Designing for Culturally Sensitive Cultural Change

A case study of designing for the visibility of Saudi women in the digital media

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ABSTRACT

Online self-presentation is recognized as a global phenomenon largely influenced by and sensitive to users' cultural norms. However, incorporating cultural understanding into the design process can be challenging. Designing for culture creates dilemmas between designing for a pre-existing cultural 'status quo' or for cultural change. We argue that culturally sensitive design should not be a tool for (i) perpetuating existing cultural inequalities or (ii) empowering the individual isolated from their wider cultural milieu. We propose "*designing for culturally sensitive cultural change*"—a process in which we support creating a trajectory departing from the status quo, to bridge the gap between people's aspirations and practices related to cultural change. We demonstrate this in a case study on designing for Saudi women's self-presentation in digital media. We conclude with reflections on cultural sensitivity in designing for cultural change and broader implications for HCI.

CCS CONCEPTS

• **Human-Centered Design**; • **Interaction Design**; • **Interaction design process and methods**;

KEYWORDS

Cultural Sensitivity, Self-Presentation, Digital Media, Cultural Change, Saudi Women

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1 INTRODUCTION

Social networking sites (SNS) have been increasingly used as a venue for self-presentation [15, 33, 47], where individuals seek to present a narrative or representation about themselves to a wider community. SNS are characteristically public (or at least semipublic) forums where individuals present a wide variety of personal information about themselves and their day-to-day lives. They inherently require users to disclose their personal information as a means for initiating and maintaining online relationships [18, 24, 27, 64]. It has been argued that self-disclosure is the minimum requirement to participate in SNS [64]. The social nature of SNS facilitates and encourages self-disclosure [29], albeit allowing users to maintain certain levels of privacy by disclosing only selected pieces of information. Online self-disclosure entails sharing various content, such as personal images, descriptions (e.g., "bio" sections of their profiles), birthdays, relationship statuses, places of residence, news, preferred books and movies, opinions, and interests, whether directly on one's SNS page or in the process of communicating publicly with others [29, 64]. Among this information, personal images are some of the most important and personally identifying pieces of information [18, 64].

A variety of different approaches and variables have already been studied to explain a user's willingness to share personal information online [24, 29]. These studies have explored the concept of online self-presentation through the prism of variables such as personal gratification, self-esteem, impression management, social validation, social comparison, privacy concerns, identity state, self-fictionalization and idealization, psychological well-being, age, gender, and national culture [4, 24, 28, 29, 37, 53, 64]. In this paper, we specifically focus on one of the major factors influencing and motivating self-presentation: *culture* [29, 64].

Understanding culture as a core construct of an individual's identity has increasingly gained attention within various disciplines [32], most notably including design research [8, 9, 12, 32, 36, 45, 56]. With the cultural diversity of SNS users expanding rapidly across nations, it is evident that vast cultural differences exist between users' behaviors from country to country [16, 29, 30, 60]. Thus, it has been acknowledged that online self-presentation is largely influenced by (sensitive to) users' national culture [64]. However, incorporating culture in design can be an challenging endeavor [23]. Culture is constantly in flux, which makes it imperative to understand a given culture in its present form and within both

the experiences of the past, as well as the dreams and aspirations of the future [32]. Moreover, challenges may arise in culturally sensitive design when working with underrepresented groups [23] for which little literature exists on their cultural contexts and whose norms do not always align with existing social media platforms (which, outside China, have mostly been developed by Western corporations, e.g., Microsoft, Facebook, and Twitter).

In this paper, we explore the incorporation of culture in design for one challenging case: the dynamics of Saudi women's self-presentation on social media, which we understand has not been sufficiently studied, despite the size of this population. Its counterpart, privacy, has been well studied most notably in the work of Abokhudair and colleagues [2–4]. Whilst such work investigates privacy preferences from culturally specific perspectives with the aim to design in a culturally specific manner, we investigate the counterpart of it: what cultural obstacles hinder our participants (women) to present themselves online and how to design for expanding the public space (online) for women's visibility, yet in a culturally sensitive approach.

This case is interesting from a cultural standpoint because despite the recent reforms introduced by the Saudi government to support women's participation in the public sphere, these reforms were not necessarily accepted as general cultural norms by people within Saudi society [38]. Thus, some cultural limitations still exist for Saudi women, both online and offline, which restrict how they reveal themselves in public (typically physically, such as using face covers). We highlight the importance of culturally sensitive design as a proactive approach to facilitating cultural change—in this study, supporting women's visibility while attending (being sensitive to) potential cultural restrictions.

To put this argument into action, we propose "designing for culturally sensitive cultural change" as a process in which we create a trajectory departing from current conditions (status quo) to desired or envisioned conditions (supporting cultural change) while attending to cultural values at each point of the spectrum. The goal is to identify a point on the trajectory which participants consider breaking from the norms yet not radical or inflicting cultural risks- we call this the proximal point we aim to design for.

In our study, this point was represented in the highest degree of visibility for women while still being in socially accepted level of visibility to minimize the perceived violation of (deviation form) their cultural norms. We report on our study with 18 transnational Saudi women to understand their perceptions and practices regarding their online visibility (self-disclosure). For this, we strive to design for safe spaces to their visibility, and perhaps challenging spaces for future work oriented towards designing for cultural change under the frame of culturally sensitive design.

2 BACKGROUND

2.1 Visibility: Self-Disclosure and Self-Presentation

Self-disclosure is a cross-disciplinary phenomenon with various definitions [6]. It has commonly been defined in comparison to a similar concept: self-presentation. The distinction can be made on the basis that self-disclosure is primarily focused on revealing factual information about oneself, whereas self-presentation involves providing a picture and projecting how one desires to be regarded by others [25, 50, 51]. However, self-disclosure can be recognized as part of the larger concept of self-presentation [47]; in other words, these two concepts blend into each other. We loosely use the term visibility to refer to either or both presentation and disclosure because our focus is on the practices and limitations on our participants *being visible online,* whether it involves revealing information (self-disclosure) or projecting a certain image (self-presentation). Thus, our working (and combined) definition for visibility is: managing which, and how, personal or private matters are revealed to others for different purposes [26, 47].

