"Like, Are You Okay With Being Recorded?": Understanding and Designing for Consent to Recording and Livestreaming

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Abstract

Unwanted streaming and recording have been extensively examined in HCI and privacy research, raising persistent concerns about surveillance and privacy. While numerous interventions have been proposed to mitigate these harms, few center consent as the primary framework for understanding and addressing them. This paper presents a speculative design study of VR dating with 16 stakeholders identifying as women and/or LGBTQIA+ (demographics at elevated risk of nonconsensual acts) to elucidate approaches to designing consent mechanics for video recording, which we define as technologies for giving, receiving, and denying permission to being captured on a live video stream or recording. Findings surfaced three core design goals: Visual interruptions to initiate explicit consent exchange, consent exchange to define private versus public social contexts, and platform-level defaults and user-controlled blocking tools to withhold and revoke consent.

CCS Concepts

• **Human-centered computing** → **Empirical studies in collaborative and social computing**.

Keywords

Consent; Livestreaming; Unwanted Recording; VR Dating; Social VR

1 Introduction

Prior HCI work has studied consent (i.e., voluntary agreement) as a contemporary lens for understanding and mitigating harm in computer-mediated communication [18]. Under a consent lens, the notion of objectively harmful behavior is rejected, with harm instead being subjectively defined on a person-by-person basis as unwanted behavior. A consent lens enables preventative—rather than reactive—solutions to harm through the scaffolding of consent exchange—how people give, receive, and deny agreement to a given behavior. The lens of consent has been applied across various HCI contexts where harmful and unwanted interactions may occur, including intimate sexual activity [5], mobile social media apps [18], social VR [25], and human-robot interactions [27].

Another context that could benefit from a consent lens is live-streaming and recording, given the prevalence of streaming platforms like Twitch and Youtube, and well-documented harms [6, 10, 19, 22, 32, 33] such as unwanted disclosure of personal information and distribution of nonconsensual recordings (e.g., revenge porn). Participants in prior research on livestreaming have even directly requested "stronger notifications of nearby live streaming and the ability to consent to, and/or to opt out of, taking part in the broadcast" [14].

While HCI literature has addressed consent to recording [19, 32, 33] and associated privacy concerns [14, 19, 32, 33], consent *mechanics* for live-streaming have yet to be developed. In this paper, we present a speculative design study of VR dating to elucidate approaches to designing consent mechanics for video recording, which we define as technologies for giving, receiving, and denying permission to being captured on a live video stream or recording.

We use VR dating as a speculative context because it brings together many known sites of problematic streaming and recording, including social VR platforms [17, 22], AR glasses in physical-world environments [1, 12], and intimate sexual interactions, both in VR and in the physical world, that could lead to revenge porn distribution [2, 6]. Our research question is: How can AR/VR platforms design for consent to recording and live-streaming?

Through group-based design workshops with 16 women and LGBTQIA+ stakeholders, we leveraged their prior experience with mobile dating apps and social VR to elucidate three design approaches for consent to recording: visual interruptions to initiate

explicit consent exchange, consent exchange to define private versus public social contexts, and platform-level defaults and user-controlled blocking tools to withhold and revoke consent.

2 Related Work

2.1 Proliferation of Livestreaming and Recording and Problematic Practices

Live-streaming and digital recording technologies have rapidly evolved from niche tools to mainstream features embedded in daily life. Today, people use platforms such as Twitch, TikTok Live, and YouTube Live to broadcast themselves in real time, often from smartphones [3]. These platforms serve diverse purposes—from entertainment to education [28, 31]. At the same time, recording tools are increasingly integrated into digital platforms and devices, enabling users to capture audio and video across various contexts—including through built-in screen recording features that can be activated without in-app notification [9, 21, 30]. Looking ahead, speculative and emerging technologies suggest even broader proliferation of live-streaming and recording. Augmented Reality (AR) glasses will expand access to hands-free video capture and enable users to overlay virtual objects in their physical environment. Similarly, Virtual Reality (VR) environments are becoming spaces for live streaming to outside audiences [17].

