

“I Shut the Door”: Interactions, Tensions, and Negotiations from a Location-Based Social App

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### **Abstract**

Location-aware mobile social apps leverage mobile phones to provide face-to-face social opportunities for physically proximate individuals. Prior work examining apps focused on dating and hookups have centered mostly on profile presentation and user goals. This leaves open the important questions of how people actually use these apps to connect and realize these goals, and what these experiences are like. We report on 22 interviews with users of Grindr, a location-aware social app for men who have sex with men. We examine interaction processes from viewing profiles to meeting up. Using relational dialectics, we uncover tensions in use around connecting with others, sharing information, and being predictable or novel. We find that profile presentations are flexible and subject to change, disinhibition challenges interaction and revealing goals, and social consequences increase through the process of moving from profile browsing to meeting face-to-face.

## Introduction

Technologies have enabled social connections between strangers for decades, ranging from the early popularity of topical forums or chat rooms (e.g., (Zheng et al., 2002; Danyel Fisher, 2006)) to the more recent popularity of dating sites for establishing relationships that often eventually move offline (e.g., (Whitty et al., 2007; Ellison et al., 2012)). Location-based mobile technologies continued this trajectory by enabling awareness of both friends (e.g., (Guha and Birnholtz, 2013; Lindqvist et al., 2011)) and strangers who are nearby (e.g., (Sutko and de Souza e Silva, 2011; Licoppe and Inada, 2009)). In some cases, location-based apps are intended to provide not just awareness of nearby strangers but also to facilitate face-to-face (FtF) interactions between strangers in the *near-immediate future* (i.e., within minutes or hours) (Toch and Levi, 2013).

We refer to location-based apps that are intended to facilitate FtF interactions between nearby strangers as location-based social apps (LBSAs). We focus further in this discussion on the subset of LBSAs that are frequently used to find others for dates or sexual encounters (e.g., Grindr and Tinder) often within minutes or hours. (For clarity of writing, we use LBSA to refer to this specific subset unless noted.) While it is easy to consider LBSAs used for dating or sexual encounters as dating sites in their own right, they differ in two key respects. First, LBSAs focus on availability and awareness of who is online right now. While dating sites have stable profiles that may be visited even when that user is offline, LBSAs are typically designed to only show users who are online or have been recently (i.e. within the past day). This may change expectations in how users interact with each other: if the system shows that you are online and someone sends you a message, they may expect a response right away.

Second, LBSAs only show other users who are nearby and are therefore sensitive in novel and important ways to shifts in location. Dating sites typically support search among a set of profiles across geographic areas (e.g, a city or metropolitan region); this region and the set of profiles within it remain roughly stable regardless of users' specific geographic location within that region or when they sign in.

On LBSAs, users are shown a fixed number of other users who are closest to them. In this way, the system “follows” users around such that the set of visible profiles at any moment depends heavily (with some variation due to specific designs) on who else is nearby and actively online.

Third, the pace of interaction is different. LBSAs are often designed to move people toward FtF connection in the near-immediate future. Where interaction on dating sites is often via asynchronous messages focused on future dates (Ellison et al., 2012), location-aware apps are used, for example, to find somebody nearby to have coffee with in the afternoon, and then later that night to locate a casual sex partner (Mowlabocus, 2010; Blackwell et al., 2014).

Finally, while dating sites are typically used primarily to pursue dates or relationships, LBSA users often have a broader and more flexible range of goals. This is likely both because the immediacy of LBSAs means users can log in to satisfy an in-the-moment goal, and because people sign in with a variety of goals (e.g., friends, casual sex) (Blackwell et al., 2014).

This increased sensitivity to the dynamics of movement through the physical world (Bumgarner, 2013) and variation in goals potentially complicates interactions in ways that are not well captured by existing literature. In this work, we present results from an interview study of Grindr, a LBSA designed to support social and sexual interactions between nearby men who have sex with men (MSM). We explore the nature and trajectories of people’s experiences with Grindr, ranging from how they assess others’ profiles to how they arrange for and consider meeting FtF. Results suggest that users experience tensions around what information to reveal and how to assess others’ objectives at multiple stages of their interactions, and that they strategically manage the release of information and addressing these tensions.

### **Related Work and Research Context**

The MSM community offers a useful entry point for studying LBSAs focused on dating and sexual encounters for three reasons. First, several commercially successful LBSAs are designed for

MSM. Grindr, for example, has seven million users in 192 countries (Grindr LLC, 2015).

Second, the MSM community has a history of using technology for social connection. These apps' popularity can in part be understood in light of the challenges of locating other MSM, as interest in sex with other men is imaginably not a visible trait or behavior. A range of physical spaces (e.g., bathhouses (Chauncey, 1994), bars (Taub, 1983)) and online spaces (e.g., chat rooms (Shaw, 1997; Jones, 2005; Brown et al., 2005), personal ads (Gudelunas, 2005; Haimson et al., 2014)) have historically facilitated connections between these men. Grindr and apps like it arguably build from these traditions, and with their large, active user base provide a rich site of inquiry. Third, sex and technology have not been explored in depth by researchers who study computer-supported coordination (Bell, 2010; Brewer et al., 2006; Haimson et al., 2014; Kannabiran et al., 2011). Thus, studying experiences on Grindr provides us with an active community in which to answer key research questions while simultaneously expanding the diversity of populations and activities considered in HCI (e.g. (Haimson et al., 2014)).

