there are specific cultural factors making this context distinctive, beyond the criminalization of same-sex acts until 2018. In Indian society, social stigma can be very severe, potentially leading to exclusion from various social networks including family, friends, and neighbors. Family values are particularly important as "reputation is familial rather than individual" (Vanita & Kidwai, 2006, p. 198), and coming out as queer is thought to bring shame onto the family. Social rejection by one's family can be devastating, leading many queer people to feel forced to live their lives as heterosexuals (Srivastava & Singh, 2015). There is immense pressure for men to fulfill certain gender and sexuality roles, often including marriage to a woman (Mimiaga et al., 2015). As a result, many queer individuals do not come out to their families.

Thus, even after decriminalization, prejudice against queer individuals continues. The medicalization of same-sex attraction is still pronounced in Indian society, with families believing they can convert their queer family member to being heterosexual (Srivastava & Singh, 2015), and, in some cases even forcing their queer family member to undergo conversion therapy (Price, 2020). Prejudice is also enacted by the state, as police continue to target the queer community (Bhattacharjee, 2020). Queer individuals, therefore, worry about how out they are given the potential legal and/or social consequences.

In this context, using GSNAs can be complex. One form of visibility that is particularly relevant is the visibility resulting from the people in an app user's immediate vicinity. In the West, we often presume a user has privacy and autonomy when using their phone, but evidence suggests this may be less true in other cultural contexts (Ahmed et al., 2017). Family members in what are considered to be more collectivist cultures like India tend to be more involved in each other's lives than in what are presumed to be more individualistic cultures (Kapoor et al., 2003). This can mean more surveillance of each other's activities, especially when people live in smaller spaces (Arora & Scheiber, 2017). As people in some Indian communities tend to live with their families in close quarters, it is a significant challenge to maintain a sense of privacy (Birnholtz et al., 2020).

We thus wanted to explore how queer men manage and think about using these apps, given these contextual challenges. This led to our first research question:

RQ1. How do queer Indian men perceive and manage their visibility in their immediate vicinity, especially as it relates to using GSNAs?

Visibility on GSNA

Another form of visibility comes with having a profile on a GSNA like Grindr and Blued.³ It is important to distinguish that one's visibility on the app is not the same as the more deliberate, revelatory act of coming out, or the process of revealing oneself to be queer. While a user's visibility on a GSNA might indeed lead others to assume a queer identity, it does not necessarily mean that the user is out or even queer-identifying (Steinfeld, 2020), and they may still be trying to hide how visible they are. For example, users find ways of subtly signaling their identity online, often by leveraging the affordances of social platforms (Birnholtz & Macapagal, 2021; Carrasco & Kerne, 2018; DeVito et al., 2018; Pinch et al., 2021).

In creating an account on a GSNA, users must decide how much to disclose about themselves. Disclosing information is important in building trust and intimacy with others on the app (Derlega et al., 1993; Jourard, 1971). For example, many users include a face picture as they are seen as a "form of insurance . . . acting as a promise of what they can expect in real life" (Mowlabocus, 2016, p. 104). Yet sharing pictures of oneself can mark one "as visibly queer" (Mowlabocus, 2016, p. 104), which brings up worries about identifiability (Woo, 2006). This is exacerbated in India where the stigma around being visibly queer can be dangerous if recognized by a neighbor or subsequently seen in public (Birnholtz et al., 2020).

Just as users are worried about what to put in their own profiles, they must also try to discern if other profiles on the app are genuine. Developing trust on GSNA with someone you haven't met can be difficult given concerns about deceptive or fake profiles, or being "catfished" (Borchert & Heisel, 2022; Ellison et al., 2012; Fitzpatrick & Birnholtz, 2018; Gibbs et al., 2011; Lauckner et al., 2019; Toma et al., 2008; Toma & Hancock, 2012). Scholars often draw on uncertainty reduction theory in looking at how a person gathers information to learn more about someone and predict how they might act (Berger, 1979; Gibbs et al., 2011). However, getting more information does not necessarily lead to a higher level of trust.

Signaling theory can be useful in thinking about how users develop trust online, and how the *type* of information may play a role. Signaling theory was initially developed in economics (Spence, 1978) and biology (Zahavi, 1975) and was applied to social networking sites by Donath (2007). Fundamentally, signaling theory assumes that a lot of information about others is not observable, and thus, we rely on signals which are the "perceivable features and actions that indicate the presence of those hidden qualities" (Donath, 2007, p. 233). Moreover, trust is often "inferred from cues and signals" online (p. 236). Rather than relying on *any* information, users instead look for signals they believe to be more reliable, or "pieces of information that are costly to fake" (Shami et al., 2009, p. 71). For example, users tend not to trust information that can be easily manipulated (Walther

& Parks, 2002) and want to verify any identity claims. Users often try to authenticate claims on Google to check for any self-presentational discrepancies, examine social media accounts, and assess any mutual friends they share with the person they are meeting (Byron et al., 2021; Gibbs et al., 2011; Obada-Obieh & Somayaji, 2017).