Privacy Concerns: Recording in live streams poses a multitude of concerns, particularly for the livestreamers' privacy and for the people around them. One key issue is the livestreamers' experience. Many express concerns about the real-time, unintended public exposure of personal information [19, 33]. More research raises an important concern about the safety and trust of VR users when immersed in their VR experience, such as unwanted touch or covert unwanted recording of VR users [10, 22]. Beyond VR, a recent study with AR glasses found that participants expressed deep concerns about being recorded without consent [1]. Beyond themselves, many streamers are also concerned about bystanders' privacy, particularly roommates and family members who may appear in the stream without consent [32]. Accidental broadcasting of background audio is also an immense concern, especially when the audio has discussion of private personal issues [32]. From the bystanders' perspective, being recorded or live-streamed without consent raises additional concerns around awareness, agency, and contextual appropriateness as a study found that many bystanders could not reliably tell when they were being streamed [14]. Additionally, recent work shows that bystanders often feel uneasy around AR wearables due to their subtle, always-on nature [12, 16].

Revenge Porn: HCI research has begun addressing revenge porn as a form of technology-facilitated sexual violence with severe mental health impacts, such as PTSD and depression [6]. Studies highlight barriers to help-seeking like stigma and shame, emphasizing the need for inclusive, victim-centered support systems [20]. Researchers also critique dominant narratives that blame victims, advocating for consent-aware and socially informed digital design [2, 4].

2.2 Strategies and Solutions to These Issues

To manage privacy concerns, streamers often use technical and behavioral strategies—like overlays to hide parts of the screen, and muting or delaying streams. Some also try to interpret nonverbal cues (e.g., someone avoiding the camera) or take proactive steps like asking for pre-approval, but these efforts are inconsistent and easily misinterpreted [19, 32, 33]. Beyond user strategies, one promising approach to improving situational awareness in immersive environments is "Vice VRsa", a prototype system developed by Do et al. [13]. It explores a set of real-time awareness mechanisms meant for both users and bystanders—such as visual indicators inside the VR headset to alert users of nearby bystanders, and external cues (like LED signals) to inform bystanders whether recording or passthrough is active. These bidirectional signals aim to scaffold mutual awareness and support situational negotiation of privacy boundaries [13].

2.3 Consent as a Research and Design Lens

Across studies, participants have consistently expressed a desire for greater control over being recorded or streamed. In mobile live streaming contexts, nearly all interviewees wanted clearer notifications and the ability to consent or opt out [14]. Similarly, bystanders observing AR glasses preferred being asked for consent and supported technologies that could block unauthorized capture [12]. The HCI community has also increasingly used consent as a design lens to address harm and harassment, and support user agency. In social VR, it helps to define and prevent interpersonal harm [25, 34], while other scholars have extended feminist models of affirmative and embodied consent to emerging technologies [18, 27]. This work positions consent as a tool for designing safer digital interactions [35], including our own efforts to understand and design for consent to livestreaming and recording.

3 Methodology

We investigated our research questions through a series of group-based design workshops that blended elements of focus group discussion and participatory design. These were held in the Midwestern United States with 16 prospective VR dating users who self-identify as women and/or LGBTQIA+. This study was approved by our university's institutional review board (IRB). Several of our methodological and recruitment decisions were informed by a prior study dedicated to producing methodological guidance for participatory design of emerging technologies for sexual violence mitigation [11]. We also consulted with a certified sexual assault nurse examiner and psychology researchers specializing in sexual violence. Across several workshop sessions, participants reflected on their personally preferred consent practices within VR dating and constructed scenarios of consensual interactions, during which they voluntarily identified recording as a significant area of focus for their scenarios.

We sought participants who identified as women and/or LGBTQIA+ because they are disproportionately the victims of nonconsensual acts in-person [15] and online [23, 24, 26], thus positioning them to most benefit from this research. We further sought prior experience with either dating apps or social VR platforms and an interest in using VR for dating (personal use with VR dating platforms was not required because of their limited availability to the public at the time of study). Recruitment methods included messages on social media, a university student mailing list, a sorority mailing list, and snowball sampling. Of the 16 participants, 14 identified as women

and 2 as non-binary. Seven were heterosexual, 4 were bisexual, 2 were homosexual, one was pansexual, and two chose not to disclose their sexual orientation. Participants were compensated with a $50 gift card.