### Research Context: Grindr

We focus on the free version of Grindr, which is broadly more popular (including among our participants), but offers a more limited feature set relative to the paid version.



Figure 1: Grindr screen shots of the home screen (left), a profile (center), and one-on-one chat (right) (Grindr LLC, 2015).

Upon launching Grindr, the home screen shows a tiled display of profile photos of the fifty closest users, sorted from the physically closest to the farthest away (Figure 1). Small green dots indicate that a user is online now or has been online in the past ten minutes; other users displayed have been online within the past sixty minutes. After sixty minutes of inactivity, that profile is removed from the display. Each photo can be tapped to reveal that user's full profile (Figure 1), which may include: screen name (short descriptor), headline (80 characters free text), age, height, weight, ethnicity, body type (selected from among common descriptors such as "bear"), tribes (pre-defined categories, e.g., "geek" or "jock"), looking for (relationship, dating, "right now," etc.), relationship status (single, married, dating, etc.), links to social media profiles, and "about me" (255 characters free text), and distance (in feet/miles or meters/km) as well as travel time (in minutes by foot or car) from the user looking at the profile.

Grindr's architecture divides public and private interaction in that profile content is visible to any other user and chats are private between the two who are chatting. From a given user's profile, a viewer may choose to "block" (i.e., the two users are no longer visible to or able to contact each other), "favorite" (i.e., 'favorited' users appear on a separate list), or start a private chat and share additional photos or location details (Figure 1) (Grindr LLC, 2015). Note that the free version does not provide push notifications for received chats, so one must sign in to see new messages. There are no "public" chat features and no viewable records of profile visitors. Thus, profiles are quasi-public and relatively static while chats are private and more dynamic.

### **Background: Open Questions About Grindr Interactions**

Grindr supports a range of pursuits from its users, including browsing profiles, chatting, and pursuing relations from friendships to hookups to relationships and anything in between. Earlier work on Grindr has taken profiles or users' intentions as the unit of analysis. Blackwell et al. argue that Grindr is a *co-situated space*, wherein strategies for impression formation are affected by the joining of users in nearby-but-different locations, often with different goals, in the same mediated space (Blackwell et al.,

2014). In an analysis of profile text, Birnholtz et al. show how Grindr users employ ambiguous language in their profiles to avoid potential stigma around behaviors some viewers may see as undesirable, like casual sex (Birnholtz et al., 2014). Fitzpatrick et al. further show that disclosure of different types of information on profiles varies by location and demographic factors, which suggests that local norms influence these practices and that not everyone creates profiles in the same way (Fitzpatrick et al., 2015). Wiele and Tong draw on survey data about Grindr use, to capture the broad range of goals users bring to Grindr (Van De Wiele and Tong, 2014).

While these studies lay a foundation for understanding LBSAs through Grindr, they do not focus on how people connect and what happens when they do. Studies on identity and profile (Birnholtz et al., 2014; Blackwell et al., 2014; Fitzpatrick et al., 2015), for example, do not capture the details of people's interactions with others. While Wiele and Tong do focus on users' goals and perceptions of use, their survey data does not provide rich detail on how users experience and attempt to realize these goals in situ (Van De Wiele and Tong, 2014). Here we contribute deeper insight into how users understand and engage with each other.

In studying web-based interaction technologies for gay men, Brown (Brown et al., 2005) identified three phases of interaction, which serve as the organizing frame for our research questions. These include: 1) composing and viewing profiles, 2) chatting online, and 3) meeting in person. While much recent work in this area has focused largely on the first phase (Blackwell et al., 2014; Ellison et al., 2006; Ellison et al., 2012), we are interested in understanding how each phase unfolds and how they may interrelate.

**Managing impressions via profiles.** The profile is central to Grindr and other LBSAs as the initial point of contact and impression management, preceding interactive chat. Grindr's profile content fields and their constraints suggest a design focus on getting people to interact through chat. First, a user's ability to articulate a range of goals may make those who view his profile uncertain, prompting resolution through chat for those interested. Second, Grindr profiles may contain no more than one photo, three brief free text fields and eight brief descriptive fields (Birnholtz et al., 2014; Fitzpatrick et al., 2015) (see above), making them quite different than dating sites like OKCupid where, for example, profiles can consist of multiple photos, up to eight free-text fields and 22 other profile fields, as well as hundreds of questions to complete for matching. Third, while online dating research consistently finds that users create profiles to elicit positive responses and outcomes from others (Ellison et al., 2012; Hitsch et al., 2010; Mascaro et al., 2012), there is evidence that people sometimes use deception to portray themselves in a more positive light about attributes such as their physical appearance (Ellison et al., 2012; Toma and Hancock, 2012; Toma et al., 2008). On Grindr, however, given little information and potentially short timeframes for meeting up, deception may be experienced as a transgression.