For marginalized populations, such as queer users, risks of harassment and victimization are heightened (Waldman, 2019), meaning the need to establish trust, and search for reliable signals, may be exacerbated. Fernandez and Birnholtz (2019) found that transgender people would try to reduce uncertainty on dating apps by revealing their trans status before meeting in person so as to protect their physical and emotional safety, and to minimize surprises later on. People often seek to establish trust before meeting in person to avoid falling victim to deceit or other nefarious actions (Ellison et al., 2012; Fitzpatrick & Birnholtz, 2018).

In India, many people report being scammed, robbed, and attacked by people they have met on GSNA (Dhar, 2020). Sinha-Roy and Ball (2022) call for more research in the Indian context focused on crimes and abuses that occur through dating apps. They highlight how dating apps facilitate abusive practices and argue that these apps' "affordances, coupled with the stigma that surrounds queer sexual identity or behavior in India, make users of gay dating platforms in India particularly vulnerable to crimes and abusive practices" (p. 54).

We argue that signaling theory can be a helpful framework for understanding Indian men's practices. While signaling theory is primarily about how people use signals in assessing others, it is also helpful in understanding how Indian men navigate their own visibility and what to disclose on GSNA. We thus want to explore how queer Indian men think about their visibility on the app, and what factors might be impacting how visible they want to be on GSNA. By qualitatively understanding how individuals choose to disclose information, we can gain more nuanced perspectives on tensions around visibility and disclosure for marginalized populations (Fritz & Gonzales, 2018; Marwick & Hargittai, 2019). Given the crimes and abuses that can occur through GSNA, it is vital to understand both how queer men are thinking about their visibility and what strategies they are using (if any) to manage their visibility. Thus our second research question is:

RQ2. How do queer Indian men perceive and manage the information they share on GSNA that might make their queer identity visible to others?

Method

To explore these research questions, we conducted a qualitative interview study with 36 queer men in 4 semi-urban cities:⁴ Pune, Indore, Nagpur, and Kolhapur. We wanted to interview people in cities of a particular size in a particular region to

Table 1. Demographics (N=36).

Demographics		Count (n)
Sex Assigned at birth	Male	36
Gender & Sexual Orientation	Gay	23
	Bisexual ^a	12
	Kothi ^b	1
Age	18–23 years	14
	24–29 years	12
	30–35 years	10
Relationship Status	Married (to a woman)	4
	Dating/in a relationship (with a male)	4
	Single	28
Outness	Out to all	6
	Out to some family and/or heterosexual friends	10
	Out in the LGBTQ community	17
	Out to nobody	1
	Other/don't want to answer	2
Education	Postgraduate degree	7
	Graduate degree	20
	Higher secondary school	7
	No secondary school education	2
Location	Nagpur	9
	Pune	9
	Indore	9
	Kolhapur	9

^a13 participants initially checked that they identified as bisexual in the demographic questionnaire but 1 of these participants mentioned in the interview that he actually identified as gay.

^bKothi is typically defined as men who “primarily take the receptive role in anal sex with men and are gender atypical to some degree” (Stief, 2017, p. 75). Kothi is also widely considered a “third gender” (S. Bhattacharya & Ghosh, 2020; Billard & Nesfield, 2020).

understand how these apps are used by different populations in India. Pune (population ~7.4 million) is the largest city of the four and has a large information technology sector. Indore (population ~3.1 million) is considered an educational hub with many universities and has a large student population. Nagpur (population ~2.9 million) is one of the fastest growing cities and Kolhapur (population ~ 635,000) is a historic city and the smallest of the four.

Participants

To facilitate recruiting, we used the help of local LGBTQ+ organizations and community-based recruiters in these 4 cities, with 1 recruiter from each city recruiting participants. Fifty potential participants were approached, but only 36 completed the interviews as the remaining 14 were either not eligible⁵ or were not willing to participate. All 36 participants were male, aged 18 to 35 years, with varying levels of education. Additional participant demographic information can be found in Table 1. For their participation in this study, all participants were paid 500 rupees (~\$7 USD).

Procedure

Interviews were conducted between September 2020 and February 2021, and due to the coronavirus pandemic, all interviews were conducted via computer or phone. In addition, demographics were collected via a short online interviewer-guided questionnaire that each participant filled out prior to the interview. While a protocol was used to guide the interviews, they were semi-structured in nature, meaning interviewers followed up on certain topics or skipped other questions depending on the flow of the conversation and participants' responses. All interviews were one-on-one, with two interviewers from our research team conducting all interviews. The interview protocol is provided in Online Appendix A. Participants could choose to be interviewed in Hindi ($n=24$), English ($n=3$), or the local language, Marathi ($n=5$). Some participants indicated comfort in multiple languages and did not express a preference ($n=4$), which led to a conversation that shifted between English and Hindi.

Prior to beginning the interview, the interviewers went over the informed consent form and reaffirmed participant's understanding and consent, and answered any questions about the study. Interviews lasted between 75–120 minutes. Interviews were recorded and transcribed by a professional transcriber in their original languages and then translated into English. To ensure accuracy, the person who conducted the interview checked each translation alongside the original language transcription. They also made notes of any cultural exchanges and included explanations in parenthesis of the transcripts to aid understanding for the US-based team members. All but two of the authors live in Mumbai and three authors are fluent in all three languages (Hindi, English, Marathi).