Participants were split across four groups ranging from 3-5 people, with each group engaging in three 3-hour sessions. This paper reports on the analysis of two of the three study sessions. During the first session, participants individually identified potential nonconsensual interactions that might occur within VR dating platforms. These individual reflections were followed by group discussions, where participants shared their personally preferred or practiced approaches to consent that could address the scenarios they identified. In the second session, participants collaboratively designed consent mechanisms to mitigate the nonconsensual interactions discussed in the first session (totaling 6 hours of engagement for each participant). The third session is outside the scope of this paper.

Transcripts of the design sessions, along with visual artifacts produced by participants, were subjected to reflexive thematic analysis [7]. Three researchers began by individually reviewing the data and taking informal notes to build familiarity. This was followed by collaborative coding and the development of an initial thematic map, which was iteratively refined through ongoing group discussions and critical reflection. When discussing their preferred consent practices for certain interactions, many participants centered their discussion around scenarios involving recording, hence the focus of this paper on elucidating approaches to designing consent mechanics for video recording. The writing of this manuscript thus served as the final stage of reflexive thematic analysis pertaining to our investigation of the aforementioned research questions.

4 Findings

Data analysis was predicated on ample discussion among participants about consent to recording in virtual and augmented reality dating situations due to competing reasons for why they would and would not want their interactions to be recorded. They imagined VR dating environments being used for incredibly intimate sexual interactions that would be subject to potential recording, including *"VR strip clubs"* (P12) and *"kink specific spaces"* (P14). For such interactions, recording could be used simultaneously for safety (by having evidence of sexual violence or harassment) and for harm (through misuse of the recordings, such as for revenge porn). For example, P10 speculated that consenting to the recording of virtual sexual acts could enable automated reporting of sexual harassment:

"They're automatically reported, the developers then have a recording of the instance, like being harassed has, or like some sort of a note within the developers log. So then, that way, it can spare the user from having to deal with all that burden of like having to report and having to like, advocate for themselves, because that can be hard to me, as well." (P10)

With these types of intimate interactions as a backdrop, participants articulated three interconnected design goals for scaffolding consent to recording and streaming within VR dating environments and during physical-world dates with AR glasses: 1) utilizing the visual affordances of VR/AR to purposely interrupt interaction with

explicit consent prompts for recording or live-streaming; 2) embedding consent exchanges at key transition points to define private versus public social contexts; and 3) establishing platform-level defaults and user-controlled tools to block or prevent recording when consent is withheld or revoked.

4.1 Design Goal 1: Visual Interruptions to Initiate Explicit Consent Exchange

Participants emphasized that VR's *"assumed anonymity"* (P6)—where avatars can be anything from animals to abstract shapes—and its sense of being *"not real"* (P16) encourage users to treat recording as trivial and disconnected from accountability or "real" consequences. In response to this understanding, participants proposed leveraging the unique affordances of immersive and embodied technologies to institute explicit, hard-to-miss consent exchanges that require mutual agreement before any recording or streaming can occur. They felt that such exchanges would reduce unintentional cases of nonconsensual recording by normalizing the exchange of consent and making each partner's boundaries around recording immediately clear.

To achieve this, some participants envisioned platform-driven consent prompts that appear directly within users' fields of vision, pausing the experience until both parties actively affirm or deny permission to record. As P1 observed, this could mirror Zoom's on-screen notification—"This session is being recorded"—but reimagined for immersive spaces.

These and similar suggestions emphasize two core benefits. First, by making consent exchange a visually obvious event, platforms can help to reduce the chance that such prompts are missed while also compelling users to reflect on the seriousness of the exchange and the resulting consensual decision. Second, these suggestions foreground a platform-driven approach to consent exchange, wherein platforms themselves are tasked with initiating these explicit exchanges. In doing so, platforms help to reduce the possibility of consent exchanges not occurring due to conceptions about permission being optional or unnecessary.