Given all of these differences in how profiles are likely to be crafted and interpreted, and how profiles relate to other types of interaction available on LBSAs, we asked:

*RQ1. What do LBSA users communicate in their profiles? How do they believe this might affect receiving chat requests from others? How do they view profiles of others and decide with whom to chat?*

**Coordinating through mediated communication.** Once users have identified profiles of interest, there remains the challenge of starting a conversation and determining whether they would enjoy further interaction with the other user, online or FtF (Fiore et al., 2009; Zytka et al., 2014). The



details of how people make this determination have not been extensively explored, so we were interested in if and how system features support users' decision making.

Prior work on online dating profiles suggests that perceptions change as uncertainty about an individual is reduced. Toma and Hancock find that longer text descriptions mean less uncertainty and greater perceptions of trustworthiness (Toma and Hancock, 2012). Gibbs et al. investigated uncertainty reduction strategies, finding that online daters with greater concerns about personal security, misrepresentation, and recognition use more uncertainty reduction strategies when communicating with potential dates online (Gibbs et al., 2011).

In the context of LBSAs, with limited profile information available for information seeking, and limited time for asking questions, we wondered how this process unfolds and what user priorities are. We asked:

*RQ2. What do users chat about? What function does chat serve in their overall interaction?*

*When and how does chatting facilitate meeting FtF?*

**Meeting face-to-face.** While we may assume that chat features help reduce uncertainty and enable negotiation of potential FtF encounters, it would be naïve to assume that users do not update or adjust their expectations once they meet FtF. Through examining profile fields and chatting, users may confidently gauge whether or not they want to pursue further interaction, but until they meet in person they may not be sure of what exactly will happen. We ask:

*RQ3. How do the profiles and chats inform or predict what happens when users meet FtF? What causes impressions to change when meeting FtF? What happens if things change?*

## Methods

We conducted a qualitative interview study on Grindr user experience across different phases of interaction. We then performed iterative, open coding to identify emergent themes. From the themes, we

turned to theoretical literature to frame the findings, and offer insight to the discussion around the negotiations experienced by our participants.

## **Participants**

As we noted earlier, any user's experience of Grindr is highly dependent on when and where they use it. To maximize the range of experiences captured in our study, we recruited participants from across the United States. We used four approaches, from January to September, 2014. Following (Blackwell et al., 2014), we recruited using the app itself, setting a tablet's location to "drop in" on Grindr in seven places across the country. We also recruited through emails to LGBT mailing lists (eight different listservs) and ads posted to the Jobs and Volunteers sections of Craigslist (40 ads total in 20 locations). In total, with all recruiting methods, we reached 20 US states.

There were 22 participants from eight locations, including five cities or urban areas and three rural areas. Nine participants were from the Southeast, one from mid-Atlantic, six from the Midwest, two from the Northwest, two from the West, and two from the Southwest.

## **Procedure**

We used a semi-structured interview protocol with eight sets of questions that asked about topics including how participants constructed their profiles and the impression they wanted to give, what they chat with other users about and what they share about themselves, and positive and negative experiences meeting FtF with other users. Two members of the research team collected and analyzed the data, with regular discussion with the third team member about progress and direction. All interviews were conducted over the phone, save one via Skype chat. Interviews lasted 50 - 75 minutes, with an average of around an hour. Each interview was audio-recorded with participant consent and transcribed for analysis.

## **Data Analysis**

Two research team members (one male, one female) used qualitative coding methods consisting of regular comparison, identifying key concepts, and iterating through the transcripts (Miles and Huberman, 1994). This process began after ten interviews had been completed. One of us performed iterative open coding on these first transcripts in order to identify potential emergent themes and refine the interview protocol for later participants. To develop an initial codebook three transcripts were read several times and iteratively coded for key themes and ideas. This process led to a list of 45 initial codes. After discussing the emergent themes and codebook with another team member, we continued coding and conducting additional interviews. The interview protocol was also adjusted to emphasize questions around specific details of what happens during chats and FtF interactions.

The other team member first read through the initial codebook and coded the already-coded transcripts. Then, as a pair, each took two new, un-coded transcripts and coded them separately, afterwards comparing and discussing. From this discussion and more specific data from the revised protocol, the codebook was updated to include 65 codes. Each interviewer coded the remaining interviews separately; the coders met and discussed progress after every two or three transcripts were completed.

Central themes of tension and negotiation emerged around the interactions participants reported. These tensions and negotiations cut across all three phases and were experienced in three critical ways: around decisions in connecting with others, what information to share and when, and how spontaneous or predictable to be.

## **A Theoretical Interlude**

After our initial analyses, we felt we were still not able to fully explain the data. We ran a second analysis using Baxter's theory of dialectics (Baxter, 1990), as we expected its perspective would lead to

new insights . As we used this approach in interpreting our findings, but did not bring it to the work *a priori*, we pause here to situate the reader.

Relational dialectic theory encompasses both the information revelation processes and the dynamic negotiations between individuals in a relationship. Its perspective allows us to consider interactions on Grindr as dynamic, unfolding processes between two individuals that are susceptible to particular dialectics, or tensions, and derive deeper understanding of users' actions and interactions. This theory describes three central dialectics in relationships: the first-order dialectic of autonomy-connectedness, and the two second-order dialectics of novelty-predictability, and openness-closedness (Baxter, 1988; Baxter, 1990).

