

Rethinking Dating Apps as Sexual Consent Apps: A New Use Case for AI-Mediated Communication

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This paper reports a participatory design study about how dating apps could be designed to mediate sexual consent exchange and ultimately serve as scalable sexual violence prevention solutions. Participants (n=17) were dating app users identifying as LGBTQIA+ or women (demographics at disproportionate risk of sexual violence). Participants envisioned dating apps encouraging safer consent exchange practices by normalizing discussions around consent and sexual boundaries online, before meeting face-to-face with potential sex partners. Designs to implement this vision were collectively dubbed consent communication progression and involved the dating app messaging interface using AI-driven conversation prompts. Such prompts would gradually progress messaging conversations towards topics of consent and sexual boundaries with an algorithm that tailors the prompts to specific users. Participants applied a consent lens to human-AI collaboration, in which conversation prompts would only be posted in the interface if the user first consented to the particular conversation occurring. Implications for future work are discussed.

1 INTRODUCTION

HCI Research has exhibited growing interest in the concept of consent to sex (how people convey agreement to a sexual experience), particularly how sexual consent practices are—and could be—mediated by computers. Computer-mediated consent is worthy of further study because it is potential scalable solution to sexual violence, or sexual activity without consent. Sexual violence is a significant public health issue, occurring both online (e.g., sexual harassment, unsolicited nude photos, revenge porn) [5,14] and offline (e.g., rape, groping) [2,4,15,19]. Victims are predominantly marginalized identities, meaning women[13] and the LGBTQIA+ community [1].

The literature has focused on three dimensions of computer-mediated consent to sex: 1) games that can teach or inform consent practices, 2) “consent apps” deliberately designed to mediate consent exchange, and 3) the (unintentional) mediation of consent practices through dating app-use. Regarding games, research has looked at how games currently demonstrate consent to players [12] and how they could be designed as tools to teach safer consent practices [20,21].

Consent apps are mobile apps designed to explicitly mediate consent to sex. Current examples like *LegalFling*, *We-Consent*, and *Good2Go* follow a common design pattern in which users open the app immediately before sex to record their consent to a sexual encounter. While this design pattern makes strides towards more overt consent exchange—thus reducing the chances of misinterpreted willingness to have sex—it has also been critiqued in the literature. As described in [12], this design pattern does not enable users to change their mind and revoke consent during a sexual activity, and so it ultimately reduces sexual agency. Popular press has similarly critiqued consent apps, as currently designed, as being more preventative against *accusations* of sexual violence than nonconsensual sex itself [11,18].

Dating apps (e.g., Tinder, Bumble, Grindr) are designed to facilitate the discovery of potential sexual partners, rather than consent to sex with those partners. Nonetheless, recent research has shown that dating apps inform the ways that users attempt to give and perceive receiving consent. Zytka and colleagues found that some users interpret consent both by being on the app, and from various content within dating apps, such as profile “likes” and particular types of message responses [23]. Some users in the study thought such signals alleviate the need to explicitly receive consent for sex. On a more positive note, other users—specifically from the LGBTQIA+ community—reported consensual sexual experiences through dating apps by, amongst other strategies, populating their profile with consent practice information [23].

Despite the inconsistency in how dating apps currently mediate sexual consent exchange, they show tremendous promise as scalable sexual violence prevention tools—if deliberately designed to mediate consent practices that minimize chances of misinterpretation and maximize user agency. Because dating apps are already widely used, and mediate a broad process including discovery of sexual partners, online interaction with said partners, and arranging of face-to-face meetings, there are ample opportunities through dating app-use to intentionally mediate consent exchange.

Our research is motivated by the question: what if dating apps were intentionally designed as consent apps? We envision a future in which users are driven to use dating apps not just for the benefits of sexual partner discovery, but for the safe consent exchange processes that they facilitate and encourage through design. In pursuit of this vision, this paper presents findings from an in-progress participatory design study with women and LGBTQIA+ dating app users. Our research questions for the study are:

RQ1. What consent practices should dating apps attempt to facilitate or encourage between users?

RQ2. Besides facilitating discovery of sexual partners, what conceptual roles should dating apps perform pursuant to consent mediation?

RQ3. How could dating apps be designed to operationalize those consent mediation roles?

2 METHOD

We conducted a participatory design study with 17 dating app users who identified as women and/or LGBTQIA+ to generate design ideas for how dating apps could deliberately mediate sexual consent practices. We recruited dating app users identifying as LGBTQIA+ or women, and who were within the ages of 18-29, because of disproportionate rates of sexual violence against these demographics through dating app-use and broader statistics [1,13].