4.2 Design Goal 2: Consent Exchange to Define Private Versus Public Social Contexts

Participants frequently pointed to the ambiguity of private space in virtual environments as a core source of anxiety: they were not sure whether entering a new room, call, or virtual area meant that recording could or could not occur, nor were they sure how others would interpret these boundaries. When faced with this uncertainty, participants suggested that consent exchange should occur before entering private rooms or traversing into spaces where private interactions or sensitive discussions could be reasonably expected. For example, P1 described: *"Like, right before you enter the room, like, are you okay with being recorded? Yes or no?"*

In this way, there is no longer a lack of clarity about what constitutes "private," because rather than basing such a definition upon social norms or platform-defined labels, participants imagined mutual agreements between users, through exchanging consent to recording, being the primary mechanism for defining privacy.

Although many suggestions frame these exchanges as being initiated by the platform itself (per discussion relating to section

4.1), and therefore requiring some sort of reliance on platform-set expectations, this does not necessarily need to be the case. For example, these prompts could be given in regular intervals or before any transition across spaces, or they could be provided as tools for users to activate themselves at any point. However implemented, these suggestions framed consent as not only boundary-setting, but also context-building, creating a shared sense of what should be expected from any given space or interaction.

4.3 Design Goal 3: Platform-Level Defaults and User-Controlled Blocking Tools to Withhold and Revoke Consent

Participants also stressed that consent is not a one-time act. They emphasized that people need to be able to refuse or revoke consent at any point during or after an interaction, especially as their sense of safety or comfort changes. For this purpose, blocking—which is often treated as a social or safety feature—was reimagined by participants as a consent enforcement tool: a way to halt or undo recording permissions. Participants imagined features that allowed users to prevent recording or livestreaming at any time.

For instance, P7 described a virtual room toggle that both parties must "unlock" before recording or screen-sharing becomes possible—and can relock at any time to prevent these features: *"...both parties can [...] turn the switch on and off to [...] lock the room."* P1 extended this idea to a vicinity-based system, where anyone approaching a nonconsenting user would see their recording interface *"go blank, [...] it'll just be [...] a black or white screen."*

Participants felt that these features would grant users complete autonomy over their consent, respecting changing comfort levels and unanticipated interactions. Also important was that these features be on by default. In other words, participants wanted systems where non-consent to recording would be the default option, and where users could "opt-in" to being recorded through mutual and ongoing agreement, rather than being forced to "opt-out" and face the potential of being recorded nonconsensually before they do so.

5 Discussion and Conclusion

Our design goals shift the framing of video recording from an implicit privacy problem to an explicit consent negotiation process. In our VR dating context—and more broadly in any recording-capable medium (from social VR and AR wearables to mobile apps and live-streams)—existing research has documented how bystanders and even streamers often suffer unexpected exposures with little recourse [14, 19, 32, 33]. Prior HCI research into recording typically describes these as privacy violations [19, 32, 33]. In contrast, we treat consent itself as the organizing concept, as suggested in other work on computer-mediated harm and sexual activity [18, 27, 27, 34, 35]. Below, we consider each design goal in turn, linking to prior literature on live-streaming and recording, and highlight how a consent-centered lens opens new design possibilities.

Visual Consent Mechanics: Participants advocated for explicit visual consent exchanges. This approach reflects a broader trend in HCI research toward visual indicators for recording status in livestreaming and AR, where badges, lights, and notifications signal capture [12, 14]. However, most prior prototypes focus solely on

notifying users that recording is active, rather than using those same visuals to structure consent negotiation to recording—a gap noted in work on cross-reality safety and alternatives to affirmative consent [8, 29]. To fill this gap, future research could co-design and test these visual consent mechanics with diverse stakeholders, identifying the prompts, visuals, and interfaces that best foster clear, reciprocal consent.

User-Defined and Mutually Maintained Private Spaces: Participants underscored a fundamental need for clear privacy rules in virtual and mixed-reality environments—an expectation long supported in livestreaming and recording research, where privacy concerns dominate the conversation [1, 12, 13, 19, 32, 33]. Traditional approaches tend to rely on inferring privacy based on contextual or spatial features—such as assuming that a room with limited access should be private—and designing systems that enforce behavioral norms accordingly [13]. In contrast, our participants proposed that privacy itself be established through a preemptive consent exchange. This shift opens new design avenues: rather than focusing on enforcing privacy within a defined space, future work can foreground consent negotiation as a potential tool for creating private spaces that are user-defined and mutually maintained.