The first-order autonomy-connectedness dialectic refers to the surrender of autonomy that inevitably follows from connecting or interacting with others. Marriage and divorce are formal articulations of either side of this dialectic, but autonomy-connectedness underpins all stages of any given relationship. That is, people in relationships are constantly negotiating the tension between acting autonomously and in concert or connection with others.

The second-order openness-closedness dialectic is critical for relationships as it relates to intimacy and vulnerability. People in relationships want and need openness, being able to share and expect sharing, in order to become close to one another; too much sharing, however, and they may become vulnerable to losing a sense of self inside the relationship (Rawlins, 1983; Rosen et al., 2008). A common experience around this dialectic occurs when individuals talk about certain topics but not others. For example, in starting a new relationship someone may not share (i.e., be open) about past relationships, as it would seem too early to talk about. (Eventually, however, she may share about past relationships, once the new relationship is stable.) Alternatively, individuals may find divergent interests and engage in them outside the relationship (for example, one goes bowling and the other goes golfing).

Finally, relationships benefit from a mix of novelty and predictability, balancing the potential for staleness with the potential for instability (Altman et al., 1981). The role of novelty can be to perturb the current relationship state in ways that introduce excitement or joy (e.g., an unexpected bouquet of roses), though it could also present conflict (e.g., disclosing infidelity). Predictability, on the other hand, is useful in that it results in routines and expectations of consistency, though these can become boring or stale with time. A classic example of novelty would be the unexpected promotion to a job in a different city: this type of opportunity has potential to disturb a relationship, perhaps even leading to a break up.

## FINDINGS

Participants described experiences in the three phases of interaction, which included critical decisions about which profiles to view and what users shared in their own profiles (RQ1), with whom to chat and what to share in these chats (RQ2), and, at times, with whom to meet FtF and what to do when meeting (RQ3). Beyond these decisions, they experienced what we labeled as dialectic tensions and negotiations throughout all three phases. Participants' experiences demonstrate that negotiating tensions in earlier phases may affect interaction in later ones. These decisions, negotiations, and tensions are illuminated through dialectic theory. As dialectics are overlapping and crossing cutting, some of our examples may seem relevant to two or more. We report examples for the dialectic we believe to be most prominent, but acknowledge there may be some overlap.

### **How to Connect: Autonomy-Connectedness**

The autonomy-connectedness dialectic unfolds on Grindr at two levels, group and individual. At the group level, Grindr users give up some autonomy as individuals whenever they log on to the system, as they move from a comparatively disconnected to a more connected state relative to other Grindr users

who are also signed in and to whom they become visible. At the individual level, people can increase or decrease connection to any given individual on Grindr.

**Group autonomy and connectedness.** Most participants reported logging onto Grindr regularly throughout the day, including first thing in the morning and before going to sleep at night, presumably to connect with others. On further discussion, they noted that their motives for doing so often varied, ranging from merely wanting to kill time to logging on to check for new messages, see who is online or pursue new connections. What is interesting about Grindr's architecture here is that one is visible to others when signed in, even if just to check new messages (i.e., there is no 'invisible' option). Thus, there is a sense in which Grindr nudges people toward the "connected" end of this dialectic, even when they may not wish to be.

In discussing how they approached connection with others on Grindr, participants reported a range of attitudes and behaviors. For example, Dave (27, urban South) reports a "love-hate relationship" with the app itself, regularly deleting and then re-installing Grindr from his phone. In his words, "*I usually don't have it on my phone. [...] Then when I get drunk sometimes, I'll just [download it] for that night or whatever and then the next morning when I wake up, I [delete it again].*" Typically, he said he would re-install it on weekends to hook up with others while hanging out late at night. He would then uninstall the app at the end of the night, effectively disconnecting from others on Grindr until he installed it again.

In terms of the autonomy-connectedness dialectic, Dave effectively cycles from high connectedness over the weekends to relative autonomy during the week. His approach is unique to typical users in that by uninstalling Grindr, he removes the possibility for negotiating within the dialectic. While other participants reported consistent use throughout the day, confronting their dialectical position in anticipating new messages and connections, Dave situates himself on one side or the other at any given time.

**Individual autonomy and connectedness.** At the individual level, the autonomy-connectedness dialectic looks different as it involves negotiation of connectedness between two users. We find that the ways in which users negotiate this tension change across the phases of interactions with others. There is a sense in which in earlier phases it is harder to connect and easier to return to autonomy, with the opposite being true in later phases. This is especially salient when looking at the differences between the first two phases, which are mediated by Grindr, and the third phase (FtF), which is not. Our participants report reclaiming autonomy in all of these phases at times, but their strategies for doing so vary.

Randall (22, urban Midwest) reported chatting, meeting up with and then receiving a massage from another user that ended in mutual masturbation and oral sex. Randall shared that afterwards he was uninterested in having another encounter. As he put it, he could tell *“he [the other guy] was more interested in me than I was in him and I didn't want him to keep messaging me.”* Immediately after leaving the apartment, Randall launched Grindr and blocked the other guy, effectively terminating their connection through the app. From a dialectics standpoint, this would be considered a selection strategy, as Randall chose autonomy over connectedness.