Analysis

The analysis involved the iterative reading of the translated English transcripts by all six authors on this article. The local team (four of the authors) assisted in contextualizing interviews and the whole team discussed emerging themes and topics. We had several conversations about the meaning of certain phrases and expressions repeated in the transcripts to reduce cultural misunderstandings. The interviewers were actively engaged in the analysis process and thus were able to clarify their exchanges and their interpretation of those exchanges.

We used a thematic analysis approach (Braun & Clarke, 2012), developing a coding scheme that reflected all relevant topics, with a particular focus on visibility related to the use of GSNAs. This method allowed us to answer our specific research questions and better understand participants' experiences and how they think about their visibility on GSNAs. We used Dedoose, a computer-assisted coding software, to help with coding, which was also useful in organizing quotes for writing up the findings. After the first few transcripts were coded, we met to establish a common understanding of codes and to ensure intercoder reliability. We then coded all

transcripts, continuing to have frequent meetings to enable consistent application of the agreed-upon codes. At these meetings, we went through a subset of the coded responses to confirm we all agreed on the coding and to resolve any disagreements or cultural misunderstandings through discussion with each other. Once all transcripts had been coded, we discussed the codes and organized them into overarching themes based on the research questions.

Positionality and Ethics

This study asks questions about sexual behavior and, while same-sex relations have been decriminalized, as we have described above, queer identities are still stigmatized in India (Banik et al., 2019; Moitra et al., 2021). Thus, significant attention was paid to the potential risks this study presented for participants. The study protocol was developed in collaboration with the local team, who were involved in every phase of the work, and the protocol was reviewed by the Institutional Review Board at the research site. While E-payment details were collected from participants for compensation, all details were kept confidential. Any inadvertent mentions of first names and specific locations were removed from transcripts prior to the analysis. Each participant was given a pseudonym to protect their privacy.

Our interpretation of interviews is inevitably informed by our unique positionality. Our research team consists of self-identified queer individuals or allies from both the Global North and South, with experience studying queer populations in our research. To appropriately consider the context, writing was collaborative among all authors, and the first author received feedback for any writing from the whole research team.

Findings

Tensions Around Visibility in the Immediate Vicinity

Our first research question concerned how queer men perceive and manage their visibility in their immediate vicinity. Participants felt that simply having a GSNA such as Grindr or Blued downloaded on their phones was a concern. The presence of a GSNA might raise questions from those in their vicinity and inadvertently out them, which could then change people's perceptions of them. Pranav (gay, single) worried that people nearby might "see the icon of that [dating] application" on his "mobile screen." Pranav further explained what happened when someone saw the GSNA on his phone that he was not out to: "I made an excuse. I know that people are mature. But [I] don't know what will [the] other person think about me, what will he tell others about me in [the] future? . . . there is awkward feeling." Ravi (kothi, dating) similarly stated, "Someone should not see that there is such an app in my mobile" and he actually reduced "the

brightness of [his] phone" so people were less likely to see that he had a GSNA installed.

The fears about others looking at their mobile phones also impacted what pictures participants could then share with others on the apps. Common on GSNA is to share pictures with other users, which may be explicit in nature, such as "dick pics" or nudes (Dietzel, 2021). Sharing explicit photos can bring up security and privacy concerns about data leaks, or other users saving and using one's explicit photos in malicious ways (Albury et al., 2017; Phan et al., 2021). Yet we found some of our participants were primarily concerned with those in their immediate vicinity seeing these pictures on their mobile phone. Kiran (gay, single) explained to us: "I never share nude photos if someone asks me for it because I can't keep such things in my mobile and not even in Grindr. . . if ever somebody takes your mobile then it will look very dirty." Sai (gay, single) similarly explained that if he takes revealing pictures he would then quickly "delete it from [his] account" because if someone sees it on his phone then he would worry "what [would] they think about me." Thus again, participants were thinking about their immediate context in who might be seeing their phone.

Living in close quarters with family made this concern about one's immediate vicinity even more salient. It is important to note that while many participants were out in the LGBTQ+ community, most were not out to their family. Soham (bisexual, single) explained regarding using GSNA around his family that privacy was a big issue. He said,

Actually my house is not so big and it's small. So if someone is doing something on mobile then my family members immediately see what they are doing . . . That's why it's better option not to open it at home. Someone may see something or may ask you what it is . . . I have to keep them hidden.

Soham, who is not out to his family about his queer identity, wanted to avoid questions from his family about what this app was. Yet what is unique in our findings beyond the close quarters concerns that Birnholtz et al. (2020) explored, is that several participants actually shared a single phone with multiple people in their household, as is common in India (Stenson & Donner, 2009), making it even more difficult to use a GSNA. Saahil (bisexual, single) explained that for him, until very recently, there was "one mobile for the entire family." Akhil (gay, single) similarly emphasized that in his family environment, "mobile privacy was not there."

Navigating Tensions Around Visibility in the Immediate Vicinity. Uninstalling and then reinstalling the GSNA became a way for participants to manage the visibility of the app on their phone, especially if sharing phones with others. Aadav (gay, single) explained that before he had his own mobile, he installed a GSNA on his "brother's mobile" to chat with people but then would have to uninstall the app when "giv[ing] the mobile back to [his] brother." Shivam (gay, single) also described his experience:

If I have to go to my home then I uninstall it [the GSNA] because at home many people ask [me for] my phone as they need it for some work. So I have to give them my phone. So they may ask me what this app is or if they see these apps on my phone and know the names then later on they can search it on their phone also.