Tools for Revoking and Enforcing Consent to Recording: Participants insisted on direct, revocable control over recording and live-streaming using features for blocking such technologies. This desire directly echoes findings from mobile and AR live-streaming research, where users similarly expressed a desire for direct control over being recorded and streamed in seeking to maintain personal privacy [1, 12, 14]. However, there has been a lack of design suggestions for how this should be accomplished. Future work could leverage immersive technologies with VR/AR users and developers to prototype and evaluate blocking interfaces that could serve as tools for revoking and enforcing consent to recording.

Acknowledgments

References

[1] Melvin Abraham, Mohamed Khamis, and Mark McGill. 2024. Don't Record My Private pARts: Understanding The Role of Sensitive Contexts and Privacy Perceptions in Influencing Attitudes Towards Everyday Augmented Reality Sensor Usage. In *2024 IEEE International Symposium on Mixed and Augmented Reality (ISMAR)*. 749–758. doi:10.1109/ISMAR62088.2024.00090

[2] Ashwaq Alsoubai, Jihye Song, Afsaneh Razi, Nurun Naher, Munmun De Choudhury, and Pamela J. Wisniewski. 2022. From 'Friends with Benefits' to 'Sextortion:' A Nuanced Investigation of Adolescents' Online Sexual Risk Experiences. *Proc. ACM Hum.-Comput. Interact.* 6, CSCW2, Article 411 (Nov. 2022), 32 pages. doi:10.1145/3555136

[3] Katie E. Anderson. 2018. Getting acquainted with social networks and apps: streaming video games on Twitch.tv. *Library Hi Tech News* 35, 9 (2018), 7–10. doi:10.1108/LHTN-08-2018-0054

[4] Gregg Barak. 2015. Amy Adele Hasinoff: Sexting Panic: Rethinking Criminalization, Privacy, and Consent. *Critical Criminology* 23 (05 2015). doi:10.1007/s10612-015-9278-3

[5] Kathleen C Basile, Sharon G Smith, Matthew Breiding, Michele C Black, and Reshma R Mahendra. 2014. Sexual violence surveillance: Uniform definitions and recommended data elements. Version 2.0. (2014).

[6] Samantha Bates. 2017. Revenge Porn and Mental Health: A Qualitative Analysis of the Mental Health Effects of Revenge Porn on Female Survivors.

Feminist Criminology 12, 1 (2017), 22–42. doi:10.1177/1557085116654565 arXiv:https://doi.org/10.1177/1557085116654565

[7] Virginia Braun and Victoria Clarke. 2021. Thematic Analysis: A Practical Guide. (2021), 1–376.

[8] Braeden Burger, Devin Tebbe, Emma Walquist, Toby Kind, and Douglas Zytko. 2025. Saying No to "Yes Means Yes": Limitations of Affirmative Consent for Mitigating Unwanted Behavior Online According to Women and LGBTQIA+ Stakeholders. In *Proceedings of the CHI Conference on Human Factors in Computing Systems (CHI '25)* (New York, NY, USA). ACM, Yokohama, Japan, 1–17. doi:10.1145/3706598.3713236

[9] CapCut. 2025. https://www.capcut.com/resource/hidden-screen-recorder

[10] Emily Dao, Andreea Muresan, Kasper Hornbæk, and Jarrod Knibbe. 2021. Bad Breakdowns, Useful Seams, and Face Slapping: Analysis of VR Fails on YouTube. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems* (Yokohama, Japan) *(CHI '21)*. Association for Computing Machinery, New York, NY, USA, Article 526, 14 pages. doi:10.1145/3411764.3445435

[11] Isha Datey, Hunter Soper, Khadeejah Hossain, Wing-Yue Geoffrey Louie, and Douglas Zytko. 2023. Ethical Participatory Design of Social Robots Through Co-Construction of Participatory Design Protocols. In *2023 32nd IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)*. 2454–2461. doi:10.1109/RO-MAN57019.2023.10309539