Perhaps more important, however, Randall could make this decision on his own and the other user would only be made aware of it after Randall's profile and chats disappeared from the app on his phone. Whereas connectedness at the individual level requires mutual engagement to advance, this example shows that autonomy for both individuals can be enforced by just one. Grindr's block feature makes this easy, moreover, in that it can be achieved impersonally without any interaction with the other user. It also provides some ambiguity about why Randall is no longer visible, as he may simply have deleted his profile on the app.

While Randall reclaimed autonomy by using the block feature, other participants described times they ended things in person with others. For example, when a man Travis (33, urban South) invited over

showed up “*overweight and [...] not even looking like the picture*,” Travis said he stood in the doorway and asked him, “who are you?” When the man explained the pictures were old, Travis shut the door again, literally and metaphorically closing the door on their encounter. The man knocked, and stayed outside using Grindr chat to explain the situation more, elaborating that the photos were still of him, but he had gained 15 pounds.

In this instance, the man tried to renegotiate towards connection by knocking and messaging. Unsatisfied with the explanation, Travis told him to leave, despite the man making an argument about his investment in the meet-up, saying he “came all this way.” This usefully highlights the difference between Grindr’s “block” feature and the difficulty of a functionally similar action FtF, as well as the stakes involved in moving a relationship from one phase to the next. Travis, in expressing a desire for further connection, assumed the other man was being honest. When this turned out not to be true, Travis’s interest in connection changed quickly. By shutting the door in the man’s face, Travis violated norms for social interaction that the other man likely expected given their earlier conversation.

These examples show how participants faced with undesirable connections shift back toward autonomy. The differences between them are revealing in how they affect people involved. Travis, in shutting the door to his apartment, sent a clear message to the other man that they would not be hooking up. This left Travis frustrated and the man presumably feeling rejected. In Randall’s case, however, Randall reclaimed autonomy after the hookup and via the app. His attitude remained indifferent, and the guy he blocked may never know what happened. In this way, Grindr can support connection and autonomy, but only to a certain extent given the ambiguity enabled by the features.

### **What to Share and When: Openness-Closedness**

Openness-closedness is critical to examine across phases because of the change in the amount of information available in each phase. While profiles are one space in which users make decisions around how open or closed to be, profiles also are carefully constructed and mostly static; a viewer engages



with a profile by reading it and choosing whether or not to pursue it further. The chat phase is the first in which private, real-time interaction between users is possible, making openness-closedness more actively negotiated. Here we find the most dynamic examples of this dialectic, as disinhibition comes into play and users negotiate goals and coordinate FtF encounters. Finally, decisions around openness-closedness in the first two phases come to bear FtF, as people bare all, figuratively and/or literally, about how they want to connect.

Participants explained their chats on Grindr regularly start with a casual greeting, such as “hi” or “sup?” to which a typical response might be “nothing” or “just relaxing, what about you?”. Given the uncertainty of goals, a key objective in early phases of these conversations is to quickly determine if they wish to engage further with a particular user. As the chat goes back and forth between the two users, one person must ultimately make a shift, subtle or direct, towards more openness around goals. This shift usually comes after users have been chatting long enough to signify interest in determining what a given user is currently looking for.

Our participants shared how the chat feature enables as well as complicates this interaction. For example, mediated communication is often characterized by disinhibition in discussing potentially uncomfortable topics (e.g., sex). This can rapidly lead to openness about sexual desires or other practices in the chat. Adam (25, rural South) for example, explains, *“I’ll [suggest sex acts] through the application. Like, ‘Hey, well if you ever want head or something, you should hit me up.’ But in person, I really won’t be that daring or crass.”* Adam describes himself as shy and it shows in the way he hedges his communication in a casual, almost indifferent tone (“hey”, “well if you ever”, “or something”, “hit me up”). He still is able, however shyly, to communicate his desires through Grindr.

Participants did not always welcome openness around goals, particularly when the goals are sexual and/or articulated abruptly. As Phil (22, urban Midwest) puts it, *“like 75 percent of the time I’m just looking [to] make new friends. When I talk to someone and I ask what they’re looking for—which is a*

*typical, generic question that everyone always asks but I always do-and they just say, 'I'm looking for sex,' if someone that I'm about to talk to is only looking for sex, then I'm not really interested in furthering communication with them. Unless it's that 25 or less percent chance that I'm just horny."*

Here Phil points to his goals changing over time and the effect of these changes on his responses towards other users' openness around sex. Phil captures here the contextual (looking for sex or not) and dialectical (openness around goals) negotiation that commonly occurs between users. This boils down to sharing the right information with the right person at the right time.

