Technocultures of Consent: Understandings and Practices of Consent Among U.S. Arab/SWANA Women and Non-Binary People Who Use Dating Apps

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Identity facets such as gender, sexuality, and race shape consent processes, including in dating. Increasingly, dating apps play important roles in consent exchange processes. Examining consent in gendered and racialized communities, as mediated by dating apps, is an overlooked yet important space for illuminating the interplay between identity, technology, and consent. We draw from a guided reflective writing questionnaire (N=20) and semi-structured interviews (N=13) with self-identified second- and subsequent Arab and Southwest Asian and North African (SWANA) diaspora generations in the U.S. We investigate participants' online dating experiences with attention to consent-related values, behaviors, and experiences. Findings highlight the U.S. Arab/SWANA diaspora's *technocultures of consent* – a conceptual framework we use to describe the understandings and practices of consent that are influenced, co-produced, or expressed by the interaction between technology and people. We demonstrate how the technocultures of consent conceptual framework reveals connections between individuals' identities and social positions, consent-related beliefs and behaviors *and* technology design, norms, and expectations. We also introduce the concepts of *networked consent* and *consent concept alignment tests*, and offer design considerations to promote consent for all.

Note: Due to the focus of this paper on (non)consensual experiences and interactions, some content might be distressing to some readers. This paper includes quotes about nonconsensual experiences, as well as some literature on sexual assault and violations of consent.

CCS Concepts: • **Human-centered computing** → **Empirical studies in collaborative and social computing**; *Empirical studies in HCI*; • **Social and professional topics** → **Cultural characteristics**; • **Security and privacy** → *Human and societal aspects of security and privacy.*

Additional Key Words and Phrases: Technocultures of Consent; Online Dating; Dating Apps; Consent; Arab; SWANA; U.S. Diaspora; Safety Work; Networked Consent; Consent Concept Alignment Tests; Warranting Theory

ACM Reference Format:

1 INTRODUCTION

Imagine that a person matches with somebody on a dating app, exchanging witty messages and photos, and even making plans to meet in person to see if the chemistry they are feeling translates offline. But, soon, the lines between what feels comfortable, what feels violating, and what feels consensual start to blur. Who's in control here, and how do people navigate the complexities of

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interpersonal consent in a digital world where things from their interactions to how they experience their identities are mediated by technology?

Social computing technologies like dating apps play important roles in consent exchange and interpersonal consensual processes [106]. Additionally, cultural beliefs/norms and technological features intertwine into *technocultures* that inform people's behaviors [20], including around consent. What these technocultures are, how they are formed, and what their implications are is important to investigate, particularly when we consider racialized and gendered communities. Indeed, consent on and mediated by online dating apps is gendered [36, 104] and racialized [34]. As such, examining consent practices amongst racialized and gendered communities can provide significant insights into the interplay between identity, power, technology, and interpersonal consent.

In this paper, we focus on the Arab and Southwest Asian and North African (SWANA) diaspora[1] in the U.S.. The Arab/SWANA diaspora in the U.S., despite being considered "white" by the government, has been feminized and racialized as "other" [69, 84]. Depending on an Arab/SWANA individual's perceived proximity to whiteness, and characteristics like religion, class, political beliefs, nationality, and experiences with discrimination [7, 61], their insider-outsider status to a (white) U.S. national identity is fluid and conditional [60, 69], and riddled with a shared experience (to varying degrees) of racial-ethnic trauma [12]. Gender, sexuality, and race play critical roles in the racialization of the Arab/SWANA diaspora in the U.S., and the diaspora's negotiations to remain "culturally authentic" [70]. As a result, gender, sexuality, and race might be particularly salient when exploring consent practices and beliefs that emerge across the U.S. Arab/SWANA diaspora. Questions remain about how these gender and sexuality dynamics are entangled in one context where (non)consent happens among the diaspora—online dating. This paper responds to this opportunity to consider how gender, race, and other intersecting identities [29] interplay with technologies to shape interpersonal consent-related beliefs and experiences. These insights have implications for individuals' safety, well-being, and sexual agency.

Through a reflective writing questionnaire (N=20) and semi-structured interviews (N=13) with self-identified second and subsequent Arab/SWANA diaspora generations in the U.S., we explored participants' online dating experiences with attention to consent-related behaviors, beliefs, and experiences. Findings suggest that individuals' understandings and practices of consent valued boundaries, safety, and trust. Yet, these values are not always upheld by dating app designs and norms. Gendered and racialized power dynamics complicated participants' efforts to negotiate consent, and at times, dating apps hindered individuals' abilities to enact agency in their consent-related experiences. Participants also noted the importance of consent communication but felt that doing so was not an expectation among dating app users. We identified the practices that emerged

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[1]For this paper, we aim to focus primarily on Arab/SWANA diaspora culture, cultural practices, and the ways culture and identity relate to experiences with online dating and consent, without ignoring how the Arab/SWANA identity has been racialized in the U.S context. Out of concerns to not further reify essentializing racial categories, the decision of 'naming' our study's population was one we wrestled with greatly for this paper, recognizing the contested nature of naming a very heterogeneous group descending from multiple, often diverse, continents and countries. We chose to use the term SWANA [23] to respect the intra-ethnic diversity often conflated with "Arab" among the 22 countries in the Arab League [86], as well as use SWANA as a designation that includes "all of the Arab League countries and Iran, Turkey, and sometimes Armenia" [11, p.115]. We are aware that a faulty conflation with Arab often dismisses that "there are Lebanese, Syrians, Palestinians, Iraqis, Kuwaitis, Yemenis, Saudi Arabians, Bahreinis, Qataris, Dubais, Egyptians, Libyans, Tunisians, Moroccans, Algerians, Sudanese, Eritreans, and Mauritanians— there are Maronites, Catholics, Protestants, Greek Orthodox, Jews, Sunnis, Shi'a, Druze, Sufis, Alawites, Nestorians, Assyrians, Copts, Chaldeans, and Bahais— there are Berbers, Kurds, Armenians, bedu, gypsies, and many others with different languages, religions, ethnic, and national identifications and cultures who are all congealed as Arab in popular representation whether or not those people may identify as Arab" [52]. Arab, Arab American, and Middle Eastern and North African (MENA) are popular terms in the literature to refer to this very heterogeneous group that we refer to as Arab/SWANA.

from participants' understandings of consent and their efforts to mitigate the risk of nonconsent. Participants' consent-related experiences were also characterized by features like fetishizing language and concerns about reputational harms related to dating app use that specifically invoked race and gender dynamics unique to their Arabness and Swananess.

Based on our findings and drawing inspiration from Kozinet's definition of technocultures [55] and Brock's conception of technoculture as a triad consisting of artifacts-practices-beliefs [21], we use the term *technocultures of consent* to describe the *understandings and practices of consent that are influenced, co-produced or expressed by interaction between technology and people*. We contribute technocultures of consent as a conceptual framework for making sense of understandings and practices of consent in online spaces that culminate from the interplay across three dimensions: 1) individuals' identities and social positions, 2) consent-related beliefs and behaviors, *and* 3) technology and its features. This conceptual framework encourages an intersectional approach to understanding the experiences individuals have in online spaces with regard to consent, technology, and its users—people who hold a myriad of identities, and varying experiences with stigmatization, marginalization, and power. In this study, we contribute and apply this conceptual framework to dating app use among women and non-binary members of the U.S. Arab and SWANA diaspora.

Through the introduction and application of this conceptual framework, we consider the implications of dating apps for preventing harms associated with the absence and presence of consent, while also being attuned to how gender, sexuality, and race may paint these interactions.

From our findings on the technocultures of consent among women and non-binary members of the U.S. Arab/SWANA Diaspora, we provide insight on the different types of safety work [53] employed to try and prevent nonconsent, including implementing what we introduce as "consent concept alignment tests": interactive information-seeking strategies designed to produce information that helps someone judge whether another's understandings and practices of consent appear to be aligned with their own. Within this type of safety work, we also expand the scope of warranting theory to encompass information inferred about an individual based on their perceived identity, rather than information presented by the person, when people aim to reduce uncertainty around consent. We

Fig. 1. Artwork Commissioned from Dua Duran symbolizing the Technocultures of Consent among Arab/SWANA Women and Non-Binary folks in the U.S. Diaspora

then introduce a novel understanding of consent as networked that emerged among women and non-binary members of the U.S. Arab and SWANA diaspora: *networked consent* describes the belief that one's consent practices and experiences are bound and connected to others with perceived identity and experiential affinity. We then offer a reflection on the limits of and possible future directions for dating app norms and design for providing space for consent processes that center values of safety and trust.

2 RELATED WORK

2.1 Consent

Understanding how people exchange consent and experience (non)consensual processes [106] is an increasingly important topic in Human Computer Interaction (HCI) and Computer-Supported Cooperative Work (CSCW). Consent has been applied to data sharing [58, 73, 88], interactions among users of online platforms [36, 72], online-to-offline interactions and harms (e.g. harassment, intimacy) [26, 37, 40, 54, 104, 108] and other kinds of relationships and interactions [50, 90, 96]. While there is no singular definition of consent consistently used in HCI and CSCW, values of safety, personal agency, and well-being are recurring themes in this space [50, 72, 96]. A widely used definition for consent is also lacking across legal and feminist scholarship, as well as sexual communication and sexual violence research [15]. That being said, for this paper, we use consent to refer to mutually agreed upon interpersonal interactions such as conversation, sexual intimacy, and the sharing of information.

While a common-law "no means no" consent standard assumes consent is given unless otherwise stated or forcibly resisted [47], an affirmative consent model requires all parties to give "free and voluntary" consent to an interaction [41, 57]. Affirmative consent [50] and the FRIES model of consent [79, 90] are two examples of consent frameworks that derive from sexual consent models and have been applied in HCI. Affirmative consent is "designed to ensure agency and positive outcomes"[50, p.66], emphasizing that one must ask and receive ardent approval before engaging in each specific interaction with another person [39]. The FRIES model is similar to affirmative consent [79], identifying five qualities for consent: freely given/voluntary, informed, enthusiastic/unburdensome, revertible/reversible, and specific [50, 90].

Supporters of an affirmative consent model argue that, compared to "no means no," affirmative consent advances and asserts women's rights to sexual self-determination and autonomy, as well as equality, positioning women as having agency and an equal determination in sexual relations and interactions with others [41, 47]. However, Gotell argues that affirmative consent [46], while centering individual agency in efforts to prevent harm, places the responsibility on the individual to navigate transactions of consent. The impact of gender, class, and race on the power relations salient to matters of consent is largely dismissed in neoliberal discourses of responsibilization [46]. Additionally, much of the consent literature speaks to sexual consent and its processes in a heteronormative way, in part due to the lack of consent literature that focuses on LGBTQ+ sexual experiences [32]. On the other hand, queer communities' sexual experiences and engagement in consent processes challenge the gender binary "focus on existing power structures and dynamics, regardless of gender, gender expression, or sexual identity" [32, p.704].

Race, gender, sexuality, and class implicate the role of power and how it may shape consent-related processes and experiences. The ability to give or withhold affirmative consent is shaped by gendered power relations and societal norms [41]. (Hetero)Normative sexual scripts position men as initiators of sexual activity and women as passive receptors responding to men's desires [15]. Additionally, race and class intersect with gender to construct notions of who is deemed a rational actor and, therefore, shapes judgments of innocence, riskiness, and propensity to commit or experience harm [10, 46, 92]. These works demonstrate how identity, norms, and power relations are integral to consent-related processes and interactions.Online dating is one context where these consent-related processes and interactions occur.