Thus, in contrast to prior studies, where users deleted GSNA's because they got into a relationship, or found the apps distracting, frustrating, or not useful (Brubaker et al., 2016; Fitzpatrick & Birnholtz, 2018; Lopes & Vogel, 2017), some of our participants deleted them explicitly due to concerns about others seeing the app on their phones. Uninstalling the app can be a way to manage one's visibility to others very nearby.

Some participants adapted to the possibility of being outed by the visibility of a GSNA by using apps they saw as common and unlikely to arouse suspicion or undesirable impressions. Many participants spoke about using Facebook and WhatsApp to connect with other queer people. Keeping a social media app like Facebook visible on their phone was less risky than a GSNA which could out them if someone saw it. A common strategy was to set up a second Facebook account to meet people. Soham (bisexual, single) explained,

With my real [Facebook] ID were my school friends, my colleagues and family members . . . And I made another ID . . . with only community people⁶ . . . and started dating through it. Because if someone would see Facebook on [my] mobile then they did not have any problem with it. Because Facebook was a common app for all.

A common sentiment was that there was no issue if immediate others saw apps like Facebook or WhatsApp on one's phone as everybody had these apps and they were "normal." Having a GSNA, on the other hand, carried a lot of stigma and could lead to those in the immediate vicinity recognizing the user as queer.

Shivam (gay, single) was the only participant to point out that there is a feature on Grindr that allows one to change the logo of the app so others cannot tell what it is. This is a recently introduced Grindr feature to improve users' privacy ("Grindr introduces New," 2020; Steinfeld, 2020). Shivam explained this was helpful "So if somebody sees it [the app] then they can't make out which app this is . . . Even right now my logo is the changed one . . ." It is worth mentioning that many of the better privacy and security features seemed to be part of the paid, upgraded version of the GSNA, which, depending on one's financial status, was not always affordable. Shivam concluded that Grindr "gives very few options for free."

Tensions Around Visibility Online: Needing and Fearing to Share

As we have discussed thus far, using the apps themselves was challenging given the immediate context participants

were in where someone might see the GSNA on their phone, exacerbated by living in close quarters with family and phone sharing. Yet even when they were able to use the app, managing tensions around their online visibility proved challenging. Participants had to balance sharing information about themselves, rendering themselves visible on the app, while also fearing how other users might use that information. Jatin (gay, single) detailed the consequences of being visible on a GSNA:

I mean, how much ever rules you make, it's not that rape stopped because law of rape is strict now. So still people get exploited. Ultimately, they don't want that this matter reaches their family. This is the biggest fear they have. Due to this they tolerate everything. They tolerate all kinds of blackmailing and exploitation. Even though at private places you are allowed to have sex, still police raids in hotels . . . things do happen.

Here, Jatin references the various consequences one must worry about. There are clearly still concerns about police action despite the decriminalization of same-sex relations, but even more pronounced, or the "biggest fear," as Jatin said, are the fears of being out to one's family. The potential consequences of this are so stark that users "tolerate" blackmailing and exploitation through GSNA's. This quote reveals just how high the stakes are in being visible on a GSNA, and the potential ramifications of this. Rahul (gay, single) similarly spoke about his experience with people on the app pretending to be the police and threatening other users:

They set up the whole conspiracy and they set up the whole plan to trap someone . . . They become fake police and accuse . . . They send message through Grindr. Then . . . they come in police uniform and scare and threaten because our families don't know . . . That is also the reason I have stopped using those kinds of apps because these things happen more.

Experiences such as these drove Rahul to stop using GSNA's as much. In relation to the potential legal consequences, Virat (bisexual, married) told us about his friend who met up with someone through Grindr and then subsequently was beaten up and robbed of his phone. He encouraged his friend to report the incident but said his friend was "not ready to do police complaint . . . he was scared that if police come [to his] home then what will happen." His friend was afraid of both being outed to his family, and the police being unsupportive of him.

Very common was for an app user to threaten to reveal another app user's queer identity to one's family. Those using the app for malicious reasons could take advantage of these concerns. Rohan (gay, single) said: "My neighbor building residential person has given me threat that he will tell everything to my family . . ." Siddharth (gay, single) explained his experience that people would message him on the GSNA: "I have taken a screenshot of your photos, I know your name, I am going to come to your house and tell that what you are

doing here, so you send me money or you come and meet me.” This user is threatening to out Siddharth to those he lives with unless he sends money or comes to meet him, presumably for sex. In this case, Siddharth responded by blocking the user, but explained that experiences such as these are not uncommon. Understandably, this made participants careful about how much they shared directly on their profile. Siddharth said that he now doesn’t like to “share personal information directly on GSNAs. It seems risky because people can misuse this.”