On the opposite end of this dialectic, users might still strategically withhold certain information. An extreme example of this comes from Travis (33, urban South), who shared an instance of being interrupted. As he puts it, *"the guy was sucking my dick and [his boyfriend] walked in and caught it. I'm trying to pull my pants up. [...] It was just uncomfortable. [Now I host because other guys] can have roommates, boyfriends..."* In that case, Travis left as soon as possible, telling the couple that they needed to talk about this without him. Here, Travis is confronted face-to-face with the product of these tensions. The guy's choice to withhold information about his relationship status had significant consequences for Travis. Recognizing that others may not be open about key details, Travis tries now to minimize this uncertainty by hosting at his place.

Our participants' reflections on their experiences suggest that they are conscious of many decisions they make about how open or closed (or ambiguous) they are with others in any given Grindr interaction, and that they consider the implications of these decisions for connecting with others. This can be tricky in that the chat environment may foster disinhibition and sharing, but there is a very real risk of sharing too much. Grindr at once creates a space where openness is required, given the ambiguity of goals, and supported; but some withholding is useful to preserve ambiguity and options. Openness may reveal goal misalignment, but closedness (or openness with the wrong person) may have costs in later interaction phases.

**No Surprises: Predictability-Novelty**

On Grindr, as we have mentioned, users can move quickly from viewing profiles to chatting to meeting FtF. Participants describe little in the way of shared expectations of the nascent relationship, but they do express some shared understanding or expectation of what is to occur next. From theory, we know people use previous experience in predicting current interactions and in the absence of shared experiences with another individual, someone may draw from past experiences with others (Baxter, 1988). The pace of interaction unfolding on Grindr, however, is relatively accelerated. Grindr users have little time and information to make assumptions about others, being able to draw only from experiences with other users (who may have changing goals), or the carefully constructed profile of a current chat partner (whose current goal might not match his profile).

The result is that behaving in unexpected ways can have unpredictable results, often including a decisive move toward autonomy by the other party (i.e., terminating the relationship). At the same time, though, we also saw evidence of people clearly shifting in their levels of openness or trying to shift interactions toward more sexual outcomes. What seemed to work for participants trying to negotiate this dialectic was a sort of “incremental novelty.” The idea here is that by introducing novelty into a relationship incrementally – in barely or just perceptible ways – people could make subtle shifts without violating expectations so much that the relationship ends.

Richard (19, urban Midwest) relates one experience that demonstrates incremental novelty well. As he tells it, he started chatting with another guy because “*instead of asking me if I was looking, or if I was looking to meet up or to hook up, [he] asked me about what I was doing at school. What I was passionate about.*” After chatting on and off for a few days, they met in person at the mall. The other guy brought a friend with him though, which confused and frustrated Richard, who was hoping for a date. Still, Richard “*wanted to see where it would go*” so they met again, this time on Richard’s terms with his friends at his school (Richard explained he wanted to even out the friend-meeting). By the third

time they met, again at the mall and with the other guy's friends, Richard shared that he "*was pretty comfortable with [him]*." As the mall closed, Richard proposed going back to his place to watch some Netflix, and the movie watching turned into a hookup session.

Several shifts occur through these interactions, involving people, places, and behaviors. What started off as platonic friendship-like behavior in public settings as part of a group incrementally shifted towards one-on-one sex in a private place. While this trajectory is not novel for social, sexual beings, what is different here is the role of Grindr. What Grindr is designed to make clear, and effectively unsurprising, are the goals of any given individual user. What happened here, however, is that goals were negotiated over time through interaction. Richard had to recalibrate his engagement with the other guy upon first meeting him at the mall when the guy had friends along. What Grindr succeeds in here is not making things clear, but rather in making things ambiguous but also providing opportunity and possibility for negotiation of what actually occurs.

On the flip side, novelty can also come as too much of a surprise and lead to failure. Commonly this played out as people tried to move a conversation from friendly chatter to more sexually charged topics. Jerry (27, rural south) offers a typical example: "*Well, there have been a few different guys that I've talked to, one specifically who sexually would never be my type but he said he just wanted to talk, chat, or whatever. And so we chatted back and forth, and then eventually, a picture of his genitals popped up on my screen, and that was -- after I explained to him again that I'm not interested in hooking up whatsoever, that's when the conversation ended.*" It appears that this shift, with little experience interacting with each other, was not well received. While there is risk that a semi-nude photo will offend a chat partner, our participants' experiences suggest that sending these photos is not uncommon.

Similar attempts to introduce incremental novelty occurred in FtF meetings. Alan (37, rural Midwest) reported having chatted with Tom, who lived around the corner from a bar. Tom asked Alan to stop by and suggested they then might step out for a drink. When Alan showed up at the Tom's

apartment, however, Tom not only looked different than his photos but also suggested that, instead of the drink, he and Alan watch porn together. Alan explained he is not interested in porn and after a socially awkward 20 minutes of conversation, ended up taking a phone call and using it as an excuse to leave. The lesson here is that the shift from beer to porn was incremental in that Tom turned their FtF encounter into a two-step injection of novelty. First he suggested that he and Alan meet for a drink. Once Alan was out of the house, he introduced additional novelty by suggesting a joint viewing of pornography.