2.2 Online Dating Apps as Sites for Consent Negotiation

Online dating apps "(partially) automate[s] the process of bringing people together"[91, p.402] around a variety of goals, such as finding short-term romantic partners, new friendships, and

long-term partnerships [93, 107]. Consent is relevant to online dating applications as they can be thought of as tools "for the safe processes of exchanging consent to sex " [40, p.1], as well as other interpersonal interactions, such as initiating conversations or friendships [28]. For example, Zytko et al. identified two computer-mediated consent processes: 1) consent signaling, where individuals assume or indicate consent to sex via the dating app interface, without any direct confirmation of consent before sexual activity occurs, and 2) affirmative consent, where individuals use the dating app interface to engage and normalize open and direct conversations about sex on- and offline [104].

Identity shapes online dating and consent exchange, with disparate adverse impacts on marginalized groups. Prior work reveals a gendered experience of consent exchange in online dating; assumptions of consent and initiating sex via consent signaling are frequently done by cisgender men, whereas affirmative consent practices are more common among LGBTQIA+ users [104], implicating gender and sexuality. Race also impacts consent processes in online dating [34].

Online dating apps' design can also signal to users what interactions are expected in ways that enable or support (non)consensual interactions. For example, queer women experience harassment from men on dating platforms. However, formal avenues of reporting harms like harassment and sexually aggressive behavior are rarely used, as reporting is perceived to be contradictory to the technoculture of apps, like Tinder, where queer women who receive explicit and sexually aggressive behavior from men perceive that behavior as expectations of the platform [36]. This is exacerbated by features of design, such as the design of Tinder's "report" button, which is difficult to locate, establishing the perception that formally reporting others is not regularly done or needed [36, p.244]. Design, in this example, enables harassment and hinders queer women's agency against unwanted interactions.

Online dating raises concerns for safety and harm, including nonconsensual interactions' impact. For example, women may experience risks such as privacy infringements, harassment, and stalking— "risks that can magnify if sexual or romantic advances are refused, or invitations for future meetings declined" [108, p.2]. To help prevent non-consensual online-to-offline harms women may encounter with online dating, Zytko et al. argue that the design of messaging interfaces can help women "retain agency over the risks that they subject themselves to by effectively predicting who they will enjoy a face-to-face encounter with" [108, p.2]. That is, design may be re-imagined to support women navigating gendered harmful online interactions; design considers and responds to the gendered user [13]. However, platforms (e.g., dating apps), often frame harmful content and interactions as produced by "bad actors," emphasizing individual behavior rather than systemic or structural factors [45] such as sexism, misogyny and heteropatriarchy [24], positioning individuals as responsible for managing their safety against "bad actors" by using the platforms' tools to shape their experiences according to their safety goals [45].

With an understanding of how identity and power shape consent and/in online dating, we look to the U.S. Arab/SWANA diaspora's online dating experiences. By investigating this community's understandings and practices of consent in this study, we gain a better understanding of how technology and consent are implicated by identity and power relations.

2.3 Gender, Sexuality, and Race in the Arab/SWANA U.S. Diaspora

The Arab and SWANA diaspora in the U.S. share a long, contested history of racialization, with their inclusion into "whiteness" and lived experiences over time shaped by social, political, and geographic forces [5, 60, 61]. The U.S. Arab/SWANA diaspora are legally classified as white [5, 60]; however, individuals' lived racialized experiences as insider-outsider to (white) U.S. national identity [60, 69] exemplify racial loopholes [60] that contribute to a shared experience, albeit to varying levels, of racial-ethnic trauma in the U.S[12].

Within these constructions of race, the Arab/SWANA diaspora—not including those who can achieve and desire complete assimilation [83]—engage in cultural authentication processes to navigate their position in U.S. society and relations with an imagined community and homeland with an imagined shared Arab and/or SWANA culture [71]. One might consider ideas of cultural or ethnic authenticity as identity projects within a generational framework, where notions of authenticity are contested between different diaspora generations [71]. For example, first-generation Arab immigrants are positioned as gatekeepers for managing and maintaining the authenticity of "Arab Culture", while future generations— which make up the population of focus in this study—are positioned as potential to continue or threaten cultural authenticity for the diaspora in the U.S. The politics of cultural authenticity produces sets of rules that work to govern the lives of future generations of Arab/SWANA Americans, disproportionately impacting women and queer members of the diaspora through conceptions of a "good Arab girl," commitments to a patriarchal nuclear family, and compulsory heterosexuality [71]. For example, for Arab American women, reputation is centered on gender performance and sexuality, and the perception of one's family through her and other women family members' sexuality [3, 71].

Gender and sexuality are integral to idealized perceptions of Arab/SWANA communities, such as concoctions of Arabness and traditional sentiments of Americanness in the diaspora that work to distinguish Arabs from stereotypical Americans [8, 69, 71]. Americanness is associated with non-normative sexualities and promiscuous women; Arabness with good girls from good families who have good morals and sex within heterosexual marriages [71]. As a consequence, a desire to uphold an idealized, perfect image favoring virginity and premarital chastity may play a role in Arab American women's sexual decisions and sexual agency [3]. Similarly, the Iranian diaspora navigates their bodies and sexuality amid notions of desirable femininity, such as valuing premarital chastity and linking a woman's sexuality with her family's honor [38]. Arab/SWANA women in the U.S. are not unique in their need to "negotiate tensions between ethnic/racial identity and societal gender and sexual norms" [3, p.1114], but the politics of cultural authenticity [71] complicate the ways their desires, actions, and behaviors—such as those mediated through online dating apps—are carried out, with perceived implications for themselves and the broader imagined community. In recognizing how the politics of cultural authenticity [71] are entangled with expressions of gender and sexuality among the U.S. Arab and SWANA diaspora, questions emerge regarding this population's experiences of (non)consent as mediated by dating platforms where gender, sexuality, *and* race heighten the stakes for experiencing more severe harms from possible nonconsensual experiences [10, 46, 92].

Within the contexts of identity and the salience of gender and sexuality, there are false assumptions both within and outside the diaspora that Arab and SWANA Americans do not (and will not) engage in premarital sexual behaviors [2, 3, 69, 71], unaware or outright dismissing the reality that some Arab/SWANA Americans regularly engage in a wide variety of sexual behaviors throughout their lifetimes [1, 2, 4, 95]. Additionally, Queer Arab/SWANA communities exist in both the SWANA region and its diasporas despite their frequent erasure [42, 63, 69]. This study deliberately includes the online dating experiences of queer Arab/SWANA Americans, aiming to highlight their experiences as a vital part of the diaspora.

To our knowledge, there has not been an inquiry into the Arab/SWANA diaspora's dating experiences with and mediated by online dating applications, nor an understanding of this population's understandings and practices of consent where intersectional identities [41] may factor. This study's goal is not to discover and present the U.S. Arab/SWANA diaspora's understandings and practices of consent as static or homogeneous. Instead, this project conceives of technocultures, and culture more broadly, as multiple synchronous practices that can complement and contradict each other [6].

This study addresses the following research questions:

(1) What understandings and practices of consent emerge as part of women and non-binary people in the U.S. Arab and SWANA diaspora's encounters with online dating apps?
(2) How are these consent-related practices, beliefs, and behaviors gendered and racialized?
(3) How do the design, language, expectations/norms of and experiences with dating apps shape understandings and practices of interpersonal consent for women and non-binary people in the U.S. Arab and SWANA diaspora?

3 METHODS

3.1 Data Collection

This study included two phases of data collection, completed by the first author.

3.1.1 Phase 1: Questionnaire with Guided Reflective Writing Entries (N=20). The first phase involved a questionnaire soliciting reflective writing entries on past experiences with and mediated by online dating apps. We recruited 23[2] participants who consented to share 5 descriptions of their most memorable (whatever that meant to them) interactions or experiences as mediated by online dating applications. We used these descriptions as artifact probes for reflection in interviews (Phase 2). Prior work in HCI and CSCW has used similar methods to generate a starting point for interviews [51, 66]. We collected the writing entries via Qualtrics. The questionnaire can be found in the appendix.

We informed participants their responses would be anonymized. Participants in this phase received a $25 Amazon gift card.

3.1.2 Phase 2: Semi-Structured Interviews (N=13). In the second phase of data collection, we conducted semi-structured interviews. We invited all participants from Phase 1 to participate in a 60-to-90-minute interview over Zoom to talk about their online dating experiences; 13 of the 20 participants completed an interview.

We used the written reflections from Phase 1 to prompt interview discussions. During interviews, we guided participants through a set of questions related to 1) perceptions, goals, and intentions of online dating apps, 2) on-app vs. on-to-off-app interactions, 3) interpersonal positive and negative interactions, 4) consent values, and 5) Arab and/or SWANA identity. When asking participants about experiences where consent was salient, we were guided by trauma-informed approaches to HCI research [26], using its 6 principles (e.g., safety, trust) to phrase questions that would enable participants to talk about positive and negative consent-related experiences safely. The interview protocol is available in the Appendix. The first author kept written notes during interviews to remain attentive to emerging themes in both written reflections and interviews to inform future data collection. For example, upon noticing themes emerging around fetishistic language, we intentionally asked questions in subsequent interviews soliciting experiences about identity-based conversations that were memorable to participants for better or worse.

We conducted all interviews, except for 1[3], on Zoom, where we adhered to participants' preferences for a video or audio-only call. We transcribed audio files for analysis. The first author

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[2]3 of the 23 participants, all heterosexual men, who submitted written reflections were not included in the data analysis for this project. This was largely in part to their submissions providing insufficient, low-quality data (e.g., one word responses), and an inability to supplement with interview data as none wished to participate in an interview. As a result, this study pivoted to focus on members of the diaspora who do not hold a privileged position in a heteropatriarchal society—women and non-binary individuals.