This tension was most pronounced in photo-sharing as many participants were aware that sharing pictures of yourself on a GSNAs can be important in developing trust (Albury & Byron, 2016; Brown et al., 2005; Mowlabocus, 2016). Abhishek (gay, single) explained, “Mostly nobody replies if you don’t have [a] profile picture...profile picture is compulsory.” Yet many participants felt sharing photos made one identifiable to other app users and took away control and, as shown above, could result in being blackmailed and threatened.

Even though participants expected other users to share profile pictures, there seemed to be an awareness that a lot of people’s profile pictures were fake. Soham (bisexual, single) explained: “Pictures are mostly fake . . . they don’t put their own photo, they put any model’s photo or put photo of a rainbow.” Interestingly, some participants attributed a geographic component to fake pictures. Those we interviewed from Kolhapur, the smallest of the four cities, felt people were more dishonest about their photos. Krish (gay, single) explained,

Because in Mumbai, Pune and [cities] like this you know you can always, you can still trust people that they are sending their own pictures. But in Kolhapur specifically I would say it’s totally, it’s very misleading. So they will send you some other person’s photograph and someone else is behind the screen.

Abhishek (gay, single) similarly observed: “In Kolhapur you will find blank profiles and profiles with photos of heroes, heroines and all. But in Pune people are comfortable with sharing their actual picture.” It is possible that given Kolhapur is the smallest city represented in our sample, people felt that sharing their photos was less anonymous and that they were more likely to be recognized as opposed to in a bigger city like Pune. However, more research would be needed to make more definitive claims about specific geographic location trends.

While our participants who shared fake pictures were doing so out of fear of being too visible on the app, some people on the app seemed to share fake pictures specifically to deceive others. Shrikanth (bisexual, single) told us he was so afraid of someone he met who didn’t look anything like his pictures, he felt he needed to break his SIM card:

I got so shocked after seeing him . . . So when I saw him I took my cycle and ran off. He made me many calls which I did not attend. Then he started messaging me and because of this I broke my SIM.

When participants did have these meetings with someone not resembling their profile, they felt the failure was their own because they hadn’t adequately vetted and built trust with the other person. Rahul (gay, single) told us of his experience of being violently assaulted by someone he met up with through a GSNAs and how he blamed himself: “Why did I come, how did I reach there, why did I trust . . . The consequences which I suffered from took me years and years to come out of it.” Kiran (gay, single) similarly admonished his friend for being too trusting:

How he could have trusted an unknown guy . . . You have never met him in your life . . . I said use the app but with safety. It is not necessary that you meet everyone when you don’t know them and you don’t recognize them either. I don’t even give my number to anyone until I know him well. Even though I am here from so many years.

Participants seemed to conclude that it was up to them as users to determine who to trust and meet up with. This exacerbated victim blaming, in that the responsibility was placed on the user for the crimes that had been committed against them.

Navigating Tensions Around Online Visibility. The general distrust of people’s profile pictures meant that participants were using other strategies to develop trust. GSNAs have features to help with some of these concerns around photo sharing. Ali (gay, single) explained that there is a feature on Grindr that when you send someone photos, they will expire after a few seconds. Yet ultimately to use this feature, “you have to buy paid version of it [Grindr] . . . And everyone cannot afford it . . . And privacy is everyone’s utmost concern. When someone is sharing their pictures they think that the pictures should get deleted after some time automatically.” Ali was frustrated that he had to pay for an important privacy feature of having his photos automatically deleted when he sends them on Grindr. Thus, features on the app did not aid our participants’ fears around photo sharing.

Participants felt that location sharing—like photo sharing—was both necessary and risky. In location sharing, participants would use uncertainty to their advantage and not give specific information. Varun (gay, single) explained that he does not share his “detailed address” with other users. Rahul (gay, single) similarly only gives “the rough idea” of where he lives and while he remains in one city, he changes the location setting on his phone between two cities:

Half of the people don’t know where I am. I like that, that nobody has the right to know exactly where I am . . . I am scared also, who will use which information in which way or something happens. I play pretty safe. So just share enough information that is required.

Abhishek (gay, single), who was “anxious about [his] identity being exposed,” voiced his frustration to us in that he has

tried to change his location on the app but found that “most of the time they ask for buying premium and upgrading.” Again, the features of the GSNAs themselves seem not to support users’ privacy and safety needs in an affordable way.

Sharing information over direct chats was seen as preferable to sharing information on one’s main profile. Rishi (bisexual, dating) said in his profile he put a “photo of either a model or actor . . . But during chats I share my original photo.” He doesn’t want to share on his profile as he felt it is too “public” and he didn’t “want to [be] openly out to family or followers . . . Very few people know that [he] belong[s] to the community.” Hitesh (bisexual, single) similarly explained that he uploaded other people’s Facebook pictures as his profile picture: “All the pics that I upload are similar to me...I am able to tell people that I am 60% similar to this.” Yet like Rishi, he will share his real picture in a direct chat. The fact that Hitesh would upload a picture that is similar to him conveys how profile pictures functioned for many of our participants in India; while it was necessary to have a picture on one’s profile, most trust-building began beyond the profile picture.

Several GSNAs have video features to facilitate the verification of appearance relative to their photo, and this was a common strategy used by participants. Ishan (gay, single) explained,

If I have any doubt with his chat or his photo then I ask whether we can do VC [video call]. If he agrees then it’s alright. If he denies means there is something. He is definitely telling some lie and so refusing for VC. So this is the basis of judgment.