Typically, the concept of visibility revolves around the notion of sharing information about oneself with others; however, there is a diversity in terms of what kind of information is included in this concept. This information can be categorized into personally identifiable information (e.g., names, personal photos, and contact details); feelings (e.g., positive and negative); thoughts, beliefs, and opinions (e.g., political, religious, and social issues); and everyday activities and events [6]. The scope of this work includes the first category, focusing in particular on physical or visual visibility, which refers to users being visually represented by any form that distinguishes them from other users (e.g., personal photos) [18]. The choice of this scope was derived from the cultural background of our participants (discussed in this paper), which restricts the physical visibility of women in public and online.

On a global level, disclosing personal information online has become a prevalent practice to the point that users not only disclose identifying information but also private or sensitive information, such as sexual orientation, relationship status, political affiliations, and pictures implying heavy drinking [16]. However, users' willingness to disclose personal information about themselves varies. The common factors reported as influencing how people disclose information about themselves are culture, gender, context, motivation, risk–benefit ratios [22], and the mode of communication [35]. Self-disclosure has been investigated and compared across different cultures [6]. In terms of gender, there is a popular perception that women disclose more than men [22], and, thus, studies have investigated the gender effects on self-disclosure, with different results [35, 52]. Self-disclosure has also been investigated in contexts such as alcohol intake, gender differences, personality characteristics [26], and online dating [5]. Other factors motivating self-disclosure include anonymity in online interactions, which was found to encourage self-disclosure more than face-to-face interaction [26, 50, 51], and the use of asynchronous media, which allows time for reflection and editing [50]. Additionally, the concept has been investigated in terms of its positive or negative effects; for instance, a lack of self-disclosure creates deindividualized behavior [14]. Some of the negative effects include embarrassment, rejection, and diminishing power [22].

In this paper, we explore online visibility with a culturally specific group: transnational Saudi women. We aim to incorporate the understanding of our participants' values and practices of their online visibility in our pursuit of supporting the recent cultural changes regarding increasing space for women in the public sphere in Saudi Arabia. For this, in the next section, we discuss Culturally Sensitive Design, and explore how to employ it within this context.

2.2 Culturally Sensitive Design

Cultural sensitivity started as a research practice in human service disciplines (such as social work) and is now widely advocated in design, where it has evolved into culturally sensitive design—a part of the growing scholarships on participatory design and justice-oriented design [23, 57]. However, the main challenge with "culturally sensitive design" as a concept is with the word choice itself; there is no clear definition of how it is attainable for design [43]. In design research, different terms have been used to describe incorporating culture and cultural values into the design process, such as cross-cultural design [12, 36, 45, 56], culturally sensitive design [9, 32, 57], and the localization of design and user experience [55, 57]. For our purposes, culturally sensitive design broadly refers to attending to cultural values in the design process and its outcomes instead of focusing on any particular definition.

In culturally sensitive design [32], research participants are not seen as passive informants; rather, they are expected to be active influencers in developing solutions. As Lee and Sayed [32] argued, "the modernization process must not always mean westernization. One important role of culturally sensitive design is to identify locales' own ways of advancement and modernization, rejecting mere adoption from Western culture." (p.59).

A few studies, related to our work, have discussed incorporating culture in the design for online practices. While the notion of designing for women's visibility in the digital media has rarely been investigated in design research, the counterpart of it, privacy has been investigated in many studies. For instance, Rashidi et. al. [49] argued that typical privacy research is conducted in Western contexts and thus called for considering the cultural aspect when designing for privacy. For this, they conducted a study in which they investigated how Saudi users of WhatsApp manage their privacy settings. They found that users in general and women especially wanted more features for privacy control and thus concluded that "*designers need to be aware that users need privacy tools that empower them to control their privacy in a way that matches their context.*" (p 7).

While we agree with such a culturally sensitive design endeavors, our work here investigates the opposite side of privacy, that is visibility, particularly of women. We argue that the need for strict privacy tools may be only a reflection of the collective societal values, not women's individual values, as we have found in our study, the two may differ in many ways. Thus, we argue that designing for even more restrictive privacy may be one way to perpetuate the status quo which discourages women from presenting themselves in the public sphere (as we discuss in 2.4).

Similarly, Abokhodair et. al. [3] investigated photo sharing as a practice of presenting oneself online with Saudis and Arab users. They found that users develop two facets of the self that are presented differently in different platforms (or in different accounts): the autonomous self and the collective self. The reason for this is that such participants coming from collectivist societies struggle to find a balance between "*what they want to share versus what they are expected to share.*" (p708). For this, the authors suggested a design implication that considers designing for the two facets of the self where users are allowed to practice this duality safely. However, we raise the same point about designing for the status quo. We argue that, given the rise of cultural changes in Saudi Arabia, the design of technology should also consider adapting with such a change and facilitate creating a trajectory in ways that are culturally sensitive yet supportive for social change.

In another Islamic context, Sultana et al. [54] argued that designing for radical cultural change may not be effective and thus designers should be *realistic* and work within the users' wider culture, "*even if we ultimately wish to subvert it.*" (p.9). As such, they proposed the concept of *design within the patriarchy* in which the goal of design is to support incremental yet small changes that do not create social risks for women. Similarly, in recent work by Abebe et al. [1], the authors suggested that between *solutionism* and *critical* approaches to design, we should develop strategies that seek to address social problems within the boundaries of social and political systems. Therefore, attending to broader cultural contexts may provide a stepping-stone toward creating positive cultural change.

In line with this philosophy, we emphasize that attending to cultural values should not be a vehicle for perpetuating the status quo. Yet we also argue that, especially with marginalized groups, designing for their needs in isolation from their broader social context might further disintegrate them from society and perpetuate exclusion. As a result, we propose "designing for culturally sensitive cultural change", which is a process in which we create a trajectory departing from current conditions (status quo) to desired or envisioned conditions (supporting cultural change) while attending to cultural values. The goal is to identify a proximal point in the spectrum that represents the highest degree of change yet within the boundaries of socially accepted practices. For instance, in our study, we aimed to clearly identify the highest degree of cultural change regarding online visibility that women could involve themselves in without becoming prone to facing major cultural criticism.

2.3 Cultural Context: Saudi Women's (In)Visibility in the Public Sphere

In many Islamic cultures, restrictions are imposed on women's visibility in public due to a heavy reliance on patriarchal interpretations of Sharia law [59]. For instance, as the Taliban recently seized Afghanistan, they asserted that they would respect women's rights in accordance with Sharia law; however, they did not elaborate on how they interpret such law. Women in some parts of the country were reportedly denied access to some public places, asked not to leave their houses without a male guardian, and images of women on store windows were vandalized [21, 34, 40, 44].