We find that, at a broad level, the ambiguities and sensitivities of Grindr creates space for potential incremental novelty as users clarify or negotiate their interactions with others across phases. What seems crucial on Grindr is the fast pace at which people move through relational phases and therefore negotiate these tensions. Interactions on Grindr can be different from other relationship settings in that where other relationships may require shifts in novelty-predictably to prevent staleness, we find that shifts in novelty-predictability can actually threaten nascent relationships of Grindr.

## DISCUSSION

We began with the assertion that the architecture of location-based social apps, in their focus on near-future interaction with those who are physically proximate, makes them particularly sensitive and responsive to changes in user context and goals. Our results have implications for both research and practice in the area of LBSAs.

### Research Implications

One top-level implication for further research in this area is that people use these apps to connect and engage with others, but prior work has largely focused on individual users' self-presentation goals (Blackwell et al., 2014), profile construction strategies (Birnholtz et al., 2014), and disclosure practices on profiles (Fitzpatrick et al., 2015). Our results highlight the importance of studying interactions on

these systems from a relational perspective. By focusing on the dialectic tensions common to relationships (Altman et al., 1981; Baxter, 1988; Baxter, 1990; Rawlins, 1983), we have shown how interactions around Grindr, across all of the phases identified by Brown et al. can be usefully considered in a relational context (Brown et al., 2005). There are several specific aspects of this that we wish to highlight.

**Profile as initial negotiation.** Our first contribution is that, where prior work has focused on the profile as a primary vehicle for self-presentation that serves as a “promise” for future interactions (Ellison et al., 2012; Gibbs et al., 2011; Toma and Hancock, 2012), we found that the profile is just one of several tools at people’s disposal for strategically revealing information to others. Merely having a profile, and a presence, on Grindr means surrendering some autonomy (Blackwell et al., 2014) and provides opportunity for connection, as our participants (especially the one who deleted his account regularly) told us.

Our participants were conscious of the information that they and others shared in profiles. In contrast to prior work on deception and self-presentation in profiles (Ellison et al., 2006; Gibbs et al., 2011; Toma and Hancock, 2012; Toma et al., 2008), however, we saw people thinking less about lying or being lied to, and more about how much to reveal about their goals and when in the process to reveal this information. As we have shown, it can be easy to mask one’s goals, or take a neutral stance on the openness-closedness dialectic, when composing one’s profile. This ambiguity is clarified through chats and interactions. The reverse is not true, however. That is, revealing a specific goal (e.g., the desire to hook up) in one’s profile can make it difficult to rescind this information in later interaction stages. Given that goals vary with time and that attraction varies by individual, this can significantly complicate chat and face-to-face meetups.

In this way, the profile is not just a way to present oneself in a positive light, but also a way to leave flexibility for future changes. That is, people are not just trying to make themselves look good to

others through their profiles; by preserving some ambiguity they are also leaving themselves room to maneuver when others do not look good.

**Chat as strategic, interactive self-presentation.** Our second contribution is that chat in an application like Grindr is more than just a way to build connections and coordinate face-to-face encounters. On its face, Grindr would appear to be a space for people to clearly articulate what they want and pursue it. In practice we find it not to be that simple. Through dialectics, we come to understand it as forum for strategically (and often incrementally) introducing novelty and openness into nascent relationships in ways that reveal one's goals and interests. Moreover, it is a forum for doing so dynamically and adaptively. Rather than listing something in one's profile for everybody to see, for example, one can see how others respond to incremental bits of information and adapt accordingly. These strategies can also backfire, however, as our participants described.

The dynamics of these conversations blend some attributes of both online and FtF interaction. People described attributes of their interactions that reflected literature on computer-mediated communication in that it was disinhibited (i.e., they explicitly discussed sex in a way they might not otherwise) and had limited cues (i.e., one could not easily see others' responses and it was unclear how somebody would respond). At the same time, these interactions also had real relational consequences in an already-uncertain context. People had to be careful. Being too open or overtly sexual, for example, could mean that the other person may not want to meet up if they are not looking for an immediate hookup. Not being clear enough, however could mean the other person may not realize what one wants and lead to disappointment or confusion.

The stakes of these interactions are further complicated by the contextual and changing goals of Grindr users. This fluctuation leads to ambiguities and disappointments in interactions. Goals might change, for example, as in the case where a message sent late at night when desiring an immediate hookup receives a response the next morning. It is also possible one's interaction partner may not be

open or truthful, as with the participant who was explicit about his interest in hooking up with a 15-pounds-lighter version of the man who showed up at his house.

In these ways, Grindr highlights a tension in LBSAs between the ability to share information and interact immediately with nearby others, and the reality that cues about those others are limited and responses may not be immediate. This mix is unique in these apps and is at the root of our contribution. On Grindr in particular, while the app “solves” the dilemma of being able to find MSM, our participants’ experiences suggest that it does little else for them regarding the work of figuring out what to do next.

**Face-to-Face as re-negotiation.** Our third contribution is that, while most work on dating sites and apps considers FtF meetups to be a goal in and of themselves, our work suggests that negotiating relational dialectics continues after people have decided to meet (Randall, for example) and during that meeting as well. What is interesting, however, is not that these dialectics are negotiated, which is expected, but rather the way in which negotiation foregrounds how neutrality within a dialectic becomes more difficult as relationships progress.