[3]One interviewee, Rana, was interviewed via email due to privacy concerns around being overheard by members in her home if she were to speak out loud for a Zoom call. For this participant, there were four emails exchanged over a week. The first email included a Microsoft Word document with the interview protocol, which Rana filled out and emailed back with

Pseudonym	Interviewed?	Age	Ethnicity	SWANA Origin	Identify as Arab?	Gender	Sexual Orientation	Dating Apps Used
Leila	N	18	Persian	Iran	N	Female	Straight	Hg, T
Rana	Y	20	Lebanese/Sierra Leonean	Lebanon	Y	Cis Woman	Lesbian	B, Hg, T, L
Nazli	Y	21	Iranian	Iran	NS	Female	Bisexual	Hg, T
Zeina	Y	22	Arab American	Lebanon	Y	Cis Woman	Bisexual	B, Hg
Aria	Y	23	Yemeni/Arab	Yemen	Y	Cis Woman/ Non-Binary	Pansexual	Hg, T
Ameerah	Y	24	Middle Eastern	Iraq	Y	Female	Straight	Bv
Amina	Y	26	Arab	Palestine	Y	Woman, Gender Fluid	Queer	B, Hr, L
Hana	Y	26	Arab	Palestine	Y	Female	Heterosexual	Hg
Layal	N	26	North African	Sudan	N	Female	Straight	S, Mz
Mariam	N	26	Iranian	Iran	N	Female	Straight	Hg
Salma	N	26	Middle Eastern	Yemen	Y	Female	Bisexual	Hg
Mila	N	27	Middle Eastern	Lebanon	Y	Female	Bisexual	Hg, T
Samia	Y	27	Palestinian	Palestine	Y	Woman	Queer	Hg
Sana	Y	28	Assyrian	Iraq	N	Woman	Bisexual/Pansexual/ Queer	Hg
Sara	Y	31	Palestinian/White (Mixed Ethnicity)	Falasteen	Y	Nonbinary	Bisexual	B, L
Ayah	Y	32	Arab	Jordan	Y	Woman	Straight	B, Hg, T
Naima	Y	32	Arab American	Lebanon, Egypt	Y	Female	Heterosexual	Mz
Noor	Y	33	Arab/ Middle Eastern	Iraq	Y	Female	Straight	B
Sirine	N	33	Lebanese, Iranian, Irish, Italian	Lebanon, Iran	Y	Non-Binary Afab	Pan	B
Sahaab	Y	35	Arab	Palestine	Y	Woman	Queer	B, Hr

Table 1. We asked about and report on participants' demographics in their own words. Y= Yes, N = No, NS = Not Sure. Dating Apps Key: B-Bumble, T-Tinder, Hg-Hinge, Bv-Baklava, L-Lex, Hr-Her, Mz-Muzz, S-Salams

conducted and recorded interviews, taking detailed notes. Interviews lasted from 84 to 98 minutes (average = 88 min). Participants in this phase received a $25 Amazon gift card.

3.2 Recruitment

We recruited participants who were 18 or older, lived in the U.S., self-identified as being part of the Arab or SWANA diaspora, but not a first-generation immigrant (born in the U.S., with at least one immigrant parent, grandparent or great-grandparent from an Arab or SWANA country), and who were active users of at least one online dating app.

We recruited participants through social media platforms, including Facebook, Twitter, and Instagram, with hashtags such as #SWANA, #MENA, and #OnlineDating. We also reached out to local organizations across the U.S. connected with SWANA populations (e.g., the Center for Arab Narratives) requesting they share our call for participants with their membership across multiple states and communities. We also asked participants to invite others to participate by sharing the study's flyer and link to the screening survey among their networks.

3.3 Screening Survey

Potential participants filled out a screening survey to be considered for this study. In addition to confirming eligibility requirements, we asked questions regarding specific demographics within the U.S. Arab/SWANA community; this was an intentional effort to represent a variety of ethnic, religious, and cultural backgrounds within this population. Beyond that, we recruited participants with a variety of genders, sexual orientations, socioeconomic status, and experience with a range of dating apps as different apps may embody different values and norms [50]. We invited all eligible participants to participate in the study, only screening out those whose survey responses did not pass the 'honesty' checks (e.g., those reporting separate answers to identical questions presented at different points in the screening survey, such as State of Residence.)

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her written answers. Then, we emailed back the interview protocol with follow-up questions, which she answered and then sent back in her final email.

3.4 Data Analysis

We followed Charmaz's constructivist grounded theory [25]. Constructivist grounded theory has a feminist commitment to reflexivity and subjectivity, with an understanding that the theories emerging from analysis are "embedded in the historical, social, cultural, and situational conditions of their production" [27, p.7]. This study's analysis process was iterative, with data collection informing data analysis and vice versa.

This study's data was part of a larger project examining experiences with dating apps among the U.S. Arab and SWANA diaspora. The first author carried out inductive open coding on participants' written reflections, producing 638 initial codes. She then grouped these codes into themes, referring back to the written reflections and their coded excerpts. These themes produced 99 focused codes such as encountering unwanted or unexpected behavior, positive feel-good behaviors between dating match, and identity values/attitudes/norms shaping dating experiences, and a series of consent-related codes. Next, the first author applied these focused codes to the written reflections and interview transcripts.

To focus on data about this paper's research questions, the first author then pulled all interview and written reflection excerpts labeled with codes relating to consent (our study's focus). She then open coded these excerpts and organized excerpts into groups around larger themes. The first author checked for connections between groups of excerpts and their codes to produce broader themes (e.g. subtext of dating apps, labor of ensuring consent, consent-based affordances on dating apps) that were refined and solidified in discussion with the second author.

We chose to analyze participants' written reflections and interviews together, rather than separately because participants' reflections prompted conversation in interviews and provided helpful context. Participants' quotes from reflections were used in this manuscript if they participated *only* in Phase 1 of data collection, or if a written reflection provided important context or a clearer example of an experience discussed during an interview.

3.5 Limitations and Opportunities

A limitation of this study is that the majority of participants did identify as Arab. As a result, a deeper dive into non-Arab SWANA experiences is critical to understanding the diverse range of experiences among the SWANA diaspora. Additionally, this study relied on cultural organizations and the authors' personal social media channels for recruitment. While others shared the call for participants, such as by resharing on social media, the participant sample may reflect the demographic communities of the authors. Additionally, as reflected by the participant who requested an email interview due to concerns about being overheard, we may have excluded potential participants who had privacy and safety concerns given the topic.

3.6 Researcher's Positionality

The first author, who initiated this project, is a second-generation Arab American from a mixed ethnic background (Lebanese and Italian). Her interest in this study stemmed from her own personal gendered and racialized experiences of dating apps that ranged from deeply traumatic nonconsensual experiences to the positive life-altering experience of meeting her partner. The first author's motivation for this project also emerged from her experiences growing up and navigating dating, intimacy, and relationships as a member of the Arab/SWANA diaspora, and her negotiations with the politics of cultural authenticity in turn [71]. The second author is an Iranian American familiar with the Iranian diaspora's dating experiences. The second author's expertise is in identity and marginality in sociotechnical systems. Both authors reject notions of shame, particularly shame, for desiring consensual human intimacy, and strongly reject notions of sexuality as related to one's

purity, value, or worthiness of respect. They also reject views of SWANA that represent them as a monolith. Aligning with Ogbonnaya-Ogburu et al. [75], we intentionally do not prescribe to fundamental differences based on identity in our effort to not reduce and essentialize members of the Arab and SWANA diasporic communities, especially as we understand culture as an outcome of multiple practices with shared or synchronized practices that can complement and challenge each other [6].

4 FINDINGS

We describe values foundational to participants' understandings of consent, detailing their associated practices and attitudes. We then discuss the power dynamics salient in participants' understandings and practices of consent before detailing their experiences and expectations of nonconsent as mediated by dating apps. We end with detailing participants' understandings of consent as communicated, yet misunderstood and unexpected on dating apps, providing insight into practices emerging from these understandings.

4.1 Foundational Consent Values: Boundaries, Safety, and Trust

We refer to boundaries, safety, trust and kindness as part of participants' consent values—beliefs about what they viewed as important for consent-related experiences. Participants highly regarded these values as they made sense of their positive and negative (non)consensual interactions as mediated by dating apps.

4.1.1 Boundaries. The most central consent value among participants was boundaries. This is not surprising as other work in HCI and CSCW [35, 87, 103] has found boundaries to be salient in individuals' attempts to manage (non)consent within online dating platforms and virtual reality dating applications. Participants believed they had a right to control how individuals engaged with them. They conceived of boundaries as the limit when an interpersonal interaction is understood as acceptable versus unacceptable. As Sara explained, consent is *"if you express a boundary and they respect it, or if they want something from you, they ask for it instead of just assuming that they can take it."* That is, honoring boundaries and asking for confirmation of boundaries before acting was necessary for consent.

Participants understood an infringement of their boundaries—physical or emotional—as disrespectful and violating their autonomy. Participants revoked consent to further interactions from dating matches if boundaries were violated. When participants chose to revoke consent or try to halt nonconsensual interactions, they referenced five actions that directly involved features accessible in dating apps: deactivating/pausing their account, unmatching, reporting, blocking, and non-response. For example, Nazli described using dating app features when encountering boundary-violating comments. She explained, *"Sometimes the comments were just really out of pocket, and then I was just like, 'All right, this is a weirdo.' So I would just unmatch with them or just ignore their message."* Often, participants described that certain behavior was deemed appropriate or inappropriate depending on when and how it emerged. For example, Noor shared an experience with a dating match when their text interactions did not meet her expectations for what was appropriate given the time they had known each other: *"He called me baby mama and [said] that I was going to be his future wife, and I had not met him yet."* This violated Noor's boundaries because it portrayed a level of relationship she did not feel she had with the match.

Participants described conversations to clarify boundaries as the main way they might prevent harm from nonconsent. However, participants attributed their (dis)comfort with setting boundaries— both on and off dating apps—as connected to their SWANAness. For example, Ayah attributes

her comfort with establishing boundaries to her parental figures and the messaging she received growing up:

> "My mom would always make sure to be like, don't do this with boys. They're bad. And all the kind of conservative talking points [you hear] when you're a little girl. I think those are definitely still in my head. ... I am really good about boundaries because I got a lot of practice with them."

Alternatively, others attributed difficulties in setting boundaries to the absence of discussing physical intimacy growing up. Nazli explained:

> "I feel like maybe communicating about physical intimacy might be hard for me because that was just never really mentioned to me growing up. So I'm just thrown into it and I just go along with what the person says because maybe I wasn't taught that you should have conversations about setting boundaries."

Participants' reflections on their experiences with dating apps highlight how different comfort levels for establishing boundaries exist among the U.S. Arab/SWANA diaspora. This, in turn, provides insights into the dynamics Arab and SWANA women and non-binary people using these intimacy platforms might wrestle with when trying to establish boundaries and mitigate nonconsent. This highlights how the perceived ability to set boundaries and enact agency over one's experiences and interactions is influenced by cultural norms.

Identity-based Assumptions and Consent Boundaries. Participants reflected on how dating matches made assumptions of consent—or lack thereof— based on their religious or ethnic identity as Muslim or SWANA[4]. Aria described how others have made assumptions about her boundaries and what she'd consent to based on her identity. She said people assume things, *"like what you're willing to do or not, especially physically, what boundaries you're willing to break as a hijabi especially."* As a result, Aria attempted to challenge identity-based assumptions while also emphasizing to potential partners her individuality—reiterating she is acting as an individual and not as a representative of some imagined homogeneous group. When Aria chooses to engage in physical intimacy with individuals she's matched with on dating apps, her awareness of the fetishization of Middle Eastern women and orientalist discourse about Muslim women as oppressed motivates her to have a conversation about her decision:

> "I have to represent everyone. ... And I also don't want to give the indication that whatever I do out of my own free will is what someone else might be comfortable with. ... I'm scared of feeding into the stereotype of Muslim women being oppressed and having to kind of be freed through sexual deviancy."

Experiences like Aria's, highlight a tension between acting as an individual while being perceived as a representative member of a racialized group. Members of the Arab/SWANA diaspora navigate such dynamics in dating, exemplary of the potential burden of negotiating consent for members of racialized communities.

Amina echoed a similar sense of responsibility towards consent and safety for her community, explaining:

> "As a means of protecting ourselves, we have to protect each other. ... Most marginalized communities, at the end of the day, we just want to be safe. We just want to exist. We just want to live our truths. And that goes the same for like any other part of my identity, too."