In Saudi Arabia, until recently, similar practices were applied regarding photos of women in public spaces, such as shop windows or billboards. Most of these restrictions revolve around one concept: the (in)visibility of women in the public sphere.

For decades, the predominant Islamic tradition followed in Saudi Arabia has been Wahhabism. Its teachings have prevented women from driving cars, kept them segregated in education and the workforce, and put them under the guardianship of their male relatives, who control their mobility, marriage, work, and education [7]. Moreover, in Saudi Arabia and other Islamic cultures, women are still not regarded as equal to men in the eyes of the law and society; for

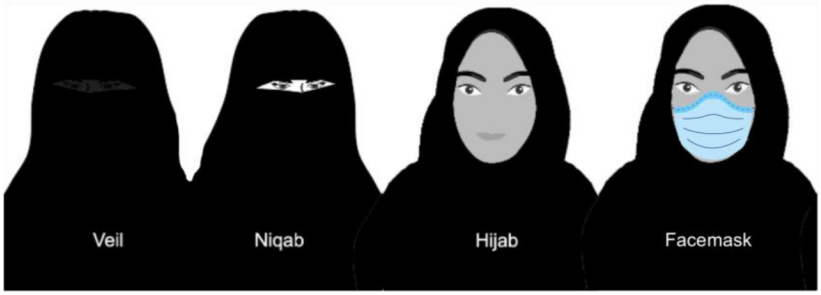


Figure 1: The three common Islamic interpretations of what makes a veil. (From left to right): A woman fully covered representing "veil", a woman fully covered except for her eyes, representing "Niqab", a woman full covered except for her face, and a woman fully covered except for half of her face, wearing facemask instead of niqab representing a newly adopted style after covid-19

example, daughters receive half the inheritance of sons, the testimony of one man is equal to that of two women, and (until recently) Saudi women were not allowed to drive or leave the country without permission from a male relative [62]. Such interpretations and legislations are also reflected in everyday life, where Saudi women are socialized to be subordinate to men, obedient, and remain chaste [58]. A strict emphasis on women's chastity is one of the reasons behind the strictly gender-segregated society [38]. Saudi women predominantly work in gender-segregated environments due to the cultural belief that they should not be seen by men other than their immediate relatives [48]. Thus, despite recent reforms in the country, being physically visible in the public sphere is still a contentious issue [58]. This invisibility is mostly symbolized and manifested in the dress code enforced on women, commonly known as the veil.

Although veiling is a common tradition among women in most Muslim societies, its enforcement in Saudi society for local and expatriate women is particularly strict compared to other countries [46]. Veiling is attributed to Quranic teachings, although different Islamic schools have different views on what parts of the body a veil should cover. The most strict is the Wahhabi tradition [46], which enforces a full veil cover on women, as it aspires to create "*godly women*" [7]. The three common Islamic interpretations of a veil are demonstrated in Figure 1

Typically the dress code for women in Saudi Arabia includes the abaya (black cloak), hijab (head cover), and niqab (face cover with a slit for the eyes) [46]. Wearing a full veil (from head to toe) is also common. The choice of coverage depends on many different factors, including religious views, family tradition, and geographical region. Saudi women are typically portrayed as a homogenous group, although, in reality, they belong to culturally diverse communities with differing customs and practices [58]. In practice, many Saudi women are inclined toward a conservative attitude and adherence to the cultural norms [58]. However, the majority of women see the niqab as a social custom rather than religious imposition, and, if given a chance, many of them would discard it [46]. Thus, women are now increasingly discarding the niqab [46]. More recently, due to COVID-19 restrictions, the use of face masks has replaced the niqab among many Saudi women, thus, revealing more of the face (the upper half) as opposed to the "*eyes-only*" visibility when wearing a niqab.

Saudi Arabia has undergone (and continues to proceed with) remarkable changes—relative to the history of the country—in the past few years in terms of women's rights and the elevation of female role models in the Arab world [65]. These changes have mainly been enacted by increasing women's public visibility and participation in the economy and other sectors [46]. Examples include their nomination in the consultative body "Majlis al-Shura," the right to vote in the municipal elections [46], and the appointment of the first female deputy minister of education [58]. Scholars have expected that the "increased visibility of women leaders and their participation on the national stage encourages other women to believe that they too can achieve great things in the future" [58] (p.31). This is particularly true of the visibility of cosmopolitan women, who are more amenable to the notion that the veil should be seen as a personal choice and not a legal imposition [46]. Moreover, the expansion of communication technology has helped reduce the boundaries between genders in Saudi Arabia, allowing cross-gender virtual contacts where women have space to appear and express themselves in the public sphere [38].

However, there is a bias in this (new) visibility of Saudi women, who are mostly expected to represent the state in public. These women are typically relatively wealthy, glamourous, cosmopolitan, and elite [7]. By contrast, concepts of culture, stigma, and taboo are present in everyday young women's lives [59]. Women's appearance in media is still generally perceived as a source of shame to their family members, especially their male relatives [5]. Indeed, studies have shown that men are significantly less convinced than women about gender equality (e.g., less supportive of the decision to allow women to drive) [38, 65].

Although there have been formal changes in recent years, they have not necessarily been accepted by all members of Saudi society. The subordination of women for many decades led some women to oppress other women and adopt a masculine persona; for example, mothers are sometimes the most prominent defenders of men's supremacy [7]. Despite the recent reforms, many Saudi women still accept the controls imposed on them that are justified by cultural or religious values [38]. Although many women may wish to practice their newly introduced rights, they are afraid of cultural conflicts: this is an important issue we seek to address in this study.

3 STUDY DESIGN

In this study, our guiding question was: how might we design for women's presentation in the online public sphere? We aimed to (i) identify our participants' current values and practices regarding presenting themselves online and (ii) their aspirations for their (and Saudi women's) visibility in the future.

3.1 Population and Participants

As part of the recent reforms introduced to "remake the nation" in Saudi Arabia, the state has sponsored scholarships abroad for educational purposes and also to create a sociocultural group of transnational Saudis who are believed to influence their home culture [31, 38, 61, 63]. We recognized this group as a remarkable opportunity to examine the ongoing cultural reform in Saudi Arabia.