Shivam (gay, single) similarly said, “If there is no video call option on that platform then we exchange numbers and we do WhatsApp video call. When we see each other on video call then we feel that we are in a comfort zone.” Shivam’s description of the “comfort zone” is an indication that he views video calling as a way to feel more comfortable with a person and as a means to begin establishing trust with them.

When a participant was interested in another user on the app, various verification methods were typically used to determine more about that user. Rahul (gay, single) explained,

Trust is also developed gradually . . . first talk on Grindr, share your number, and then chat on WhatsApp. And the last parameter is on social media like Instagram, where my family members are also associated with me. School college friends are also associated with me. That’s why it comes in last.

Rahul told us he generally will not meet up with someone for “10 to 15 days” as you need some time to determine if it is a genuine person. Jatin (gay, single) similarly described building trust as a “process.” In addition, related to the earlier points about phone sharing, when talking to another user on a shared phone, trust was especially necessary. People did not want to share their family number with just anyone and

had to be sure they could trust the other person. As Shivam (gay, single) explained: “Many people say that they will exchange the number only after meeting because it’s their family number.”

Meeting in person presented a paradox in that it carried more risk yet could also be the ultimate way to take a relationship to the next level and further build trust with someone. Pranav (gay, single) stated that meeting in person was the most important step: “If you need verification . . . you meet face to face.” Many participants were aware of the risks and tended to meet up in public places before a more intimate meet-up. Rohan (gay, single) said: “When I am dating someone [for the] first time, I ask him to meet at [an] open place like café, hotel or crowded place.” Siddharth (gay, single) similarly said of a first meeting that he doesn’t “meet at any secluded place.” Harish (bisexual, single) further explained,

I don’t like to go anywhere far. The problem is that we don’t know the person, we don’t know what kind of person he is, we go to meet one person, maybe 4-5 people are present there, so I like to meet in my area only. But bit away from my house. Whether it is any crossing or coffee shop or anything.

In addition, given our interviews took place during the coronavirus pandemic, participants explained how they felt it was even more important to establish trust given their perception that dangerous incidents had increased during lockdown. Pankaj (gay, married) told us that he knew of people using Grindr to meet up during lockdown and, when meeting face to face, were “looted,” “beaten,” and “even attacked with [a] knife.” He went on to say “Since COVID . . . these crises are slowly increasing.” As a result, he explained his own precautions: “After lockdown, I am having date with people whom I already know . . . I have a lot of fear in mind in meeting new people.” Coronavirus seemed to exacerbate the concerns about verifying other users as many people had heard about such dangerous incidents.

Ultimately, some participants expressed their desire for the app itself to be setting up a more formal verification process, as this might aid users’ visibility and trust concerns. Harish (bisexual, single) stated: “We should know that this guy is verified. Otherwise anyone can use the app and how we would get to know that who he is? If any accident happens with anyone then how we would find the culprit? They block the ID but we won’t get to know that who was using this ID.” These dangerous incidents were not uncommon, and users were left to find reliable signals and hope those they were talking to were genuine.

Discussion

Our investigation sought to understand how queer men use GSNAs among four smaller urban environments in India, and specifically how they think about their visibility related to these apps. Our discussion is structured around the two

initial research questions and then we conclude with practical guidelines based on our findings.

Visibility in Context

Much of the extant research on GSNAs often focuses on a user's self-presentation online, and their audience for online behavior (Birnholtz et al., 2014; Ellison et al., 2012; Ward, 2016). While a user's behavior on the app is certainly a vital visibility concern, we found that our participants were also concerned about offline audiences, or those in their immediate vicinity, in that simply having a GSNA installed on one's phone was an important visibility consideration. Participants worried about offline others seeing the app icon, and how this could then inadvertently out their queer identity and impact people's perceptions of them. As such, we need to consider a person's queer visibility within their context, understanding that a person might not only be thinking about their online audience but their immediate offline audience too.

One legacy of personal computing that persists today in much mobile device research is the assumption of one person per device (Bardini & Horvath, 1995; Lin, 1998). Yet in certain social and cultural contexts, mobile phones are not private and secure, but instead can be shared (Ahmed et al., 2017). While phone sharing has been particularly studied in Global South contexts (Ahmed et al., 2017; Burrell, 2010; Steenson & Donner, 2009), it can also occur in Western contexts (Karlson et al., 2009; Marler, 2019). In addition, phone sharing tends to be more common in vulnerable populations where one person per device is not possible due to financial and/or other constraints (Vickery, 2015). To better support vulnerable populations, more attention needs to be paid to phone sharing and how this plays out in particularly intimate spaces such as in using GSNAs, and dating apps more generally.

Our findings show how existing frameworks for privacy often guide design decisions in ways that do not reflect the socio-technical complexity that may arise in different contexts on the ground. The assumption implicit in one person per device is that one person will have sole control and access to their phone. Yet this breaks down in this context where a device may be shared, and multiple people could have total access to the device and information on it. This has significant consequences when thinking about GSNAs, given the stigma in Indian society of using these apps and the consequences of coming out to one's family. This is further exacerbated by norms around living with family, often in close quarters, making it hard to hide one's phone activities.