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[4]It is important to note that Islam and Arabness or SWANAness, while not synonymous with the other, are deeply intertwined in racialization processes for the diaspora and as a result, assumptions made about Muslims can shape the interpretation of those racialized as Arab or SWANA (and vice versa) regardless of if a member of the diaspora is Muslim [81]

Amina, identifying as visibly Muslim, Palestinian, working class, queer and genderfluid, understands being in community as necessitating behaviors that protect and promote the safety of herself and others. Both Aria and Amina's consent-related interactions with others on dating apps are shaped by their experiences living with multiple identities.

Overall, participants emphasized the impact of their Arab or SWANA identity on consent processes in dating contexts, detailing how assumptions based on their religious or ethnic identity influenced expectations others had from them of (non)consent. At times, this motivated participants to challenge stereotypes in ways that promote individual choice in intimate decisions.

Fetishizing Language Informing Boundaries. Participants described how their relationship with SWANAness informed their conditions for consenting to interactions with a dating match by shaping their boundaries. For example, Mila described an experience with a dating match and ethnic fetishization:

> *"I came to learn that he was in the army. Not soon after, he told me, 'I joined the army to find beautiful Middle Eastern women and I found one right here.' … the people who fetishize Middle Eastern women are often the same people who make a living off of the oppression of our people abroad. Now I'm unwilling to meet with anyone until I know where their beliefs lie, even if it's just a hookup."*

Mila's awareness of the racialization and fetishization of SWANAness in Western contexts and the U.S.' role in military oppression in the region [65, 77, 84] shaped her boundary setting practices. Experiences, like Mila's, highlight how experiencing communication with fetishization has implications for (non)consenting.

4.1.2 Safety and Trust. Safety and trust were foundational for interpersonal interactions to be desired and consented to by participants with their dating matches. Without these, many participants shared that they would not feel comfortable interacting with matches, especially in physical intimacy. As Rana stated, *"I just want general safety. I want to ensure that I won't 'get in trouble' so to speak or put my personal physical safety/information at risk just so I can get some 'action'."* The ability to interact with others, mediated by dating apps, was not deemed as worth sacrificing one's physical safety or privacy. Sahaab's understanding of intimacy as exchanging more than just physical touch necessitated the establishment of trust with matches. They explained that a safe, compassionate interaction means getting to know a person and that for desirable interpersonal interactions, especially physical ones, trust is a must. This extended to conditions for consenting to meet in person —trust and safety needed to be settled before the meeting. As Hana explained:

> *"People are all about 'let's go,' fast-paced, and I'm like, I don't want to … I think it's like I just don't trust you if you want to go meet right away, you haven't talked to me a single word. … I always ask [for] your number and or your Instagram because I need to make sure you're a legitimate person."*

Time was necessary for safety and trust to be established. Whether it be a sense that certain values had been established or logistical conditions achieved, participants revealed expectations for granting consent centered on trust and safety, with participants emphasizing the time and space needed to establish and assess these values.

4.2 Navigating Power Dynamics: Transactions and Negotiations of Consent in Dating App Interactions

Participants understood consensual experiences with dating matches as a negotiation of power. Zeina explained, *"The power is in your hands to decide whether or not you like the person that you're talking to. You have all these routes and methods of refusing access to you, from the person that you*

matched with; you can block them, you can report them, you can unmatch with them." Participants viewed dating apps as spaces where these negotiations of consent and power take place.

4.2.1 Consent Scripts: Uncertainty from Gendered Roles of Pursuer and Recipient. Participants understood consent scripts—shared understandings of how to obtain or express consent— as gendered and resulting in ambiguities for one's role in establishing consent, highlighting the tensions of a gendered binary of active pursuer and passive recipient [67, 100]. Nazli envisioned herself taking on a traditionally masculine role when she decided to use Tinder for hooking up, particularly after she felt used when men were only pursuing her for sexual transactions:

> *"Once I realized that, I was like, 'You know what? Now I can do that with guys. I can just meet up with them because I'm interested in having a one-night stand with them or to smoke with them or whatever.' So I became the player."*

The tension in gendered consent scripts was most noticeable when some participants described who was positioned as "leading" or having control in interactions with dating matches, particularly when the interactions were between women and/or non-binary people. For example, Sirine mentioned that because they were interacting with a woman on a dating app, it was unclear to them who was supposed to make the first move. They explained in their written reflection that they were nervous because *"I didn't want to be creepy."* For participants who internalized gendered consent scripts, their role in establishing consensual interactions on dating apps remained unclear. This echoes findings by Metz arguing that queer scripts can reflect traditional heteronormative scripts where the gender binary and expectations are salient [67].

4.2.2 Power Dynamics and Situated Agency. Participants described reactions to unwanted interactions that were informed by an awareness of possible harm or discomfort if they were to revoke or abruptly alter previously exchanged or assumed consent. Ayah shared an experience where a conversation with an individual she'd matched with made her deeply uncomfortable and crossed her boundaries, despite him asking for her consent to have a conversation about sexual intimacy. She explained in her written reflection:

> "He initially asked me if it was OK for him to tell me his sexual interests in context of what he's searching for and so I said yes it was ok, and then he just got real weird ... I suppose when he initially asked consent to tell me what he was looking for I thought that was fine because it's different then sending unsolicited messages of that sort?"

Ayah initially consented to the conversation with certain expectations; however, this individual's behavior contradicted her expectations, forcing her to signal discomfort by decreasing how much she engaged with the conversation. Ayah explained that his behavior led to questioning "whether or not he was safe, and then that's what made me want to just proceed very cautiously. It's like I could still be kind so as to not potentially trigger anything else." In this experience, Ayah chose to gently disengage from interactions to signal disinterest, while mitigating potential harm. Within this example, Ayah's agency to disengage was situated within a context where she perceived herself as potentially endangered by her match's reaction to her rejection: Her dating match held some power, while Ayah simultaneously acted on her own.

Lastly, during interviews and in their reflections, participants repeatedly shared experiences where the design of technology enabled dating matches to challenge their enforcement or request of establishing a boundary, especially when they wished to end a connection with a dating match or revoke consent to continue interacting. Noor described sustained unwanted contact from a former dating match:

> *"It was out of the blue, 'Hey.' When I ignored it, he called me. When I ignored those phone calls, he kept on sending messages. So, for a couple of days, I just ignored it. ... So after a*

little bit, he kept on messaging me to a point where I couldn't even look at my phone. . . . So the last call, I decided to just send him a message, 'Stop.' And when he didn't and he continued to call, I'm like, 'okay, well, I know with police they will only interfere if you have told them to stop three times.' So I'm like, okay, let me send another message, 'stop.' And he continued to call at least 25 times. Then I sent another message, 'stop', and then I sent a voice message saying, 'I'm warning you, I'm going to go to the police if you don't stop.' That's when I blocked him and it led him to sending me messages over so many different numbers. I would say at least 15 to 20 different numbers. And I'm like, how is he changing his number so quickly or what app is he using? That's when I went to the police and they were awful. . . . They didn't really care. And that's when I just said, 'Okay, I will change my number.'"

Noor was left to her own devices—literally—to manage this harassment and violation of consent from a dating match, forced to disrupt her life by changing her phone number as a last-ditch effort. While technology's features that help establish boundaries may prevent nonconsensual interactions, they are insufficient solutions.

Overall, power influenced the enactment of agency for consent within dating apps. While some participants valued the ability to change their minds and disengage from interpersonal interactions, others faced challenges in asserting boundaries, experiencing instances where initial consent led to feeling locked in or fear of harm delayed revoking consent. Concerns about upsetting dating matches, especially men, and the fear of triggering harmful reactions influenced participants' decisions in managing consent. Furthermore, experiences of dating matches persisting and participants facing challenges in ending connections underscored the limitations in relying solely on technological features, highlighting the need for multifaceted strategies to address nonconsensual interactions.

4.2.3 Reputational and Privacy Risks Associated with Dating App Use in the Diaspora. Participants reflected on reputational risks associated with using dating apps in their communities due to others' (in their communities) assumptions of one's reasons for using dating apps, a gendered double-standard around dating and relationships (in their communities), and consequences they would face (in their communities) for rejecting heteropatriarchal norms.

Participants, like Zeina, explained how the assumptions for using a dating app implicated their reputation and increases concerns for using dating apps:

"[Dating apps are] much more like you're here and you're on this app to do something as opposed to someone potentially seeing you in public. . . that could be misconstrued. I could be like, 'Well yeah, we were just doing something for work or we were just studying' and I could say it that way. But like, if you're on a dating app, you're on a dating app, you're not doing anything else. [The assumption is that you're] feltene, like you're kind of loose or you're promiscuous or you're boy crazy, all this kind of stuff... I think also when I think about my reputation,....I think I have a reputation as someone who's very studious, someone who's very hardworking....especially being here where reputation is everything, I think that reputation would be marred by people knowing that I was on an app."

By being seen on a dating app, Zeina was acutely aware of the reputational harm that could ensue due to assumptions that contradict expectations of cultural authenticity and the gendered archetype of a 'good Arab girl' [69]. To manage these concerns of reputational harm and its consequences, participants frequently chose to delete or pause their accounts on dating apps when concerned about visibility to others they suspected might pose risks to their privacy. As Aria explained, *"I mostly pause the app so it's not deleting, it just pauses it and then you can unpause it. . . ."*

One concern shared by several participants was the sharing of their dating profile with others off the apps and without their consent, such as through somebody screenshotting their profile and sharing it with a family member. The valuation of one's reputation in Arab and SWANA communities was central to some participants' concerns regarding privacy loss due to nonconsensual sharing of information. Rana explained concerns of her dating app profile being shared with others:

> *"I just don't want my friends and family back home to see what I put on the app. That's it really…I think photos are a big thing, people being able to screenshot/share a profile if someone comes across it…I fear it would be shared and I would face familial or community repercussions."*

Participants recognized the consequences of nonconsensual sharing of information regarding their dating experiences were gendered and posed higher risks to them as women, queer, or non-binary members of the Arab and SWANA diaspora.

For some queer participants, like Rana, reputational harm was interlaced with concerns around privacy and other harms. Rana explained: *"Being openly queer can lead to disownment, ridicule, and rejection from the ethnic community at large…"* For Rana, experiencing harm within her community due to her queerness caused her to be mindful of what information people had access to about her. Amina articulated her experience with queerness and efforts to remain anonymous on dating apps, contrasting the gendered nature of shame to the sense of safety she felt on queer dating platforms. Amina explained:

> *"I think coming into my queerness, having a photo, trying to be as anonymous as possible. You know, those are elements that exist with the queer apps as I use them. However, I think men feel less safe to me, right? So even if, you know, my mom's friend's son is on MuzzMatch and he sees my [profile], the reality is him and all his buddies are on the apps. Right? Like, they talk shit. There is more shame there…. the reality is [shame]'s gendered."*

Amina recognized that the shame she'd experience if she lost control over her privacy (e.g., no anonymity on apps, profile shared without her consent) was gendered. This led her to feel safer on queer dating apps with increased opportunities for anonymity as opposed to other dating apps.