The study was conducted with Saudi women living temporarily as students in the United States (US) or the United Kingdom (UK) for educational purposes. The participants included **18** women in total (UK = 10, US = 8). They ranged from 19 to 35 years of age, their education level ranged from undergraduate to PhD students and their time spent abroad ranged from 1 month to 11 years. All our participants were current users of social media platforms, mostly WhatsApp and Snapchat, with Facebook being the least used platform. All our participants were funded by the Saudi National Scholarship Program (KASP) which sponsors Saudi students from different areas and backgrounds based on academic merit. In general, the group was representative of a diverse range of socioeconomic backgrounds in Saudi Arabia, rather than purely the elites who can afford self-funded study abroad. As such, this population is expected to influence their wider home culture upon their return due to their education, participation in the workforce, and cultural fluency [38, 42].

3.2 Interviews and Analysis

We gained ethical approval from our university ethics committee, which included provision for informed consent from our participants. Given the sensitive nature of the topic, private, face-to-face semi-structured interviews were conducted with each participant on an individual basis [19]. The sessions were audio-recorded and lasted from 30 minutes to 2 hours. Each session was divided into three activities. The first was a sensitizing activity in which participants were shown a set of cards, each had two images representing different views on something related to women's visibility, for instance, one article from a newspaper in which women were symbolized using images of flowers, whereas another article showing actual depictions of women. In the second activity, participants were provided with four pages of news headlines related to women's visibility. They were asked to choose which stands out as their favorite or least favorite headline. The third activity was the core of the study, in which we used Scenario Co-Creation Cards [9], a method developed to facilitate the elicitation of values from participants. Through the scenarios, the participants were asked about how they perceive the visibility of Saudi women in the media and how they would act in hypothetical scenarios of presenting themselves in the digital media. Thereby, they were encouraged to reflect on their actual practices, the kind of information they were willing to disclose online, and the reasons behind their choices.

The interviewer shares a similar background with the participants. She identifies as a female, transnational Saudi, and a native Arabic speaker. The interviewer conducted and transcribed the interviews in Arabic and then led their subsequent translation during the analysis. The interviewer conducted a Thematic Analysis [13] on the transcripts and led subsequent discussions and the refinement of codes and themes with the coauthors. Codes were iteratively collated into overarching patterns indicating unifying concepts.

4 FINDINGS

4.1 Participants Views: Imposing (in)visibility on Women is Dehumanizing

Over the past few years, "there has been a change in the societal thinking" (P1) in Saudi Arabia, particularly regarding women's visibility in public, both offline and online. An example of increasing offline visibility is that "10 years ago . . . no one would accept a female [medical] doctor" (P2) because she would be visible to the public as hospitals are set in a "mixed-gender environment . . . so [girls] used to be scared away from it" (P8). However, as per our participants, "currently there have been changes in people's attitude towards women, for the better, in the past everything was forbidden for women" (P13). For instance, "now . . . people's attitude towards doctors has changed" (P6), as they are not only accepting it "but [also] now they encourage it" (P2).

These ongoing cultural changes regarding women's visibility in public (i.e., offline) also seem to be reflected in the digital world, albeit at a slower pace. For instance, P9 recognized the recent 'offline' cultural changes in Saudi society, although she still finds it difficult to adjust to this when she posts online:

It's becoming more acceptable for women to be in hijab [only head cover], especially in my area [however] I can't appear in media currently because of my society, but maybe after two years it would be OK.

This was echoed by P8, with a more pessimistic timeframe of "maybe within five years"; but overall, it is believed that "people over time will have to accept it whether they like it or not." (P5). In response to the expected cultural changes in Saudi society, it was evident that most participants, if not all, advocated for women's visibility and the related cultural changes. They also expressed their disapproval of imposing invisibility on women. They considered this dehumanizing, per P11's comment about a newspaper that presented photos of men's faces alongside images of women represented symbolically by flowers.

> We, women, are also human beings. Our photos are supposed to be presented as a normal thing just like men's. Why do we have to hide our photos just because we are females!

Similarly, P10 expressed her disapproval of this behavior and found it dehumanizing when it was not the women's free choice to replace their photos with flowers photos:

> Honestly, I prefer presenting women's photos [over symbols] because this is her identity . . . if the newspaper imposes using flowers [symbols] on these women while they don't mind their photos to be presented I feel it is not the newspaper's right to do this.

P2 expressed her disapproval of this and believes it reflects a double standard in the treatment of women:

> I feel the flower is kind of funny; it is not realistic, it does not represent me. Why do they put flowers? I don't get it! If they put a female character at least . . . I really hate these things . . . because they are things [not human] . . . If I would appear in this news, I would show my face . . . I'm not a flower, I'm a human.

This same view was also emotionally expressed by P6:

> This is very provocative; it may be the choice of these women, but this is not an identity of a human. Flowers do not represent humans . . . I feel that [the newspaper] is ideologized and . . . I get a huge frustration when I see images of women are dealt with in this way, as if there was something wrong with them and they are supposed to be hidden . . .

Although most participants, if not all, strongly advocated women's visibility in public and media and disproved of imposition of invisibility, there seems to be a gap between the views they expressed and their real-world day-to-day practices in engaging in self-presentation online.

4.2 Participants Practice: Opting for (In)visibility is the Safest Choice

Despite advocating women's visibility, at least in theory, our participants described the struggle they face in practice if they opt for online visibility due to different types (and degrees) of social risks. It seems this period of time has been a complex transitional era within Saudi Society, in which women are struggling between the desire to catch up with new changes and the fear of being the first to break the norms. Nonetheless, the recent cultural changes regarding women's visibility in the country have induced different mechanisms by which women deal with this struggle including (i) striving for consistency, (ii) embracing hypocrisy and/or (iii) deviating from the norm as discussed below.

The reports of our participants illustrate a considerable disconnect between our participants' views and practices in terms of what level of visibility they would accept for themselves (very limited) as opposed to what they would advocate if it was by other women (more supportive). The main reason behind this gap is perhaps the fear of societal criticism, especially against **inconsistency** in women's appearance as stated by P4:

> I am pro women's rights. Women are not a disgrace; . . . the problem is society would be like why is she not covering her face?... if I would appear on TV I would be veiled, but then it is not reasonable because they see me here not veiled then if they see me on TV wearing the veil [it] would be inconsistent . . . as if I was frightened . . . I don't like inconsistency honestly.