Various scholars have pointed out that Western conceptions of privacy tend to focus on individual autonomy and do not always consider the social context and relational aspect of privacy (Bannerman, 2019; Ma, 2019; Reviglio & Alunge, 2020). Privacy has been conceptualized by Crabtree et al. (2017) to be fundamentally about relationship management practices: "It is a concern with *people* and the impact the networked world might have on their interpersonal affairs"

(p. 484). This resonates with what we saw in our findings in how participants were thinking about what information to share. In the earlier example of both Kiran and Sai deciding not to share explicit photos on Grindr, their fears were not about their visibility to their online audience, but rather the fear that someone offline might see these photos on their phone and how this might impact how others subsequently view them. Privacy in this case was more about managing relationships with people who might also have access to information on the device. Thus there is a relational and social aspect to privacy. Our findings are in line with Sambasivan et al. (2018) who find that privacy practices in India are dynamic and situated in the social setting.

Moreover, there is a mismatch between the conceptual privacy frameworks that assume one person per device and the designs for technical methods of access that reflect these assumptions. Mobile phones are not designed for the possibility of varied levels of visibility, in that when multiple people use a phone, each user sees the same notifications and apps. While Sambasivan et al. (2018) found that the lack of privacy around mobile phones in India is not always a problem, and some users are accepting of this norm, we find it can be a challenge when using platforms like Grindr and Blued, given the stigma they carry in this context.

Many technical structures designed to enhance privacy are ineffective when people share phones. Phone passwords, for example, are supposed to protect the privacy of the individual, yet when these devices are expensive and often shared, people either don't have passwords or they are widely shared such that the technical structures are no longer effective. Grindr itself has technical features to try to enhance a user's privacy. For example, users can change the app logo to make Grindr less recognizable to people who might see the app on their phone⁷ and also create a PIN (Personal Identification Number) that must be input if anyone opens the app. While many participants mentioned a lack of privacy when using their mobile phone, they did not mention the potential of these features. Instead, the common solution was to uninstall and reinstall the GSNA, or just stop using them all together and try to meet people through more common apps like Facebook. This could be due to a lack of awareness of these technical features, or, as Ahmed et al. (2017) detail, it can be irritating to have to unlock an app each time using it, and/or have passwords on certain apps on a shared phone which can also indicate to those sharing the phone that the user has something to hide. These technical solutions offered by Grindr may not be sufficient in helping users in this context protect their privacy.

Visibility Online

Once participants were using GSNAs, there were still tensions around visibility as participants managed sharing information about themselves while being aware of the various risks that came along with this. Sharing information on GSNAs was a

constantly negotiated process, where participants used different tactics to manage their visibility, such as using chat strategically or using uncertainty to their advantage as in location sharing (Corriero & Tong, 2016; Fitzpatrick & Birnholtz, 2018; Warner et al., 2019). Even on the app, the offline context remained important with participants aware of how their online actions might create offline threats.

There was a persistent tension around visibility, in that it was hard to distinguish between profiles of people who legitimately wanted to build connections, but were afraid of being too visible, and profiles of people that were there to blackmail or threaten users. These profiles could look similar, each using fake pictures, such that the value of a photo was reduced in that it was not a reliable way to assess if someone was genuine. Some of our participants admitted to posting a fake picture out of fear of being too visible. To get around this, participants looked for more reliable signals that were often found beyond the profile. Similar to Fitzpatrick and Birnholtz (2018), the profile was only an initial stage of negotiating relational tensions.

The minimal effort required to post a photo, or even a fake photo, was just a baseline signal but was not, on its own, useful in assessing the trustworthiness or attractiveness of another user. It is, however, an invitation to begin chatting and getting to know someone. A picture of some sort was still required to create engagement among other users, even if it was fake. One reason for this could be that participants shared a general understanding of the risks of being visible on GSNAs in this context, and could work around this by accepting a potentially deceptive profile picture and instead focusing on building a relationship beyond the profile.

We might assume that disclosing information about oneself would beget trust yet this depended on the type of information. Consistent with signaling theory, the participants in our study put more emphasis on signals that were costly to fake. This shows the importance of gaining information in real time and of live interaction with visibility, such as video calling, as this makes one's identity harder to fake. In addition, we found that participants tended not to use one signal, but a variety of signals to decide whether to meet up with someone. Multiple signals, simply by virtue of each requiring more effort, are harder to fake. Relying on multiple signals made users feel safer in assuming those they were talking to were not on the app for malicious reasons.

In other contexts, the worries around visibility on GSNAs may not be as stark, as there may be fewer concerns around legal and/or familial repercussions of being outed. Our participants' need to build trust and find reliable signals was likely heightened given the consequences. This resulted in some participants tolerating blackmail, by not reporting those blackmailing them and putting themselves in potentially dangerous situations, so as not to be outed to their family or to have to speak with police, who they did not necessarily see as supportive.