The potential for being shamed for being on dating apps was deeply upsetting to participants like Aria who felt tensions between her position in the U.S. Arab and SWANA diaspora when using dating apps. She explained:

> *"We're just all here…to find love. And I think it really depresses me that people just criminalize, especially in our own communities, that when we try to seek out of the norm of kind of arranged relationships by our families that we're criminalized with that. It's very taboo, etc.…We are American. Like we are in American society and like dating is…in American culture.…If my parents saw my dating profile, the first thing they would say is, 'Oh, we should have stayed in Yemen. Like, look what happened here.' For them, American is very synonymous with white…For them…they don't view us as American. Whereas like, I grew up here and this is, this is the culture we were raised in…So [to] me, dating shouldn't be a big deal as it is, but because it differs with Arab culture and my own Yemeni culture, then it would, it's seen as taboo and wrong for sure…I think for me…it's impacted in the way that I'm very secretive honestly. I shouldn't feel guilty about wanting to find love and wanting to have a partner and wanting a relationship. It's just the culture has made me guilty for wanting those things."*

Aria situates her guilt that emerges when using dating apps within what she understands as cultural diasporic norms. The potential for an individual to screenshot one's dating profile and share that

with others (e.g. family, friends) was identified as a risk for the reputation of women and queer members of the Arab and SWANA diaspora, due to several factors: assumptions of reasons for using the apps, a gendered double-standard around dating and relationships, as well as consequences for rejecting heteropatriarchal norms.

Participants highlighted the gendered double standard within their communities with regard to dating and relationships, emphasizing concerns about nonconsensual sharing of information with unintended others and resulting reputational harm, and the consequences of assumptions made about their dating app use. Experiences of shame and guilt, secrecy, and the need to manage reputational concerns underscore the complex intersections of gender, race, and cultural expectations in participants' usage of dating apps.

4.3 Communications' Role in Consent and its Practices

Whether or not direct and explicit communication about wants and desires occurred in their own consent-related experiences, participants across the board agreed that direct communication should be a part of consent processes.

4.3.1 The meaning of a "Match" for Consent. Participants understood matching with an individual as signaling a start to consent processes between them and a dating match. Some participants perceived matching as consenting to conversation. For Samia, she made sense of consent and dating apps through the metaphor of a door:

> "I was on the subway the other day and this guy literally started chatting up the woman next to him and asked for her number. To me that's very much opening a door that is shut and the invitation has not been there. There's no signal that's saying I'm open to having these conversations. Whereas [on] the dating app, the door is open. ... You're on a dating app ostensibly to be in a relationship. ... The door's open for conversation. . . . Then from that you determine what other doors are open."

Other participants also saw choosing to match or maintain a match as consenting for them to have continued access to the information they've chosen to make available on their profiles.

No participants supported the notion that a match signals consent to anything beyond potential conversation and access to a profile, *especially* not consent to physical intimacy. This belief differs drastically from how cisgender heterosexual men, those positioned with the most power in a heteropatriarchal society, interpreted matching on dating apps as signaling consent to sex [104]. Some participants were aware, however, that others may have different understandings of what a match signals. As Nazli explained, *"Some people that would reach out first ... if I would respond, they would basically just have an expectation that I would hang out with them or owe them maybe my Snapchat or my phone number."* Participants said they did not believe that simply matching with someone meant they owed consent to further interactions, on- or offline. They unanimously rejected the idea that matching implies consent to anything further, but some, like Nazli, acknowledged varying expectations regarding matching.

4.3.2 Communicating Consent Practices. Participants envisioned dating apps as spaces that mediate the communication of consent to interpersonal interactions—online and offline. And yet, they also understood dating apps as obscuring information deemed useful by participants for sensing a dating match's intentions or goals—and thus, veiling signals or starting points for establishing consent or mitigating risk of nonconsent. As a result, participants relied on their own interpretation of signals from matches to inform reciprocal interest in an interaction.

Participants referred to information about dating intentions or goals, often visible on a match's profile, as a way to begin to understand what a match may consent to, or a justification for not

seeking out further clarity by taking that information at face value. Aria described the profile as giving a glimpse into what a match may want, and using that as a starting point for clarifying these wants before meeting:

> *"Some people openly just say open for hookups and things like that. They'll tell you exactly what they want. Whereas other people will say nothing. ... I'll ask them 'What are you looking for?' And they'll say, 'Oh, casual or something.' And I'd be like, 'Can you define casual? Do you mean just hookups or do you want to date? Like, what's the plan here?'"*

Reflected in this example is the understanding that words used to convey intentions may mean different things to different people, necessitating further conversation to ensure clarity. Alternatively, some participants saw profile information as eliminating the need for a potentially awkward conversation around dating intentions and consent.

Participants discussed the ways that consent was frequently not discussed explicitly before meeting a match in person, and if it did come up explicitly in conversations, frequently occurred once physical intimacy had already begun. For example, Nazli described an instance where a match she'd met up with began to initiate physical intimacy before establishing consent. She explained in her written reflection:

> *"There was no conversation over text about physical intimacy. I'm sure maybe there was flirting, but no actual conversation about that. And then, the moments leading up to it, we were just kissing, and then he was getting ready to undress himself, and I was just like, 'Oh, what are we doing?'"*

Others, like Sahaab, tended to avoid conversations about consent on the app and preferred to use the app as a starting point to decide whether to even meet in person, when consent may seem more relevant for them to discuss. They recognized conversations to establish consent as a form of labor they didn't want to expend casually. They explained, *"It's like, 'Do I want to waste time?' ... I don't want to invest too much, until I feel like, 'Okay, this seems like a decent person.'"* Conversations to establish consent were thus understood as being reserved for those Sahaab perceived as being worth investing energy and time into, something they'd be able to determine once they had met in person. Participants' experiences illuminate how the conversation of consent may not occur until in person due to the "in-the-moment" shifts (e.g. escalation in physical intimacy) that are perceived to warrant an explicit conversation or be reserved for when a certain benchmark of interest in further interacting with a match is reached. This produces a tension among participants who all cited direct and explicit communication as central to consensual experiences, yet experienced and/or practiced communication that was obscure, context-dependent, or conditional.

Overall, participants viewed dating apps as both mediating and hindering the communication of consent, relying on their interpretation of signals and app features to gauge mutual interest and establish consent; however, explicit discussions about consent were often in-person and postponed until deemed necessary, highlighting a tension between the perceived importance of clear communication and the practical challenges in initiating such discussions on dating apps.

4.4 Experiencing and Expecting Nonconsent: Understanding and Responding to an Absence of Consent on Dating Apps

Participants shared nonconsensual experiences within the dating apps themselves and other digital tools. For example, Nazli shared an experience where a photo was taken without her consent by a dating match:

> *"We ended up hooking up. And I just didn't really think much of it, but he took a picture of me after it happened. And I was clothed when he took a picture of me, but it was right*

> *after the fact. And he sent it to someone else that I had known through my high school and was like, 'Oh, I just had sex with [Name].' ... That was a trust issue right there."*

Participants also shared experiences with deception. Mila shared in her written reflection a dangerous instance with a dishonest match:

> *"I had never really explored my sexuality, and I decided to match with a woman for a casual hook up. ... When I got to the bar I let her know I was there, and then I received a message from her that she had just been called in for work at the hospital. About a minute later, a guy approached me in the spot that the woman and I had decided to meet. ... I realized that the Tinder profile was fake and that this guy had actually been the person I was messaging…"*

Mila had consented to an in-person meetup with a woman; however, what she had consented to had not happened. It is important to consider experiences of nonconsent beyond physicality to attend to the many dimensions where (non)consent may be central to unwanted and/or harmful interactions as mediated by dating apps.

4.4.1 Perceived (Gendered) Risks in Dating App Interactions. Participants associated engaging on dating apps with vulnerability. Sana described a conversation with a dating match, after she rejected his physical advances, who seemed confused as to why she was on Tinder if she wasn't wanting to get physical with him. She explained feeling that maybe she was in the wrong place, that, *"Oh, this is probably what I signed up for when I signed up for [Tinder], because this is what people associate with this app."* Leyla shared in her written reflection an experience beginning on Tinder and ending on Instagram that heightened her privacy and safety concerns:

> *"This person proceeded to follow me on instagram and message me repeatedly after I expressed disinterest. It made me really uncomfortable to know that this person was able to find my social media and contact me as a result of a dating app. ... This interaction made me realize just how vulnerable being on these apps is. You basically release so much information about yourself to people that you do not get to really control, and with the access to social media platforms it is really easy to be found."*

These examples demonstrate how participants feel they should have *expected* nonconsensual interactions mediated by dating apps.

As a result of these expectations for harm on dating apps, participants described entering dating apps warily. To Sana, dating apps are supposed to be fun, but she shared:

> *"We have to enter on the defensive, it just sucks 90% of the joy out of it. ... Regardless of what your identity is, it's so difficult to put yourself out there. So then for women or maybe queer people that put themselves out there ... they also have to think of all these precautions."*

Sana's desire to have fun has morphed into disappointment as a queer woman, having to be on the alert because being on the apps will, at some point, lead to encounters with *"weirdos or unsafe people."*

Being cautious when matching with men was a shared experience among participants whose settings on dating apps made their profiles visible to men. Overall, participants understood men as inappropriate actors within the dating app ecosystem, prompting vigilance towards men in online dating. Noor's perception of men as a potential threat to her safety led her to start looking up criminal records: *"and I noticed that a lot of them had assault with a deadly weapon or assault. So it's very scary."* Similarly, Sana explained that she only ever receives unsolicited sexual messages from men, which has impacted the way she engages. She explained, *"It makes me way more cautious when I match with men and makes me less trustful of them,"* as opposed to gender non-conforming people,

women, or others she engages with. Participants seemed to generally expect that interacting with men on dating apps would bring unwanted nonconsensual interactions.

Participants perceived engagement on dating apps as a gendered vulnerability, anticipating risks and discomfort, and prompting heightened privacy and safety concerns. As a result, participants frequently described a defensive entry into dating app ecosystems, with men generally viewed as threats to safety, informing vigilance and cautious engagement.

4.4.2 Attributing Nonconsent to Dating Apps' Designs and Norms.

Norms and expectations. Participants described aspects of dating apps they believed increased their potential for experiencing nonconsensual interactions. Dating apps were understood as having behavioral expectations that enabled interactions not normally expected in offline dating. Ayah, like other participants, understood dating apps as having different subtexts. For example, she attributes most of her inappropriate experiences with men to Tinder's subtext:

> "The subtext of being there is that you are a sexually active person. And I am constantly baffled by the amount of people who think that that means that there are no boundaries, that there's no respect, or anything like that. You can have a kind of back and forth with somebody that feels like a normal human conversation that two people might have on earth. And then that person skips right over to something … there was no lead up to, there was no consent, there was no conversation about comfort levels."

What people expect dating apps to be for, in this sense, contributes to false assumptions, nonconsent, and crossing boundaries.

Design features. Some participants reflected that the very design and nature of dating apps enabled less accountability of consequences for nonconsent. For example, Noor explained: *"Because it is online … it's so easy to unmatch if someone says, 'you're not respecting my boundaries,' and they get a little butthurt—unmatch."* Noor attributes the ability to quickly make and end connections as reducing the potential accountability for when a person misbehaves by allowing users to simply dismiss and move on.

Insensitive recommendation algorithms were another feature that led to breaches of participants' boundaries on dating apps. For example, Sana described continuously being shown the same profile repeatedly, despite rejecting the match consistently. She explained, *"His profile would keep coming up, and every time I would see it, I would just report it."* Other features like 'Tinder notes' meant that Sana continued to receive inappropriate messages from individuals she has not matched with, where she received messages from people who matched her but not vice versa – which is fundamentally non-consensual. Additionally, Sara pointed out how dating apps' messaging features may encourage unhealthy boundaries, saying *"you can just message anyone anytime as much as you want."*

The extent to which dating apps' designs provided sufficient space for consent processes to occur surfaced as another feature. Participants contrasted dating apps like Tinder, with dating profiles largely centered on images, with other dating apps like Lex, which have more space for text and community engagement. Sahaab explained:

> "Tinder is very picture focused, so it's a little bit more superficial. … Lex, the experience there was much more like when I was younger and we were first getting the Internet … You're engaging more, you're posting more. It's not about visual[s], it's about the content … And I found that I was able, in terms of my experience, to be the most honest and direct there."