It seems that a critical part of the societal judgement that P4 is afraid of is appearing "inconsistent." Indeed, exploring this concept in the data we found that our participants revealed a struggle around consistency in the way they appear online versus offline and within their cultural context (inside the country) vs. abroad. Despite acknowledging the inconsistency of their appearance between different contexts and adapting as part of their dual lifestyle, they prefer not to embrace that inconsistency. The main inconsistency here revolves around covering the face (typically with a veil), which most participants did in their homeland but not abroad. For instance, P7 described how this plays out in her experience being visible online and offline and being home or abroad:

> If it is exclusively in the UK, I don't mind [appearing on TV] because people have seen me and they know me, but [back home] people would be like she is inconsistent, being on TV not veiled but at work [in Saudi] she is veiled. They don't respect personal choices, so I might just go veiled to avoid criticism, although I don't think veil is the solution. I don't advocate veil (face cover) in the first place. I love hijab (head cover) only . . . but if I post my photos [unveiled], it would be inconsistent to see me suddenly not veiled.

The yearning for consistency of P7 may be due to personal preference for peace of mind "*to avoid criticism*" and perhaps to avoid cognitive dissonance, but it also is due to societal pressure, which ironically accepts women being uncovered more than women being inconsistent as per P18 comment:

> I've seen this girl on Snapchat . . . she records herself while wearing a scarf but loosely, not fully covering the hair . . . then eventually she ditched it. . . because many people said to her "make a decision, you either wear a hijab [appropriate] or not wear it" . . . men do not criticize girls who are not covered both online and offline [consistently], but like this girl, men feel she is not serious . . . she is inconsistent

However, in other cases, striving for consistency may not be the best coping mechanism. On the contrary, P6 support embracing **hypocrisy**, to some extent to express her identity on the one hand while managing societal expectations on the other hand:

> I strongly want the change . . . We are tired of the life of hypocrisy where one lives 100 different lives but can't live their own [desired] life . . . everything in our society, every category of your life, family, school, tribe, city, state, all of them are expecting specific things from you. All of them are creating molds for you and they want you to stick to, and you might not fit so you can't squeeze yourself in more than that, just to satisfy all of them . . . so social media [can be] the only vent where one spends three-quarters of their time on, and find their true self, and express their own views that might piss others off . . . so if you want to live in peace with people you will have to be a hypocrite, I don't mean in your behavior but in your identity that you disclose to people.

While P6 embraces hypocrisy she expressed being "tired" of living this dual life yet what she is gaining from this is peace of mind which seems to be a higher value than expressing individuality and making an explicit deviation from the norms. On the other hand, it is believed that **deviation** from cultural norms might be the only way to embrace cultural change, based on past cultural changes as per P2's comment:

> Society won't change unless someone breaks the mold then they get used to that, and this has happened in so many cases like education, it used to be shameful for girls to go out for schools, my dad says: 'when I used to take my sisters to schools, everyone used to criticize me' . . . somebody has got to break out then the society will start to accept this till it becomes a norm.

However, this deviation, as we learned, is risky and most participants would not engage in it. It is as though everyone supports driving cultural changes, but none wants to be the first to be embody the change. This insight motivated our further analysis to explore different levels of visibility that are considered breaking out from the norms to some extent yet still fall within the range of cultural acceptance. In a way we started to explore what makes for a culturally sensitive visibility of women: indeed, we found different criteria in the data that our participants stated as conditions for socially accepted visibility, discussed in the next theme.

4.3 Bridging the View-Practice Gap: Towards a Culturally Sensitive Cultural Change

To address the theory-practice gap, explained in the two themes above, we explored the participants aspirations related to women's visibility and how they envision a reality in which the gap between their views/values and practices is bridged. We found that participants envision an alternative reality and in particular a future where women are more visible in the public (and online) sphere. This envisioning was mainly articulated in how they want their children (daughters) to be visible. For instance, P5 explained why it is difficult for her to embody the recent cultural changes in her everyday practice and, thus, would rather delegate it to her daughters:

> For my daughter . . . I would want her to be more visible, even if without hijab . . . it is too late for me and psychologically difficult to change even if I tried to ... It would be as if I'm deceiving myself . . . but for my daughter when she grows up, she is free to choose whether or not to be visible. . . as long as it is not in a foolish context, perhaps something more formal . . . I don't like her to post her photos everywhere and give them to everyone.

Yet this delegation of embodying the change does not seem to be unconditional. P5's also stated that her daughters' visibility is expected to meet her standards such as being visible in an appropriate and not "foolish" context from the mother's perspective. Similarly, P7 explicitly stated her desire for the cultural change to be embodied by the new generation of children:

> My son, I am the one who raises him to accepts or not [me being on media] . . . it is good if he is understanding and not following the old traditions, the old retardation . . . we have to change . . . we wish Saudi children now to embody the cultural change . . .

However, moving through the conversation, P7 stated how she would still expect her daughter to live up to her standards. Concepts related to religious obligation and societal image (reputation) are still present in this case:

> It is time she builds her own personality, rationally . . . not as if she is looking for cheap goals, something good for her and her reputation . . . my conviction is that hijab (head cover) is mandatory not heresy . . . so I would say to her, as long as you are staying with me you obey my instructions, until you get married . . . many girls abandon hijab behind the back of their families. I hope my daughter will have the same convictions as mine.

This shows that although not all participants agreed on imposing the head covering, overall, they seem to have a rather conditional acceptance for women's visibility. The use of concepts by our participants such as "*my convictions,*" (P7) "*foolish context*" (P5) and "*formal*" (P5) all imply certain conditions associated with their acceptance of women's visibility. By exploring such conditions in the data, or as we call them "criteria for accepted visibility", we found three criteria under three aspects: (i) purpose and context of visibility, (ii) type of media, and (iii) level of visibility. We discuss in turn each below.

4.3.1 Preferred Context of Visibility: High Achievements. Our participants questioned the core purpose of visibility and considered revealing their photos as often "not necessary" (P3, P7, P9, and P10). P4 questioned the reason or the legitimacy behind being physically visible:

> Why would I post my photos? I don't know everyone online so why let them see my photos? I'm not a celebrity.

This questioning, according to P10, is also expected from society:

> I've never posted my pictures even if I'm wearing hijab . . . people would be like what's the point? This would be the question revolving around it. What are the benefits?

However, in specific contexts, the concern of being physically visible may not be an issue, with settings such as education and science being seen as relatively safe spaces for visibility. For example, P9 makes a clear distinction between social and academic contexts, where a social context involves a higher risk of drawing societal judgment:

> Yes, I would [appear] if it was something educational. My family would be OK as long as it is [a] scientific domain . . . something more academic. Whereas if it was more social, they would look, comment, and gossip. I'd just avoid that.