It is easy to obfuscate or appear neutral in one’s profile and even in chat. This is much harder when deciding whether or not one is on a “date”, whether or not to let somebody into one’s home, and whether or not to engage in sexual relations. We suggest that meeting face-to-face, rather than being an end goal, is actually just another stage on which the same relational negotiations play out, but in ways that are more difficult and have greater social consequences.

## **Design Implications**

We believe that our results offer several contributions for designers of location-based social apps, both for dating/hookups and more broadly. One key lesson is that users’ goals and motivations for using an app like Grindr can be various and dynamic. Allowing them to specify this information in profiles (e.g., the “looking for” field on Grindr) can seem like a useful design feature. In practice,



however, this often failed because many users did not wish to say they were looking explicitly for sex, to avoid social stigma, or were only looking for a specific goal some of the time, but did not update their profiles accordingly. Each of these situations merits separate design consideration.

For the first point, we urge designers to consider mechanisms for matching users with similar goals, without necessarily revealing those goals to all other users. That is, one could reveal goals only to the system, and it could then match them with users who have similar goals. Another possibility would be to specify goals on a per-user basis. That is as users view profiles or interact with others, they could submit goals for individual people. If people match individually on the same goal, the system may inform each of the users and they can interact from there.

For the second point, we urge designers to consider the pace at which information in profile fields is likely to change, and consider different mechanisms for automating or updating information that changes often. We have noted that Grindr is sensitive primarily to shifts in location (because this is tracked and central to visibility on the app) and goals (because people use the app to satisfy in-the-moment urges). Location is automatically updated by the app. Goals seem rarely to be updated for users, however. Specifying goals at each login or on a per-other-user basis, as we suggest above, could help with this.

But, as features are introduced that make goals more explicit or require more steps to engage in interaction, possibilities for spontaneity may be constrained. As we learned from our participants, sometimes the shifts in goals of users are a result from human persuasion and interaction. Leaving room for spontaneity and ambiguity can play an important role in allowing experiences and relationships to unfold through negotiation, rather than simply trying to match on goals and preferences expressed at a particular point in time (Aoki and Woodruff, 2005).

Another way to address shifts in goals that would not require users to dynamically update an explicit goal field would be to allow for ephemerality of certain messages that are associated with an in-

the-moment goal or interest (such as a hookup). This removes the problem of what we might consider the residue of prior goals. In Phil's case, for example, he notes that most of the time he uses Grindr to meet guys and chat, but sometimes he is seeking an immediate hookup. Crossing between those objectives could be awkward, particularly after going to sleep after seeking a hookup. With time-expiration as an option, a user wanting to hook up before bed one night could send a time-expiring chat to another that would disappear if he does not receive it by a particular time. This would help reduce friction in goal shifts caused by "residue" from prior interactions. This idea is not without complication, of course, but a mix of ephemeral and persistent messaging would be novel and worthy of exploration (perhaps especially if paired with goal declaration at session login).

### **Limitations**

As with any study, ours has limitations that urge caution in interpreting our results. First, we report on interviews with a limited sample of Grindr users. While they were recruited nationally and described a wide range of experiences, it is not possible to generalize from this sample. At the same time, however, by the end of our interviewing process there were clearly repeating themes suggesting that we had reached or neared theoretical saturation.

Second, our data also comes from participants who use Grindr, just one of several location-based social apps for MSM. Though our interviews asked specifically about interactions on Grindr, we also asked if participants used any similar apps for similar purposes. While some participants reported using other apps, they reported them to be very similar in the types of experiences they had.

Third, a common limitation of studies like this is that we only have our participants' side of their stories. Moving forward, pursuing lines of inquiry on dyads in these spaces will be productive, though admittedly recruiting would be tricky given the types and dynamics of interactions on Grindr that we have described.

Finally, we looked at an app for MSM. While some aspects of interaction are perhaps specific to MSM populations, such as sexual roles, we believe that the overarching issues around when and how nearby strangers connect can be applied more broadly to other location-based technologies. This is a specific case of a population with specialized needs, but as Newell argues, edge cases highlight salient issues for design more broadly and may be used to help inform design for larger populations (Newell and Gregor, 1997). As designers, we tend to focus on supporting possibilities for connection but do not always examine the interactions that happen after. On Grindr and other LBSAs, however, the in-app connection is just the beginning of a user's experience.

### **Conclusion**

We have presented a qualitative study of how people make social connections on Grindr. Grindr is a particularly interesting context for studying interaction processes because its architecture makes user experience highly sensitive to shifts in user context and in-the-moment goals, in contrast to other social apps or sites that provide a more stable set of visible profiles or are more focused on shared objectives. While much research on online dating and mobile social apps has focused on profiles and self-presentation, we focused on how users assess others' profiles and goals, how they decide when and with whom to interact, and how they make decisions about meeting face-to-face. We argued that Grindr's architecture affects users' experience as it supports ambiguities in goals and negotiations in tensions that are subject to the app's sensitivity to time and place. We found that, despite its simple architecture and goals, Grindr supports users engaged in complex relational work, which is met with both failures and successes.

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