[12] Tamara Denning, Zakariya Dehlawi, and Tadayoshi Kohno. 2014. In situ with bystanders of augmented reality glasses: perspectives on recording and privacy-mediating technologies. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (Toronto, Ontario, Canada) *(CHI '14)*. Association for Computing Machinery, New York, NY, USA, 2377–2386. doi:10.1145/2556288.2557352

[13] Youngwook Do, Frederik Brudy, George W. Fitzmaurice, and Fraser Anderson. 2023. Vice VRsa: Balancing Bystander's and VR user's Privacy through Awareness Cues Inside and Outside VR. In *Graphics Interface 2023 - second deadline*. https://openreview.net/forum?id=gItvr7Xl66

[14] Cori Faklaris, Francesco Cafaro, Asa Blevins, Matthew A. O'Haver, and Neha Singhal. 2020. A Snapshot of Bystander Attitudes about Mobile Live-Streaming Video in Public Settings. *Informatics* 7, 2 (2020). doi:10.3390/informatics7020010

[15] Claudia García-Moreno, Christina Pallitto, Karen Devries, Heidi Stöckl, Charlotte Watts, and Naeema Abrahams. 2013. *Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence.* World Health Organization.

[16] Olli I. Heimo, Kai K. Kimppa, Seppo Helle, Timo Korkalainen, and Teijo Lehtonen. 2014. Augmented reality - Towards an ethical fantasy?. In *2014 IEEE International Symposium on Ethics in Science, Technology and Engineering*. 1–7. doi:10.1109/ETHICS.2014.6893423

[17] Yang Hu and Guo Freeman. 2025. Understanding Social VR Streamers' Unique Challenges in Managing Cross-Reality Social Interactions Through Multi-dimensional VR Interfaces. In *Proceedings of the Designing Interactive Systems Conference (DIS '25)* (New York, NY, USA). ACM, Funchal, Portugal. doi:10.1145/3715336.3735825

[18] Jane Im, Jill Dimond, Melody Berton, Una Lee, Katherine Mustelier, Mark S. Ackerman, and Eric Gilbert. 2021. Yes: Affirmative Consent as a Theoretical Framework for Understanding and Imagining Social Platforms. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. ACM, New York, NY, USA, 1–18. doi:10.1145/3411764.3445778

[19] Yao Li, Yubo Kou, Je Seok Lee, and Alfred Kobsa. 2018. Tell Me Before You Stream Me: Managing Information Disclosure in Video Game Live Streaming. *Proc. ACM Hum.-Comput. Interact.* 2, CSCW, Article 107 (Nov. 2018), 18 pages. doi:10.1145/3274376

[20] Georgina Mclocklin, Blerina Kellezi, Clifford Stevenson, and Jennifer Mackay and. 2024. Disclosure Decisions and Help-Seeking Experiences Amongst Victim-Survivors of Non-Consensual Intimate Image Distribution. *Victims & Offenders* 0, 0 (2024), 1–27. doi:10.1080/15564886.2024.2329107 arXiv:https://doi.org/10.1080/15564886.2024.2329107

[21] NVIDIA. 2022. https://www.nvidia.com/en-ph/geforce/geforce-experience/shadowplay/

[22] Joseph O'Hagan, Julie R. Williamson, Mark McGill, and Mohamed Khamis. 2021. Safety, Power Imbalances, Ethics and Proxy Sex: Surveying In-The-Wild Interactions Between VR Users and Bystanders. In *2021 IEEE International Symposium on Mixed and Augmented Reality (ISMAR)*. 211–220. doi:10.1109/ISMAR52148.2021.00036

[23] Anastasia Powell and Nicola Henry. 2019. Technology-Facilitated Sexual Violence Victimization: Results From an Online Survey of Australian Adults. *Journal of Interpersonal Violence* 34, 17 (2019), 3637–3665. doi:10.1177/0886260516672055