As such, a context associated with achievements seems to provide the safest space for visibility. Participants explicitly stated

that contexts of visibility must be "*some kind of achievement*" (P3), "*something huge, a great discovery*" (P1), "receiving an award" (P11), something that is "*worth being in [the] media*" (P2), "*something good and honorable*" (P13), or an *"achievement that is worthy, not just any achievement, an actual one*" (P9). For instance, when commenting on a hypothetical scenario of her appearing in media as an athlete, P15 chose "winning" as the only condition she would accept for being visible:

> Maybe during winning. If not winning there is no need to appear in media, unless if I participate in a contest that is not easy for everyone to participate in . . .

From this quotation, it is evident that visibility is associated with high levels of achievement, not only by the definition of the individuals but mostly by the societal definition of what makes a good achievement. This means societal recognition of something as an achievement is a key aspect for individuals accepting their own visibility. This was also confirmed in the comparison between different types of media, as discussed next.

4.3.2 Preferred Type of Media: Formal and Ephemeral Media. Our participants mostly ranked the "media of official bodies [as] better" (P15) places to engage in visibility than informal media (e.g., social media). For example, official TV channels and government websites are considered safer spaces for visibility, as exemplified in P18's comment:

> I wouldn't mind appearing on TV, because at the end what would they present anyway? It is like on TV it is about the context, for example, sport, whereas on Instagram it's about me and showing myself . . . Instagram is a personal account and would be my own decision. People would see it like she is doing this to seek attention and advertise herself.

We can see another factor associated with formal media which is agency. Our participants clearly distinguished between posting their photos themselves or having someone else (preferably an official body) posting their photos. For instance, by "*my own decision*," P18 refers to her responsibility to take the blame if she posts her photos on her accounts as opposed to on TV, where she would be held less accountable. This same notion was expressed by P16 in another comparison, this time, between government websites and social media:

> Government website would be easier in terms of receiving criticism, if my photos get published, it is not me who posted it (laughter) whereas the blog is something personal . . . maybe after a while of being published on the government website first and people know my identity more, [I would appear on other media].

Another point raised by P16 was the notion of accepting visibility on social media once it was granted on formal media. This means that starting with formal media would open the door for other media types to be acceptable, a point was confirmed in P17 confirmed:

> Family would look at me like it is not OK to get fame from social media, whereas TV is different, so if I appear on TV first then on Snapchat it is not a problem, whereas starting from social media is a problem.

However, formality alone is not the only measure for preferred types of media. We also found that ephemeral media types are as much preferred for safe visibility. For instance, among different types of social media, Snapchat seemed to be the most preferred platform among our participants for posting photos. The main reason for this preference was that Snapchat does not allow photos to be saved and consequently shared. This was stated by P3:

> Snapchat is fine. I take selfies there, but blogs no because anyone can access them. Even if private, photos there can be saved. I don't like my photos to be disseminated at all (laughter).

Other key features of Snapchat included that it is "private and temporary" (P13) and "ephemeral" (P7). The same notion was expressed by other participants who preferred live visibility (synchronous) over recorded (asynchronous) visibility. This explains our previous finding around the notion that online visibility is taking a slow pace. For instance, participants considered being on a stage as low-risk visibility because "it is like one time and you are done" (P9) as long as it is "not recorded, so it won't be saved, it won't be disseminated to all people" (P5). Another factor was that recorded or documented media might make the message behind visibility "distorted" P14 or "misunderstood" (P17). For instance, P2 stated:

> Writing in a newspaper might be indirect, whereas talking in person is something we do once and hear it, not like reading it more than once and then misunderstanding.

This raises the question of whether ephemeral and formal media are mutually exclusive; that is, whether there is a conflict of preferences, where some participants accept formal media (e.g., newspaper) and ephemeral, undocumented media (e.g., Snapchat). We suggest that there is no inherent conflict between the two types of media, and it is possible to accept a combination of them; however, this does not presently exist, at least as stated by our participants. Another critical factor that remains to be explored is how much visibility participants preferred, both in real and hypothetical scenarios. These will be discussed in the next section.

4.3.3 Preferred Level of Visibility: Auditory Visibility. For this theme, we gathered references in the data to levels of visibility and classified them a spectrum starting from total invisibility up to full visibility. To simplify the presentation of the data here, we visualize the levels of visibility alongside our participants' responses in a matrix to demonstrate under which classification each participant falls as shown in Table 1

From Table 1, we can see that most participants' existing practice (light grey) often falls under total invisibility. Yet what they personally view as acceptable and believe that their society finds acceptable too (white) ranges from total invisibility up to (most commonly) audio visibility. Some participants extended the range up to partial visibility; however, others considered this level as completely rejected (black) ironically even compared to face visibility. Perhaps as mentioned earlier in the data, being partially visible can

Table 1: The different forms (and degrees) of media visibility and participants' levels of preferences, for each individual participant in our study. In this table, light gray shading represents what participants say they typically do (practices), white shading represents what they accept and consider safe spaces for visibility (views), dark gray shading represents what they accept but consider challenging spaces for visibility (tension), and black represents rejected levels of public visibility.

Level of Visibility Particip ant ID	Invisibility	Symbols non-human flowers)	Symbols (human emoji, avatars)	Name (name + accomplishme nts)	Writing (tweets, articles)	Voice (audio)	Physical / anonymized	Physical / with niqab	Physical / with hijab	Physical / no hijab
	Total invisibility									
P1										
P2										
P3										
P4										
P5										
P6										
P7										
P8										
P9										
P10										
P11										
P12										
P13										
P14										
P15										
P16										
P17										
P18										

be seen as an expression of being inconsistent or even a declaration of being "frightened" (P4) of societal judgment. Therefore, we did not consider this level of visibility as the preferred level, instead the previous level, audio visibility, seems to represent the most agreed upon and socially acceptable level of visibility, despite not being the most common practice.

Perhaps intriguingly, being physically visible while wearing a hijab is the most acceptable or preferred option by the individual (participants), however it was considered risky and socially not acceptable by the collective. Thus, many would not practice it to avoid societal tension. Taking a culturally sensitive design perspective, and based on the table above, we identified audio media is the target level of visibility if we to design for creating a safe cultural change, since it is accepted by most though not practiced, it would be one way to bridge the gap between the views-practice-preference ultimately. It is this point where we start to support creating a trajectory of incremental change.