Practical Guidelines for Using GSNAs in India

Based on our findings, GSNA designers could help make users aware of certain privacy and security features. One suggestion would be that as part of the profile construction processes on GSNAs and when a GSNA is deleted/reinstalled, users are asked questions such as how comfortable they feel having this app on their phone, if they live with others, and if they share their phone. If the user responds "yes" to any of these questions or expresses a general discomfort with having the app on their phone, the GSNA could give additional information, including a tutorial about how to use these various privacy and safety features.

While many GSNAs do have safety guides, they could further give explicit tips on strategies for verifying another person's identity, particularly when a user first joins the app. GSNAs could have new users read interactive and engaging information which encourages the use of *reliable signals* that are harder for users to fake, such as using the video calling feature, or encouraging users to meet up in public places first. While many of our participants used verification strategies, they tended to learn about them through friends, or only after having had a very negative experience of meeting up with someone without using any sort of verification. If apps preemptively told users this information, it could save some participants the potential of these negative experiences and help with safety.

Many participants also expressed dissatisfaction with apps themselves in that the app's features that were supposed to help users manage their visibility and security, cost money. This disadvantaged users who were not able to pay for these features. Participants expressed frustration at having to pay for features that were important to their safety. By having these features cost extra, GSNAs are marginalizing users who cannot afford these features but may very much need them.

These design suggestions are imperfect especially as the use of these apps in Indian society is fundamentally a socio-technical problem. Still, these apps play a foundational role in connecting the queer community, especially in high-risk settings. Having features that make users feel more comfortable in using these apps can still be beneficial. Yet at the same time, safety guides and features can be paradoxical in increasing self-blame when something does go wrong (Sinha-Roy & Ball, 2022). Self-blame can arise when advice is framed around the individual and what they should do to protect themselves. We saw this in our findings in that users attributed the blame for crises to themselves for trusting too easy, or not doing enough to develop trust. Our point is not to exacerbate self-blame narratives. Safety guides should do more in normalizing help-seeking and support, no matter what risks a user may have taken. Designers of GSNAs need to continue to try to combat the use of these apps for malicious crimes, as these abuses seem to only be worsening during the coronavirus pandemic.

More generally, our findings reveal that people in this context do not always have privacy and autonomy when using their mobile phone, and thus assumptions that the phone is a private and secure space are at odds with how users in this context think about and actually use their phone. Much like Ahmed et al. (2017), these differences are important to conceptualize in the design process and we should allow for new ways of thinking about mobile phones such as from a “shared use” paradigm which could offer new design possibilities (p. 16). Situating the design of technology to match local practices and norms can help reduce the universalizing tendencies of assuming every user has the same needs.

Limitations

In this study, we sampled men who are using GSNAs as they tend to use such apps more than other groups. Yet it is vital to have future research that focuses on women and/or other identity groups to understand their particular needs and experiences in these online spaces. Increasingly, other identity groups are using these apps, yet there has been little investigation into their experiences with these apps (Hall, 2021). We only spoke with 36 men in 4 semi-urban cities in India. The findings presented here are not representative of all users of these apps and we urge caution in interpreting our findings and hope they lead to further work in this area.

In addition, we were only able to interview people who were accessible to recruiters and, as mentioned, all interviews happened via computer or phone which meant that participants had to have a working phone or computer access. There are likely experiences we didn’t capture in our sample about the difficulties in gaining access to these platforms given everyone in our study had a phone or computer access.

Finally, these interviews were conducted during the coronavirus pandemic. This meant that interviews were not just amid the pandemic but also in the middle of stringent lockdown measures in some places. The discussion of the details of how the pandemic might have impacted the findings is beyond the scope of this paper yet it is important to recognize that this was an ongoing concern while we conducted our research.

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Supplemental material

Supplemental material for this article is available online.

Notes

1. In this article, we specifically refer to GSNAs that are targeted at queer populations, such as Grindr and Blued.
2. We use the term “queer” as an umbrella term to encompass sexual and gender identities that do not conform to normative constructions (Dasgupta, 2017). Moreover, the term can promote the interconnectedness and intersectionality of our identities in relation to dominant power structures (Cohen, 1997; Crenshaw, 1989). Yet it is important to point out that intersectionality is a US-specific framework for understanding the intersections of race and other identity facets. We are aware the use of “queer” is contentious but given it has been increasingly used in the Indian context and can encompass a wide-range of sexualities, we have decided to use it throughout this paper.
3. Grindr and to a lesser extent Blued were the main GSNAs that participants in our study talked about which is why we focus on these two platforms. They are queer GSNAs that allow users to create a personal profile and then browse other profiles of people that they could potentially meet up with.
4. These cities are considered smaller relative to major metropolitan centers such as Mumbai. One city is considered a Tier 1 city while the other three cities are considered Tier 2 cities (see https://en.wikipedia.org/wiki/Classification_of_Indian_cities).
5. The eligibility criteria for recruitment were participants who self-identify under the queer umbrella (restricted to male-identifying participants), in the age range of 18–35, have used the internet to interact with/meet a same-sex attracted person, have lived in the above-mentioned cities for at least the last 2 years, and are willing to provide informed consent and agree to audio-recording.
6. By “community people,” he meant those in the LGBTQ+ community.
7. It is important to mention that even with a different logo on the app, the app still identifies its name as “Grindr,” and the app designers may want to consider allowing users to rename the app on their phones to further hide it.

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