We used several recruitment methods: messages posted to Discord servers related to the LGBTQIA+ community, emails to university clubs for women (e.g., intramural sports clubs, Women in Computing, business clubs), the research team’s personal social networks, snowball sampling, and paid Facebook ads. In all recruitment materials the goal of the study was stated as generating ideas for how dating apps could assist users in mediating sexual consent exchange. There were 17 individuals who participated across five participatory design sessions (two to five participants per session). Sessions were all approximately two hours in duration. Participants identified as Caucasian (14), Vietnamese American (1), Asian (1), and African American (1). They identified their genders as: 13 cisgender female, 2 non-binary, 1

genderqueer, and 1 gender non-conforming. They identified their sexualities as: 8 bisexual/pansexual, 2 lesbian, 7 straight, and 1 demisexual/asexual. Ages ranged from 19 to 25. Participants were compensated with a \$20 gift card.

Participatory design sessions were conducted online in private discord servers due to COVID-19 precautions. We started each session by asking participants to verbally discuss their preferred practices of exchanging consent to sex in order to explicate the particular consent practices that they would want dating apps to augment. To scaffold our first design exercise, we then showed participants a timeline of a persona using a dating app to progress to a sexual encounter, divided into three stages: discovering/assessing user profiles, text-based messaging on the dating app, and meeting a potential sexual partner face-to-face. Participants were split into pairs and assigned to a particular stage of the timeline. They were prompted to (re-)design a way that dating apps would mediate or support their preferred sexual consent practices in the assigned stage. Participants were given 10 minutes to produce these designs in the form of written or verbal ideas, which was followed by a 30-45-minute discussion amongst the whole group to reflect and iterate on the ideas. For the second design exercise participants were asked to generate a design for a dating app-turned-consent app that could exist 10 years in the future. The prompt was intended to encourage co-designers to think beyond the traditional features of today's dating apps and envision new roles that dating apps could play pursuant of consent mediation. Participants reconvened in pairs to sketch ideas using pen and paper or computer drawing programs. All Discord sessions were audio recorded, transcribed, and subjected to an open coding process [3].

3 WHAT CONSENT PRACTICES SHOULD BE COMPUTER-MEDIATED?

Before presenting our main findings, we must identify the consent practices our co-designers personally adopted and envisioned being mediated by dating apps. We identified three common qualities of participants' consent practices: 1) all sexual partners must "*explicitly express*" consent to sex, 2) consent must be given for "*specific*" sexual acts, and 3) sexual preferences, boundaries, and consent practices themselves must be discussed before a sexual act can occur. We will refer to these collective practices as affirmative consent for the duration of the findings because the practices closely resemble how the term is used in prior literature [9,16,23].

4 FINDINGS

When envisioning the roles that dating apps could play in mediating consent, a recurrent theme involved facilitation of overt conversations about sex, boundaries, and consent before meeting face-to-face. The app would facilitate and work to normalize candid conversations around sexual preferences and boundaries online, which could make it easier for users to maintain such discussions face-to-face.

Our participants advocated for the normalization of such conversations because of perceived social taboos around discussing sex and consent in dating apps. As Sarah explained: "*No one ever really talks about consent or talks about boundaries [in the dating app] before they meet up.*" This makes it difficult for users to assess, before meeting, if a potential partner will respect their sexual boundaries and adhere to their affirmative consent practices. Given the rarity of candid conversations around sex in dating apps, some participants described occasions when their attempts to have these conversations were misunderstood as sexual advances, especially by cisgender men. Sabrina indicated that she hesitates to attempt conversations around sex on dating apps anymore because "*guys can be so pushy*" when they interpret a sex or consent discussion topic as sexual flirtation. Multiple times she experienced "*a guy forcing [sexual advances] on me*" during messaging. Normalizing discussions of sex by design was envisioned as a way to demarcate sexual advances from discussions of sexual boundaries and consent.

4.1 Designing Dating Apps to Facilitate Online Discussions of Consent

Our participants presented various ways that dating apps could be designed to normalize discussions of consent practices and sexual boundaries. Most of these designs centered on the messaging interface and envisioned the dating app broaching discussion topics to users that would gradually progress the conversation towards topics of sexual boundaries and consent practices. We collectively coded such design ideas as Consent Communication Progression (CCP).

The motivation behind CCP was to redirect the social pressures or awkwardness of bringing up sex away from the individual user and onto the app. Participants expressed that they would feel more comfortable talking about their sexual preferences and consent with other users on the app if there was a seemingly neutral third party bringing up those topics on their behalf. Sabrina explained how app-broached conversation topics around sex would also help mitigate misinterpretation of such topics as sexual advances. In her words it *“throws the ball in the girl’s court”* (it enables them to select the app-suggested conversation topic) *“without making her look like she’s easy”* (*“easy”* is slang for extreme willingness to engage in a sex).

4.1.1 AI-Informed Conversation Progression Towards Consent Topics

When discussing how a dating app could generate conversation prompts that gradually progress a messaging conversation towards topics of consent and sexual boundaries, several participants reflected on the types of data available about users that the system could use to tailor such prompts. Instead of a user recommendation algorithm, participants envisioned a messaging prompt recommendation algorithm.