[24] Kelsea Schulenberg, Guo Freeman, Lingyuan Li, and Catherine Barwulor. 2023. "Creepy Towards My Avatar Body, Creepy Towards My Body": How Women Experience and Manage Harassment Risks in Social Virtual Reality. *Proc. ACM Hum.-Comput. Interact.* 7, CSCW2, Article 236 (oct 2023), 29 pages. doi:10.1145/3610027

[25] Kelsea Schulenberg, Lingyuan Li, Caitlin Lancaster, Douglas Zytko, and Guo Freeman. 2023. "We Don't Want a Bird Cage, We Want Guardrails": Understanding

& Designing for Preventing Interpersonal Harm in Social VR through the Lens of Consent. *Proc. ACM Hum.-Comput. Interact.* 7, CSCW2 (Oct. 2023). doi:10.1145/3610172 Place: New York, NY, USA Publisher: Association for Computing Machinery.

[26] Ketaki Shriram and Raz Schwartz. 2017. All are welcome: Using VR ethnography to explore harassment behavior in immersive social virtual reality. In *2017 IEEE Virtual Reality (VR)*. IEEE, 225–226. doi:10.1109/VR.2017.7892258

[27] Yolande Strengers, Jathan Sadowski, Zhuying Li, Anna Shimshak, and Florian 'Floyd' Mueller. 2021. What Can HCI Learn from Sexual Consent?: A Feminist Process of Embodied Consent for Interactions with Emerging Technologies. In *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*. ACM, New York, NY, USA, 1–13. doi:10.1145/3411764.3445107

[28] John C. Tang, Gina Venolia, and Kori M. Inkpen. 2016. Meerkat and Periscope: I Stream, You Stream, Apps Stream for Live Streams. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (San Jose, California, USA) *(CHI '16)*. Association for Computing Machinery, New York, NY, USA, 4770–4780. doi:10.1145/2858036.2858374

[29] Devin Tebbe, Braeden Burger, Toby Kind, and Douglas Zytko. 2024. Consent, Deception, and Articulating What it Means to Feel Safe in Social Cross-Reality with Participatory Design of VR Dating. In *Companion Publication of the 2024 Conference on Computer-Supported Cooperative Work and Social Computing* (San Jose, Costa Rica) *(CSCW Companion '24)*. Association for Computing Machinery, New York, NY, USA, 616–623. doi:10.1145/3678884.3681915

[30] UnfoldLabs. 2023. 2023 Screen-Recording Software Market Growth Trends. https://unfoldlabs.medium.com/2023-screen-recording-software-market-growth-trends-105ddf9002ee

[31] Donghee Yvette Wohn and Guo Freeman. 2020. Live Streaming, Playing, and Money Spending Behaviors in eSports. *Games and Culture* 15, 1 (2020), 73–88. doi:10.1177/1555412019859184 arXiv:https://doi.org/10.1177/1555412019859184

[32] Yanlai Wu, Xinning Gui, Pamela J. Wisniewski, and Yao Li. 2023. Do Streamers Care about Bystanders' Privacy? An Examination of Live Streamers' Considerations and Strategies for Bystanders' Privacy Management. *Proc. ACM Hum.-Comput. Interact.* 7, CSCW1, Article 127 (April 2023), 29 pages. doi:10.1145/3579603

[33] Yanlai Wu, Yao Li, and Xinning Gui. 2022. "I Am Concerned, But...": Streamers' Privacy Concerns and Strategies In Live Streaming Information Disclosure. *Proc. ACM Hum.-Comput. Interact.* 6, CSCW2, Article 379 (Nov. 2022), 31 pages. doi:10.1145/3555104

[34] Douglas Zytko and Jonathan Chan. 2023. The Dating Metaverse: Why We Need to Design for Consent in Social VR. *IEEE Transactions on Visualization and Computer Graphics* 29, 5 (2023), 2489–2498. doi:10.1109/TVCG.2023.3247065

[35] Douglas Zytko, Jane Im, and Jonathan Zong. 2022. Consent: A Research and Design Lens for Human-Computer Interaction. In *Companion Publication of the 2022 Conference on Computer Supported Cooperative Work and Social Computing* (Virtual Event, Taiwan) *(CSCW'22 Companion)*. Association for Computing Machinery, New York, NY, USA, 205–208. doi:10.1145/3500868.3561201