Sahaab's sense that they can be more direct and explicit about what they do or do not want with a dating match on Lex was attributed in part to the platform being text-based, as opposed to apps

like Tinder which are much more centered on images and a faster sorting experience via 'swiping' when considering dating matches. Dating apps, through their design and modes of interaction made available to participants, can set the tone for consent being granted the time it needs to be able to occur between individuals.

4.4.3   Labor of Preventing Nonconsent. The act of engaging in extra labor to ensure consent, prevent the experience of harm, and promote safety was an integral part of consent practices among participants. Zeina shared her need to anticipate warning signs:

> *"I think a lot about situations where it was like, 'Oh, if she had just recognized like this one warning sign, like, she'd still be alive.'... I think about that and I'm like, I have to be extra vigilant."*

This extra labor to protect themselves from nonconsent echoes prior work that looks at the strategies women deploy as protective measures against intimate intrusions on Tinder—behaviors that, while not blatantly violent, "still make them feel uneasy, uncomfortable, or unsafe"[44, p.2].

Participants were interested in signals that would lessen their uncertainty about experiencing nonconsent with their matches. To do this, participants made judgments about a match honoring their boundaries if they engaged in behaviors they understood to promote safety. For example, Sara described being attentive to signals that a dating match shared similar understandings of healthy boundaries:

> *"I think I can tell when people don't have good boundaries, if they message a lot or they make comments that feel inappropriate. ... I try to get to know people just as slowly as you would under more traditional circumstances. And when people don't do that or don't respond to that, if I send one message and then they send me 10 messages, it concerns me that they potentially don't see how that can be emotionally unsafe. And I wouldn't say it signals to me a potential lack of physical safety, but I would say there's some lack, I think, [of] emotional safety."*

Similarly, Sana described signals for vetting safe dating matches based on conversations about her past:

> *"Usually past dating experiences come up. And then that's a great way for me to vet people based on their reactions to some of the messages I get, to me expressing how people have pressured me and done this. And then I usually can gauge their reaction."*

By performing this labor, Sana creates space to judge matches' responses to her disclosures and determine if they affirm the inappropriateness of a behavior and then judges their understanding of consent.

Sometimes, however, participants deliberately sought out signals for the understandings and practices of consent embodied by their dating matches to prevent harm, often assessed through little 'tests' for their dating matches. Sahaab described a series of 10 questions she asks:

> *"I was pretty overt with that. I was like, 'I'm tested. Do you get tested? How many ... partners do you have? Do you ... ?' And some were political, and some were whatever. ... It's different depending on the person. With cis guys, I expect more. I hold them to a higher level ... So, you can sense their personality a bit when they're pushy about like, 'Well, what are your answers?'... They don't like that they're more vulnerable."*

By asking these questions, adding more time for personality to emerge and judging how that relates to whether she'd like to continue speaking with a match, Sahaab engages in labor to make judgments on safety and risk, and on her desire to consent to further interaction with a match.

At the same time, participants described engaging in the intentional pursuit of information online as a way to be cautious and mitigate risk of nonconsent. Many participants admitted to

rigorously investigating dating matches' digital footprints to vet them. Naima googled people if possible, checking for suspicious photos on social media and criminal records. *"It's a safety check more than anything else,"* she said. Whereas Leyla experienced nonconsent and harassment when someone found her on other social media platforms from information visible on a dating app, Naima used information visible about matches as a way to check for signals of safety. Similarly, Hana described asking dating matches for additional contact information to verify they are who they've presented themselves as:

> *"If I want to meet or talk to them off of the app, 'Hey, what's your Instagram and what's your number?'… As a safety mechanism, I'll try to find out who this person is, anything, make sure they're a real person."*

Whether they check a digital footprint, directly ask a match or use investigative skills to find information based on clues in a profile, participants valued more information than what was solely made available on a dating profile to assess the risk of harm.

Despite a desire to engage in information-seeking about dating matches to reduce uncertainty of consent and safety, participants also described deliberately withholding information about themselves. For example, after being physically grabbed by a person who recognized her from a dating app, Hana explained in her written reflection that she chose to use an Arab name other than her own on her profile:

> *"I was pulled from behind by a random man. He called me by my name, when I have never met this person in my life. I was mortified. He asked me why I didn't match with him back on Tinder. … I have a very unique name … I now go by a shorter version of my name that has Arab roots."*

Aware that her name was unique for the area she lived in and potentially more memorable as a result, Hana chose to withhold her real name from dating matches for fear of nonconsensual experiences.

Engaging in extra labor and behaviors to ensure consent, prevent harm, and promote safety is an integral part of the practices of consent among participants, involving strategies such as deliberate information-seeking, assessing signals of respect for boundaries, and implementing tests to gauge a dating match's understanding and practices relevant to consent.

5 DISCUSSION

By examining the experiences of women and non-binary individuals in the U.S. Arab/SWANA diaspora mediated by online dating apps, this study provides insights into how individuals' identities and social positions, consent-related beliefs and behaviors, and technology and its features intertwine to shape people's (non)consensual experiences. By paying attention to the relationship between technology, identity and consent, this study offers its key contribution: a conceptual framework of *technocultures of consent.* We elaborate on this conceptual framework and discuss opportunities for design that facilitate consent processes.

5.1 Technocultures of Consent: A Conceptual Framework to Situate Consent-Related Experiences Mediated by Technology

Technocultures of consent refers to the understandings and practices of consent that are shaped by interaction between technology and people, and serves as a conceptual framework to interrogate these experiences. We focused on the consent-related experiences among women and non-binary people in the U.S. Arab/SWANA diaspora —an overlooked group in consent-related CHI, CSCW and social computing research. A large corpus of work in CHI and CSCW has investigated the relationships between consent and technology [35, 40, 87, 103–105] across different genders and
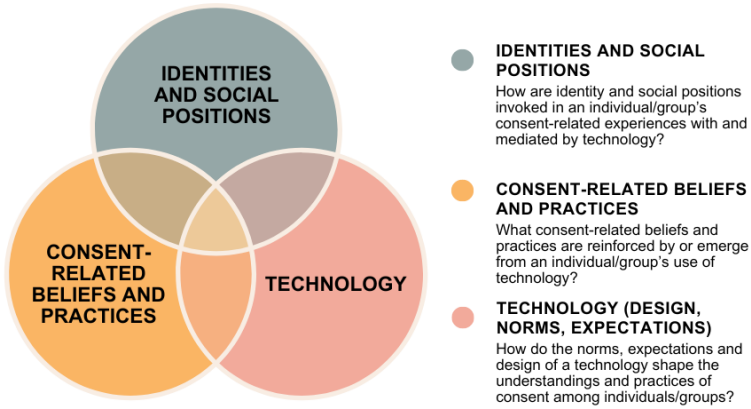
TECHNOCULTURES OF CONSENT

Fig. 2. This diagram illustrates the three dimensions of the technocultures of consent conceptual framework: 1) consent-related beliefs and practices, 2) technology, and 3) identities and social positions. We provide examples of questions scholars using this conceptual framework might ask to make sense of consent-related experiences encountered in their work with participants. We aim for these guiding questions to serve as a starting point for scholars considering the technocultures of consent conceptual framework in their research.

online dating environments.This valuable work has produced recommendations for design, such as ways to support users with decision-making to mitigate risk [30, 108] and engage in self-protection [9]. However, our conceptual framework of Technocultures of Consent aims to push CHI, CSCW, and social computing consent-related scholarship towards centering the *racialized*, and gendered user as opposed to a universal, genderless (white male) user [13]. This approach encourages us to consider how identity and social positions are implicated in consent-related processes, highlighting the significance of intersecting identities and power dynamics [29]. Consequently, technologists can better account for how identity may shape consent-related processes [31, 36] and mitigate the increased risks of nonconsensual harms for marginalized communities [48].

With this conceptual framework, we emphasize the relationship *between* identities and social positions, consent-related beliefs and practices, and a technology [Fig. 1]. Technocultures of Consent focuses on the interconnectedness of consent *with and as mediated by* artifact, beliefs and practices [21, 76]—it holds a commitment to investigating the *relationships between* that might contribute to experiences of (non)consent for those implicated by a technology's use, centering those at the margins *while* also recognizing the importance of not dismissing those with power (e.g., whiteness, maleness, heterosexualness). That is, Technocultures of Consent centers consent-related experiences of users experiencing marginality without ignoring other racialized and gendered users who hold power via whiteness and maleness or heterosexualness and so on.

We demonstrate, next, how the conceptual framework of Technocultures of Consent can be used to situate consent-related experiences, using examples from our analysis. Then, we discuss the place this conceptual framework has in HCI and CSCW scholarship.

5.1.1 Nonconsensual Sharing of Information: Womenness, Queerness, and Privacy Concerns. Participants expressed concern that their presence and/or information shared on a dating app might spread to others in their personal networks without their consent (e.g. via screenshots) *or* that they may encounter people they know on the same apps, facing context collapse [19]. These anxieties around nonconsensual sharing of information were grounded in concerns over one's reputation, a gendered double standard for engaging in dating, or concerns of experiencing consequences for not adhering to heteropatriarchal norms that may be present among the Arab/SWANA diaspora and broader U.S. context [71]. Participants in our sample—regardless of sexual orientation—rejected these social norms through their decisions to engage in intimacy, dating and relationships outside of a heterosexual marriage.

More broadly, participants' concerns of nonconsent were connected to privacy concerns emerging from simultaneously existing as part of a public, and networked public [18]. Public, here, can be conceived at a broad level as being part of a group of people living in the U.S., at a narrower level of belonging to a collective of people who exist as part of a diaspora as an imagined community with an imagined shared Arab and/or SWANA culture, or at the local level of belonging to a specific, localized community (e.g., city, neighborhood). Networked public [18], in this case, refers to the digital space developed through dating apps *and* the imagined community that manifests around users of these platforms. Neither of these publics are completely bounded entities. Participants' concerns of nonconsent and privacy violations invoked an imagined audience [56] of personal and communal ties, information distribution using technology's functions (e.g., screenshotting) and non-technical approaches like general gossip, *and* the consideration of social and communal norms. As many dating apps rely on geographic proximity as a way to present potential matches, the boundaries between public and networked publics is even more blurred; within this context, participants attempted to navigate concerns of nonconsent and privacy infractions.

Participants' understandings of consent and concerns for the nonconsensual sharing of information invoke Marwick and boyd's *model of networked privacy* [64]. Marwick and boyd argue that networked privacy "is the ongoing negotiation of contexts in a networked ecosystem in which contexts regularly blur and collapse. ... it requires meaningful control over the networked contexts in which the information flows" [64, p.1063]. Networked privacy—like consent—requires ongoing negotiation. This aligns with participants' understanding of consent as an ongoing process they should have full control over on a case-by-case basis for determining what is appropriate or not, consensual or not.