Notably, our participants stated that their families, and religious figures "*don't mind*" women's visibility in audio format (P4, P16, P1, P14, P5, P10, P11, P8). P7 stated she actually "*would like to be*" in audio media. Participants attributed this societal acceptance of audio media to the fact that "*radio is less [risky] than social media*" (P17) and that they would be "*less afraid of [their] voice[s] being under criticism*" (P18).

5 DISCUSSION

5.1 The View-Practice Gap of Saudi Women's Visibility in Digital Media

The overarching finding of our study is that there is a considerable disconnect between our participants' views versus their practices in respect to the notion of women being visible in the public sphere. There is a gap is represented in a strong advocacy for women's visibility (value) versus a strong inclination toward invisibility (practice). Indeed, studies have shown that Saudi women are more supportive of gender equality (e.g., having the right to drive cars and travel alone) than men [39, 59, 65]. However, women are still aware that their visibility can cause shame and disgrace to their families, especially male members [7]. Our participants believe in the mutual influence between their visibility and cultural views, as the more they push the boundaries and deviate from the cultural norms, the more societal changes will occur. Despite advocating visibility and disapproving imposed invisibility, this attitude was expressed as an internal change by our participants (values and views), while they struggled to exhibit it externally in their daily practices. The gap, or inconsistency, between the participants' views and practices, is manifested in (i) inconsistency between their appearance online versus offline, (ii) inconsistency between their appearance home and abroad, and (iii) inconsistency between the visibility they would accept for themselves versus that of other women (and for their children).

As we observed with our participants, dealing with this situation entails either abiding by or deviating from the cultural norms. However, neither of these options has a pleasant effect; deviating from the cultural norms makes them prone to criticism (e.g., P2) while abiding by the norms creates inner struggle due to the gap between values and practices (e.g., P4). In other cases, the only way to deal with such a situation may be to adopt both strategies on different occasions- aka: being inconsistent. As illustrated in the data, the inconsistency dilemma, is also prone to social judgment, sometimes even more than deviation from the norms (e.g., P18). This aligns with research that suggested public inconsistency in one's appearance creates a negative impression; thus, people avoid self-disclosure when it is difficult to maintain consistency for different audiences (as is the nature of online communication) [50]. In this context, the inconsistency dilemma involves women presenting themselves differently in public according to the nature of the context; for example, sometimes they would abide by the norms, and other times they would not. However, they would always still fear to be *discovered* by others as inconsistent. That is in addition to the inner struggle to accept being inconsistent or "hypocrite" (P6). Such a dilemma poses a challenge for designers even when taking a culturally sensitive approach. We next discuss the dilemma between two major positions: designing for (perpetuating) users' values and the status quo (taking a user empowerment stance) or designing for social change (taking a solutionist stance) [1].

5.2 Perpetuating or Challenging Cultural Values in Design?

A question that perplexes designers is whether to design for perpetuating or challenging identified values and cultures? This is especially the case when we identify gaps between people's practices and values within the studied culture. As Perkins [43] asked: "do designers coming from an egalitarian perspective try to promote examples in the content that show strong female representation, or must the designers submit to the values held by a local group, thereby creating content with examples that maintain the status quo of a paternalistic society?" (p.2).

In response, we take the stance that culturally sensitive design should not be a mechanism for (i) potentially perpetuating existing cultural inequalities within the target population [11, 17] or (ii) focusing on the individual (person or group) isolated from others or the wider cultural milieu [41, 54]. This means that culturally sensitive approaches can be employed in design for social change; the two are not (and should not be) mutually exclusive. We emphasize that the role of designers should transcend the mere making of good and valuable products and services. Instead, designers should be guided by a vision of contributing to societal development, including eliminating social inequalities. This is because understanding people's current values and social structures would almost always reveal some societal biases that, when embedded in the design of technology, can perpetuate and magnify existing social inequalities [20].

Typical culturally sensitive design studies as discussed in the literature earlier (e.g., [49] and [3]) emphasize that designers should carefully account for people's culture and not adopt Western models. While we advocate adopting culturally sensitive approaches in design, we argue that such approaches may impede the capacity of design to support creating cultural change. This argument is in line with feminist HCI literature [11] which questions conventional ways of doing design in perpetuating societal inequalities. A pragmatic example of applying this philosophy is the work of Sultana et. al., [54] in which they highlighted ways for designing for women's empowerment in a deeply patriarchal society. They argued that the mere designing for people's culture could endanger the people whom designers are seeking to empower. Thus, the authors made a compromise with their desire of designing for change; and rather, explored attainable ways to empower women from within the existing social structure. We, therefore, applied a process to conducting culturally sensitive design with the aim to explore ways of making a cultural change within the boundaries of current cultural restrictions in our participants' context.

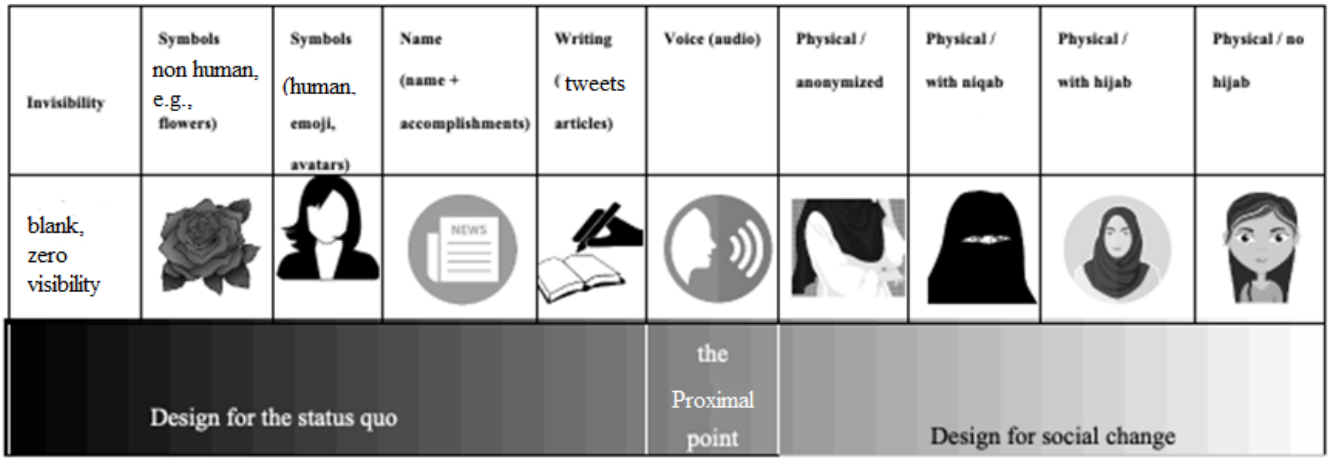
Moreover, designing for cultural change not only challenges the status quo, but also it aligns with the nature of culture which is constantly in flux. That is, culture should not be understood only from its present form but also with a considerations of the past and the dreams and aspirations of the future [32]. In our case, finding the proximal point to bridge the gap between views and practices proved a pragmatic step towards aligning with the ongoing cultural changes.