Early ideas for this algorithm involved users’ interests and likes, as mined from their profiles. Further ideas considered additional data that the app could generate with users specifically to improve messaging prompt recommendations. One of these ideas was an integrated *“Want Will Won’t list”*. A Want Will Won’t list has been popularized in LGBTQIA+ culture as a way for individuals to explicitly indicate to sexual partners what they want to do, will do, and will not do while having sex [17]. While this is traditionally done in-person with pen and paper, our co-designers suggested it could be incorporated into dating app design during user profile creation. Messaging prompt recommendation algorithms could cross-reference users’ Want Will Won’t lists to identify (in)compatibilities in sexual preferences and incorporate those into prompts as users progress through messaging conversation. Pablo explained *“A Want Will Won’t list is good for consent”* because it allows people to show not only what they do and don’t want to do, but also things they may be *“on the fence”* about.

4.1.2 AI-Human Collaboration for Conversation Topic Decisions

Key to CCP is that app-generated messaging prompts would gradually escalate towards consent and sexual boundaries, rather than immediately broach these relatively sensitive topics. Some co-designers imagined an abstract *“natural progression”* in conversation towards these topics that would be comfortable and appropriately paced for both messaging partners. As Sarah described: *“I feel like it should be like, you have like, introductory questions. And then as you guys are further along in the [conversation], then it can get more inclusive. And then like if you want to skip ... you can always skip those, and then come back to them later, if you feel more comfortable later.”*

As co-designers probed more deeply into exactly *how* a CCPS would facilitate such a natural progression, ideas around AI-human collaboration emerged. Specifically, co-designers preferred a veto system in which users would individually see prompts that the algorithm is preparing to insert into conversation, therefore giving users the option to privately skip a conversation topic they are not (yet) comfortable discussing. One participant, Sophia, likened this to

consent exchange between the user and algorithm, with the user needing to “give consent” to a conversation topic before it is officially prompted.

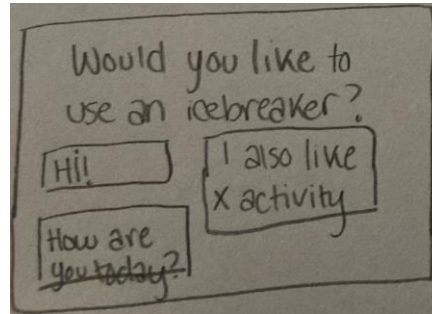


Figure 1: Alec and Jo illustrated how a messaging prompt recommendation algorithm would begin with casual, non-sex related prompts. The illustration also depicts the user’s ability to “consent” to different algorithm-generated topics.

Sophia believed this step of giving consent to the algorithm would be useful for times when “you’re having a bad experience and don’t really want to talk about explicit stuff”. This would allow users to have more control over the conversation depending on their feelings for a particular messaging partner. Sophia continued to explain that there exist “different levels of intimacy” in that some users are looking for a “sexual relationship” while others “want something that’s just flirtatious and fun”. In recognition of varying desires for sex, and the possibility that two users are messaging for an entirely non-sexual motivation, the algorithm consent stage would maintain user agency over which conversations progress towards sex-related topics.

5 DISCUSSION

We are conducting participatory design with dating apps users identifying as LGBTQIA+ and women to envision how dating apps could be designed to mediate sexual consent exchange and, ultimately, serve as scalable sexual violence prevention solutions. We report an emerging theme in which dating apps could normalize overt discussion of consent practices and sexual boundaries online; before users meet face-to-face. This was imagined primarily through AI-driven conversation prompts that would progress messaging discussions gradually towards consent, sexual preferences, and boundaries. We call this idea Consent Communication Progression (CCP). The notion of CCP represents a new potential use for AI-mediated communication (AI-MC), which is defined as “*interpersonal communication that is not simply transmitted by technology, but modified, augmented, or even generated by a computational agent to achieve communication goals*” [6]. Applications for AI-MC are ever-expanding such as assisting with e-mail replies, house rental profiles, and spellcheck [6,7,8,10,22]; the context of sexual consent mediation further expands on these application areas and warrants future work given its potential to impact sexual violence prevalence and users’ health.

Notably, our findings elucidate a tension between user agency and AI-driven messaging prompts intended to normalize consent discussion prior to meeting face-to-face. Our co-designers encouraged a “consent” process between the user and the AI that would enable users to block or skip particular conversation prompts that they were uncomfortable with. While the reasons offered for this veto power are valid from the perspective of our co-designers, it also enables users who may be less inclined to practice affirmative consent to entirely bypass prompts to discuss sex and, with it, any hopes of consent discussions becoming normalized on dating apps. In our ongoing research we are exploring user control of AI-driven progression towards consent-oriented messaging discussion to identify how user agency can be maintained without subverting the underlying user-driven goal of normalizing consent discussion online.

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