Particpants' identities and relationships with these identities may inform or motivate their granting of consent and negotiations of privacy. While prior work [59] suggests that dating app users care more about institutional privacy (e.g., personal data shared with institutions) than social privacy (e.g., interactions involving people one knows or could know), participants' concerns for nonconsent deeply implicated social privacy concerns exacerbated by womenness or queerness and membership in the U.S. Arab/SWANA diaspora. Members of racialized and gendered communities are embedded in various contexts and networks (publics) and our findings demonstrate how social norms (e.g., stigma around dating, assumptions that dating app use is sexual) prompt dating app users to engage with technological functions to negotiate the myriad contexts of networked privacy [64].

In recognizing the ongoing nature of both consent *and* networked privacy [64], women and non-binary individuals in the U.S. Arab/SWANA diaspora might benefit from dating app design

whose privacy settings and affordances regularly adjust or update to individual wants and needs. Future work might explore how dating apps' current privacy features support or hinder control over the many contexts information shared on users' profiles *might* flow elsewhere. Researchers might also investigate how dating app users fearing nonconsensual information sharing manage these concerns, specifically for information flows that extend beyond the networked public of dating apps, to identify ways dating apps can help mitigate nonconsensual information sharing from online-to-offline contexts.

5.1.2 Dating Apps, Neoliberalism, and Consent-Related Safety Work. Participants took it upon themselves to navigate the risk and harms encountered through their use of dating apps, in part as a reaction to the neoliberal ethos of dating apps that renders users responsible for their own safety. Apryl Williams argues that "tech companies take a hands-off approach when harm comes to their users as a result of the social ecosystem they've developed … it's every person for themselves" [101, p.141]. Additionally, social platforms position online harm as done by a few "bad actors" that "responsible" users can shield themselves from [45]. By dating apps addressing safety and harm prevention with a neoliberal ethos, they position users as beings with uninhibited agency [102], and those without power in a heteropatriarchal society [78] as fundamentally "capable of transcending gendered power relations and exerting complete control over their surroundings and other people" [22, p.829]. Neoliberal discourses of responsibilization dismiss how one's race, gender, or class might shape power relations integral to consent processes [46]. Participants in this study engaged in extra labor to protect themselves from nonconsent—work they took upon themselves to ensure safety and prevent harm while using dating apps.

We view participants' labor to prevent nonconsent as a form of consent-motivated 'safety work' [53]. Safety work, coined by Liz Kelly [53] describes "the work women do as a precursor to stop the violence happening at all. … so automatic that we no longer notice the strategies that we use in our attempts to limit or avoid intrusions … a requirement, producing a set of gendered expectations that have a huge amount of influence over our actions and beliefs"[98, p.269]. Vera-Gray views exercising of one's labor in safety work as *situated* agency, where one's agency is free *and* restricted simultaneously, "an expression of the way women are both acted on by, and capable of choosing to act within, the patriarchal gender order"[97]. Extending prior work that views the labor heterosexual women on Tinder perform to prevent intimate intrusions from men as safety work [44], we illustrate how safety work [53] also occurs in the consent-related practices of queer women and non-binary people in our study. Participants' experiences with dating apps reveal *consent-related* safety work as necessitated by dating apps' neoliberal ethos with regards to safety and the expectation of harm from men, while simultaneously prompted by an individuals' desire to prevent and/or reduce the risk of nonconsent and its consequences.

Consent-related safety work by participants can be understood as situated within the neoliberal ethos of affirmative consent [46] *and* safety on dating apps [45, 101], as well as the heteropatriarchy present in the U.S. *and* Arab/SWANA diasporic publics. Participants referenced the features of (repeatedly) deactivating/pausing their account, unmatching, reporting, blocking or withholding responses to protect themselves from the consequences of nonconsent; however, they did much more supplemental labor thought to prevent nonconsent. Consent-related safety work as a practice in the U.S. Arab/SWANA diaspora's technocultures of consent manifest in several ways. First, participants applied predictive/proactive uncertainty reduction strategies regarding a dating match's consent-related behaviors to increase predictability of their consent-related behaviors on- *and* offline. Second, participants understood their consent-related practices as connected to protecting the safety of others with perceived identity or experiential affinity, revealing an understanding of one's consent as interconnected that we refer to as *networked consent,* described in detail later.

Consent Practices as Uncertainty Reduction Work: Dating Apps, Gendered Labor, and Reducing Uncertainty of (Non)Consent. Participants described engaging within the ecosystem of dating apps on the defensive, expecting to encounter harm from matches (particularly men), and considering themselves lucky if they did not. As a result, participants' consent practices culminated in labor —consent-related safety work— that aimed to reduce their uncertainty regarding experiencing nonconsent. People are motivated to reduce uncertainty with others who can bring both positive, rewarding experiences and harmful experiences [82]. Participants tended to reduce uncertainty about dating matches with the awareness that they might be a source of fun, safe, consensual experiences, as well as pose threats to their safety and cause harm. We argue that a fundamental practice of consent among women and non-binary people in the U.S. Arab/SWANA diaspora is implementing predictive and proactive uncertainty reduction strategies [16, 17] regarding behavioral uncertainty about a match, with the goal to increase predictability of (non)consent. Predictive, proactive uncertainty reduction strategies aim to allow somebody to anticipate behaviors *prior* to them occurring [17]. For participants, these strategies included warranting-type [99] and information seeking [80] behaviors, as well as secret tests [14] to help individuals predict the likelihood of nonconsent, as well as produce signals of a dating match's *understanding* of consent.

Individuals may want to warrant (validate) that someone's online self-presentation aligns with their offline self, and engage in warranting-type behaviors based on the "perceived legitimacy and validity of information about another person that one may receive or observe online" [99]. An example of a warranting-type behavior might be a person wanting to validate that a dating match worked where they said they worked by trying to find a secondary source to corroborate their claims. When information is perceived to be highly controllable by the person it describes, that information has less weight on an individual's impression of the legitimacy between online and offline presence [33]. As a result, individuals are more likely to seek out information about a person with higher warranting value—information free from potential manipulation by that person—to corroborate claims [99]. However, our participants—instead of warranting information presented by another's online self-presentation [43]—attempted to seek out additional information that corroborated their own assumptions based on the identity of a dating match and as a result of lacking trust in dating matches. These findings differ from prior work on warranting and online dating [43] by individuals looking to warrant information *assumed* about a person on the basis of perceived identity (e.g., seeking out criminal records in response to a match being a man), not information presented by a person.

Participants attempted to seek out information online that *affirmed* their expectation for encountering harm from male dating matches: Noor and Naima deliberately searched online and offline for dating matches' criminal records or evidence of past abusive behavior. Harm was the expectation, not the exception, and thus corroborating this expectation was one way participants tried to reduce uncertainty for nonconsent and harm from dating matches. The absence of such information online—such as not locating a criminal record—was seen as failing to corroborate an expectation for harm *and*, as a result, reduced uncertainty for nonconsent or potential harm from the individual being warranted. This study *extends* warranting theory [99] by revealing how information *assumed* about an individual *on the basis of their identity*—not solely information explicitly presented or self-disclosed—might prompt warranting-type behaviors.

Beyond warranting, participants repurposed the messaging interfaces within dating apps and other digital tools (e.g., texting) to deploy interactive information-seeking strategies that they thought would help them to reduce uncertainty regarding (non)consent. Participants' information-seeking behaviors were motivated by the goal of wanting to experience consensual interpersonal interactions, and behaviors from their dating matches' that aligned with their understandings of consent. Information seeking may involve "direct interaction between communicator and target

during which different tactics are enacted to elicit desired information. The communicator may interrogate the target, disclose information designed to elicit reciprocal disclosure, or attempt to relax the target as means for acquiring information" [80, p.219]. Individuals sometimes deploy secret tests to potential relationship partners in order to acquire desired information about the status of their relationship [14]. Participants in our study described giving tests—tests we refer to as *consent concept alignment tests*—to their dating matches to elicit information thought to signal a dating match's understanding and practices of consent. We define *consent concept alignment tests* as interactive information-seeking strategies designed to produce information that helps someone judge whether another's understandings and practices of consent appear to be aligned with their own. Consent concept alignment tests are a type of consent-related safety work embedded into technocultures of consent.

In this way, participants repurpose interfaces offered by online dating apps—individual profiles, messaging features[108]—for evaluating dating matches as testing grounds for evaluating a person's potential understanding and practices of consent. However, understandings or practices of consent may not translate to actual behavior and could shift at any moment. Thus, consent concept alignment tests are a means of reducing, but not eliminating, uncertainty of (non)consent in future interactions.

Networked Consent: Consent as Interconnected. We introduce the concept of *networked consent* to refer to the idea that one's consent practices and experiences are bound and connected with others. The network may include people in one's social network as well as people with perceived identity or experiential affinity. Practices of networked consent—such as reiterating that what one consents to is not representative of what others assumed to be like them might also consent to can be conceived of as a type of consent-related *safety work*. These practices attempt to preemptively prevent violations, harms and nonconsent of *others*, rather than oneself. While whiteness is often understood as representing a group of individuals acting as individuals, racialized communities are often portrayed as a monolith, dismissing the rich heterogeneity that exists within [21]. Participants were acutely aware of the orientalist discourse and fetishization that surround Arab/SWANA individuals and did not want to further reify these beliefs in their consent-related behaviors with dating matches. Participants, understanding themselves as part of a racialized group in the U.S. context, saw their consent and consent-practices as interconnected with others in this imagined network—network in this context being those with a shared identity (e.g. Arab/SWANA, queer SWANA, Muslim woman, etc.). A sense that one's consent is interconnected with others' experiences of (non)consent prompts some to feel a sense of responsibility for protecting others from nonconsent. In this way, *networked consent* was an understanding of consent that emerged among women and non-binary people in the U.S. Arab/SWANA diaspora.

Practices of networked consent are motivated by both the feeling they are part of a community they hold a responsibility to *and* the awareness that they are perceived as belonging to or representing a gendered and/or racialized group. While much of prior HCI work on consent looks at consent from one-to-one (e.g. staying within a relationship or as between a corporation and its consumer) [106], *networked consent* alludes to larger patterns of consent that might implicate a group of *many* with shared identities. Considering how consent might be networked is important to provide insight for how processes of racialization and group identity might inform individuals' experiences of consent in their engagements with others.

5.1.3 A Place for the Technocultures of Consent Conceptual Framework in CHI, CSCW and Social Computing Scholarship. Social computing technologies have an important role to play for consent exchange and interpersonal consensual processes [104], and we know cultural beliefs and technological features culminate into technocultures that inform groups' behaviors [20]. Technocultures

of Consent is a conceptual framework that aims to bridge these two notions by centering analysis on the relationship between one's identities and social positions, consent-related beliefs and practices, and a technology and its features. This is valuable for CHI, CSCW and social computing scholarship concerned with mitigating nonconsensual experiences and supporting consensual ones for individuals and communities while being attentive to differences in power and lived experiences within the sociotechnical. This lens is one way an intersectional approach [29] can be central to consent-related research emerging from the CHI, CSCW and social computing community. This lens centers analysis of technology users' social positions and power differentials when making sense of understandings and practices of consent. In this way, a technocultures of consent lens aims to prioritize intersectional analyses in consent-related research among CHI, CSCW and social computing scholarship.