5.3 Designing for Women's Visibility in this Context

To illustrate this argument in our study of women's self-disclosure, we refer to the header of Table 1, which represents a spectrum of women's visibility. The header illustrated the different levels of visibility in which our participants were situated in terms of their (i) current practice, (ii) accepted practice, and (iii) preferred practice. The distribution of these three categories slightly differed for participants depending on contexts. For instance, a participant's practice might be situated in the zero-visibility box while her maximum accepted level might be audio visibility, but in a less (culturally) conservative society, she might prefer to be physically visible with a hijab. To apply the previous argument to this case, we could take the superficially attractive position of fully attending to the users' culture and current practices. Then, we would design for complete invisibility because it is the most comfortable practice for our participants and entails no societal judgment. This would perpetuate the exclusion of women from the public sphere and situate the designer as a mere "maker" of what the data presents. Conversely, if we take the position of a reform agent, not attending to users' values and culture, we would perhaps take the extreme position of designing for women's complete physical visibility (no hijab). While this might be our ultimate vision as designers, feminists, or Westerners, we should not impose it on users if it is not congruent with their vision. Indeed, most of our participants have a vision of a future where they can be physically visible but with a hijab.

Understanding the nuances between the two design extremes is essential for designing for social change while addressing people's cultures and values. For instance, from Table 1, we identified the accepted levels of visibility in the gap between participants' current practice and future vision. It was apparent from the table that most participants accepted audio visibility as the maximum level they

Table 2: Designing for safer deviation and the proximal point represented under audio visibility



could engage with in their current reality. Thus, audio visibility was identified as the proximal point (**see** Table 2**)** where a designer can design to challenge the current practices (which was zero visibility in this study) while attending to what people perceive as a safe space to be part of that challenge. It is a culturally sensitive tactic to bridge the gap between participants' practices and views and, thus, create a trajectory with a vison of closing that gap. Finding the proximal point is a practical process that aligns with research into tactics to work between solutionism and user empowerment.

The main goal of finding the proximal point within the data is to define a safe point to create a trajectory toward a cultural change (empowering the users). It is a situated tactic [54] because it shifts the focus from the identified problem (in this case, zero visibility) toward the tactics defined as socially acceptable but not yet commonly practiced. The proximal point involves, by default, considering the collective identity [3] of the users as it seeks to define what is "socially acceptable." Thus, it accounts for the cultural environment of the users. Moreover, this approach also aligns with work from Dombrowski et al. [17], in which they suggested strategies and commitments for design. One of their suggested strategies was Designing for Reciprocity, an orientation in design that considers different stakeholders and whether they were considered allies or oppressors of those we design for. Our example considered both the advocates of women's visibility and the conservative parties in the wider society who may not accept certain design agendas. Designing for culturally sensitive cultural change also aligns with the modernization movement introduced by the government in Saudi Arabia as part of its Vision 2030, which is happening within the Islam framework under the guidance of religious scholars [7]. It can be used as a strategic design tactic to address the unsettling discrepancy between the legal reforms supporting women and the conservative culture restricting women's freedom; this dilemma is creating confusion and uncertainty in Saudi society concerning what is considered socially and ethically accepted [10]

5.4 Designing for Culturally Sensitive Cultural Change

For researchers, designers, developers, decision makers or anyone who is interested in designing for culturally sensitive cultural change, we can summarize the discussion above in the form of three overarching considerations:

Firstly, investigating the difference between public and private values.

The combination of cultural sensitivity and cultural change into a unified approach implies the necessity for incorporating both public (societal) and private (individual) values. By public we refer to incorporating wider societal cultural values into the design process, even those that we (and our participants) ultimately aspire to change. On the other hand, by private values, we refer to those individual values expressed by our participants, often indirectly, such as through references to their children or "future self". While it is tempting to explicitly design for such values, we came to realize that doing so would not be acceptable to our participants in their current circumstances. Thus, the first step of this approach is to create a clear distinction between the two ends of a spectrum representing the more obligatory cultural values at one end, and the aspirational future at the other end.

Secondly, creating a spectrum to illustrate participants viewpoints.

The second step is to populate the spectrum, thereby resisting the temptation to design for a cultural prototype. It is important to recognize that values of any target population inhabit a spectrum on which different degrees of adopting (or rejecting) those values are distributed. Not only does the spectrum help in affording the representation of diverse practices, but also supports the design of a trajectory from one end of the spectrum to the other. In this way, we avoid both designing for the status quo and designing for radical change (two arguments long discussed in HCI).

Thirdly, identifying a proximal point for design is not the ultimate goal

In the third and final step, we strive to identify a proximal point on the spectrum which is the 'sweet spot' for design for culturally sensitive cultural change. The proximal point is a point on the spectrum that represents the boundary between current practices (the status quo) and radical change (future visions). It is the point of maximal cultural change (challenge) that lies within the boundary of cultural acceptability (safety). However, while in this approach we call for designing for this proximal point, it is important to appreciate that this is not the ultimate goal. Instead, the proximal point is the first point on a trajectory of a cultural transition to a future envisioned by the population under study.

6 STUDY LIMITATIONS AND FUTURE WORK

Transnational Saudi women are a significant segment of the wider Saudi society in that they are potential advocates of social change (upon their return to Saudi Arabia). However, future work should investigate other segments of Saudi society such as (and most importantly) women who have never lived abroad. There is a pressing need to understand how their values and practices differ from, and influence, transnational women. Furthermore, future work on designing for culturally sensitive cultural change is much needed in other cultural contexts.

7 CONCLUSION

The exclusion of Saudi women from the public sphere has been declining due to recent reforms in the country and the expansion of SNS. However, it is argued that this decline has been more pronounced among elite, educated, and cosmopolitan women. Understanding the views and practices of women and how they disclose themselves in digital media in the new public sphere helped us identify safer spaces for expanding women's visibility. To do this, we proposed designing for culturally sensitive cultural change, a process that aims bridging the gap between people's current reality (practices) and desired reality (values).

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