5.2 Opportunities to Support Consent through Dating App Design

Participants revealed understandings of consent that centered myriad values such as safety, trust, direct communication and the ability to set and change boundaries. Participants needed time and space to establish trust and a sense of safety with a dating match *prior to* beginning to negotiate consent. However, this space—both as a feature of design *and* as a construct of time—was not always supported by dating app norms and design. Recognizing how platforms' design and norms can shape user experience, we reject a neoliberal framing of safety and harm on dating apps that "absolves platforms of responsibility and reproduces the myth that platforms are neutral conduits, rather than powerful media institutions whose architectures, cultures, and governance practices not only reflect but also help to shape society and its various forms of inequality"[45, p.9]. Instead, we argue dating apps' design can create more space for consent to develop, along with safety and trust. Below we speculate on threads of design that *may* address this need, but note that exploring these avenues for consent support is a site for future work.

Design Space for Consent Communication. Designers might consider how to design to facilitate conversation about consent, as well as conversation that fosters a shared sense of trust and safety. Features within dating profiles are used as starting points for establishing consent, such as the "What're you looking for?" feature where users can publicly display their goals on their profile. Open-text boxes, as opposed to pre-prescribed options, align with participants' understandings of the fluidity of dating intentions, as well as making more space for voicing one's wants and needs. An existing example of this is Hinge's dating intentions feature—with an open-text box—that allows users to provide additional context *in their own words* that could appear below their selected response (e.g., short-term, life partner) on their profiles [62]. Another opportunity to interject space for consent are the prompts dating apps provide to display on one's profile. Hinge is the only dating app our participants used that included prompts specifically with topics relating to consent, with prompts such as "A boundary for me is…" and "A non-negotiable for me is…" Future work could examine how individuals make sense of disclosing consent-related wants and needs on their profiles, as well as the myriad ways people interpret such disclosures.

Design for Individual Interaction Preferences. What constitutes nonconsent can vary from person to person, and depend on contextual interpretation of appropriateness or boundaries. Designers could consider more opportunities for individuals to set their preferences and help with communicating these to dating matches. Dating profiles might create space for individuals to select (and elaborate) on interaction preferences, dislikes or dealbreakers. These could refer to things like frequency of messaging, mode of messaging, comfortability with moving off the app, openness to consider physical intimacy, etc.

It is important for design to offer space for consent, without mandating it—by creating space and the option to display, design can afford individuals the choice regarding what, how, if and when this information is disclosed to others.

Design for Consensual Visibility. Participants raised concerns about the possibility of others screenshotting their dating profile and sharing it with others. Dating apps like Salams and Muzz offer individuals some control over the visibility of photos shared on their profiles, allowing the option to hide or blur photos, and then selectively choose when and to whom they make those photos visible [68, 85], instead of visibility automatically being granted to anyone seeing their profile. This seems like a promising feature for other dating apps to pursue to better protect users' privacy. Additionally, the ability to screenshot (or not) brings to light a tension between screenshotting and one's privacy *and* safety. While some apps ban users from screenshotting dating app profiles or messages [31], others specifically encourage users to submit screenshots of a person's profile or messages when reporting their behavior [49, 94]. There is a need for dating apps to design a more regulated screenshot or screen recording ability that balances uses of screenshotting/recording for safety with privacy violations [89].

Design to Assist Boundary Setting. Participants highlighted how their upbringing within the diaspora might have supported or constrained their skills for setting boundaries in dating. Similar to how Bumble offers suggestions for first messages, dating apps could assist with boundary setting by offering editable messages for matches that state and affirm boundaries. A user might benefit from suggestions for how to tell a match that a message made them uncomfortable and, as a result, they no longer wish to continue the connection before unmatching; a message providing a starting point with suggestions for how to set that boundary could lessen the cognitive and emotional labor of navigating that situation. In this way, dating app design could make space to support the establishment and maintenance of users' boundaries.

For participants who expressed concern over the fast pace, dating app design that grants more time for a match connection to (potentially) progress might be appreciated. Prior work in HCI [74] has proposed *designing for slowness* as a way to support anticipation. Participants in our study seemed to anticipate harm/nonconsent despite desiring consensual, enjoyable experiences with matches. Future work might explore what designing for slowness might look like in the context of dating apps to add time for trust and a sense of safety to grow between dating matches.

With all of these possibilities, it is important to note that issues of (non)consent become even more complex as individuals move offline, and so we do not make claims that design can end nonconsent. These design threads propose considerations for designers to build *space* for consent-related practices and behaviors in alignment with values of consent we uncovered in this work. However, the direct thread between these potential design directions and their translation to individual experiences of (non)consent as mediated by dating apps is a site for future work.

6 CONCLUSION

Through 20 written reflections and 13 interviews with women and non-binary individuals from the U.S. Arab and SWANA Diaspora (N=23), we explored connections between identity and social positions, understandings and practices of consent, and dating apps and their features that were salient to participants' experiences of (non)consent as mediated by dating apps. We found that boundaries, safety, trust and kindness were salient to participants' consent practices and beliefs, revealing tensions when those values are not shared with dating matches and not prioritized in dating app design. We detailed the ways that navigating gendered and racialized power dynamics complicated participants' efforts to establish, revoke, and enjoy consensual interactions, and noted limitations within dating apps for enacting agency in consent negotiations. Lastly, we reflected on participants' understandings of consent as communicated, yet misunderstood and unexpected

on dating apps, noting the types of practices that emerged from these understandings to try and mitigate risk for nonconsent. Women and non-binary people in the U.S. Arab/SWANA diaspora are not a monolith, and their experiences revealed the ways their social positions and identities shape their understandings and practices of consent as mediated by dating apps. Drawing from our analysis, we contribute the conceptual framework of *technocultures of consent* and demonstrate how this framework helps to situate individuals' positive and negative consent-related experiences facilitated by technology. We extend warranting theory to include how information assumed about a person on the basis of perceived identity, not information solely presented by a person, is warranted as part of participants' uncertainty reduction consent-rated safety work. We also propose the novel concept of *networked consent* to describe the belief that one's consent practices and experiences are bound and connected to others with perceived identity and experiential affinity, and demonstrate how this motivated consent-related safety work that aims to protect *others* from nonconsent. We discuss the constraints of dating app norms and design for making sufficient space for consent processes that center values of safety, trust and kindness, and propose future directions for research and design to consider for allocating space and time for consent to occur on dating apps and other CMC technologies.

7 ACKNOWLEDGMENTS

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8 APPENDIX

A INTERVIEW PROTOCOL

[Warm-Up]

(1) Can you tell me a little bit about which dating apps you've used? What made you choose those apps specifically?
   (a) Are there any dating apps you used to use but don't anymore? What caused you to stop using [dating app]?
   (b) Which dating apps do you currently use?
(2) If you could describe your online dating experience in a couple words, what would you say? Why?

[Perceptions, Goals, and Intentions]

(1) Can you tell me a little bit about when you first started using dating apps?
   (a) What was your reason for beginning to use dating apps?
   (b) How have your goals or reasons for use changed over time?
   (c) Currently, what are you looking for or why do you use online dating apps?
(2) How has your perception of online dating apps changed since before you first started using them?
(3) If you feel comfortable, could open up your bio on one of the dating apps you currently use and tell me what it says? Why did you choose that bio?
(4) Can you describe a couple of the photos you chose for your dating profile? Why did you choose those photos?
(5) When people look at your profile, what do you want them to take away from it? Tell me more about that.
(6) What do you think other people think when they look at your dating bio?

(7) Do others in your personal network know that you use online dating apps?
  (a) How did they find out?
  (b) How do you feel about others knowing you use dating apps?
  (c) Do you have any concerns about certain people knowing you're involved with online dating?[If yes] What are those concerns and who are you concerned about—why? Does that impact your behavior on the app or in your personal life in any way?

[On-App vs On-to-Off App Interactions]

(1) What are the ways you interact with people on the apps?
  (a) If you had to describe it, who do you think you typically interact with?
  (b) How do you decide whether to interact with somebody or not?
  (c) Have you ever had an interaction with somebody on the app that you would've rather not interacted with? Can you tell me about that (those) specific interaction(s)?
(2) What are the ways you interact with people you've met through online dating apps outside of the apps themselves? [Follow-up] For example, have you ever met up with someone for an in-person date or chatted with someone on a separate social media account that you met through online dating?
(3) How did your interactions with others move off the app?
(4) Have you ever engaged in intimate behaviors with someone you met through a dating app?[Follow-up] For example, have you ever hugged or kissed someone you met through the apps? Have you ever engaged in sexual behaviors with someone you met online?
(5) If you feel comfortable, would you be open to telling me about a positive intimate experience you've had with someone you met through online dating?
(6) If you feel comfortable, would you be open to telling me about a negative or uncomfortable intimate experience you've had with someone you met through online dating?
(7) Did someone you met through online dating ever try to interact with you either on or off the app in a way that you did not like? Tell me more about that. What was it about that interaction you didn't like?

[Interpersonal Positive and Negative Interactions]

(1) Can you tell me about a specific interaction or experience you had with someone you met through online dating apps that is most memorable to you—that stands out from the others? [may prompt with asking about specific interaction/experience shared in the journal entries].
(2) Can you tell me about a positive interaction you've had with someone through online dating apps?
(3) If you feel comfortable, would you be open to telling me about a negative interaction you've had with someone through online dating apps?
(4) This section will be where I ask follow-up questions to specific interactions/experiences shared and reflected on in Part 1 of the study. This will involve preparatory work personalized to each participant.
(5) Do you feel that the dating apps do or do not support you in navigating safety concerns? Tell me more about that.

[Values]

(1) Have you had any experiences with online dating where issues of safety and trust were salient to you (Safety/Trust)? Can you tell me a specific example?
(2) Have you had any experiences with online dating where you did or did not feel in control (Agency/Autonomy/Enablement)? Can you tell me a specific example?

(3) Have you had any experiences that you think had an impact on your well-being? For example, your physical, mental, or emotional health (Well-being)? Can you tell me a specific example?

(4) Have you ever had any online dating experiences where you felt you were or were not treated with respect as a human being (Equality and Respect)? Can you tell me a specific example?

(5) Have you ever had an experience with online dating where you sought support or confided in someone (Peer Support)? Can you tell me a specific example?

(6) Have you ever had any experience using online dating apps where you felt like the app was particularly helpful or supportive of your wants and goals (Collaboration)?

[Arab and/or SWANA Identity]

(1) Do you feel that your identity as a [insert self-identified identity from screening survey] has shaped your experiences with online dating? If yes, in what ways? [If no, follow up] Have you ever thought about your race or ethnicity while using an online dating app or engaging with others on-and-off the apps?

(2) Do you feel your gender or sexuality as a [insert gender/sexuality from screening survey] has shaped your online dating experiences? If yes, in what ways? [If no, follow up] Have you ever felt your gender or sexuality mattered when you were using the apps or interacting with others?

(3) Do you feel your socioeconomic status has shaped your online dating experiences? If yes, in what ways?[If no, follow up] Have you ever felt your socioeconomic status mattered when you were using the apps or interacting with others?

[Closing]

(1) What would you say has been the most surprising or unexpected thing you've found about online dating apps?

(2) What's been the most surprising or unexpected thing you've found about online dating generally?

(3) How would you define consent between individuals?
  (a) Given your definition, can you tell me about how you think consent is understood in the online dating context?
  (b) How do you think consent *should* be understood, practiced or treated? Tell me more about that.

(4) Do you have any questions for me before we end today?