1 INTRODUCTION
Postcolonial computing promotes the idea of acknowledging that the design, development, and use of technology varies within different cultures around the globe, and we need to establish a deeper understanding of these practices and the implications that those design practices have in a global context [18]. Within HCI there is a concept called WEIRD (Western, Educated, Industrialized, Rich, and Democratic), which highlights a requirement to better understand how current HCI principles fit in other countries and it emphasizes the necessity to more critically review our processes [43]. An upcoming CHI 2021 paper has identified that 73% of the 3,269 papers from 2016-2020 included Western participants and in general fit the WEIRD profile, calling attention for the need of more international focus in HCI research studies [32].

1.1 Position Statement
Since prior work has identified that cultural differences influence user design preferences and interaction methods, as well as emphasizing the need to reflect on the appropriateness of popular HCI principles, we believe that it is equally important to apply this inquiry to digital accessibility and how accessibility fits within the design process around the world.

1.2 Current Research Progress
Our long-term research plan is to build upon work in this area by investigating how digital designers in different parts of the world consider accessibility and whether current accessibility resources (often developed in the west) meet their needs or conflict with their approach to design.

Acknowledging the immensity of this task, we have narrowed our focus to a smaller project spanning just a few years that will look at improving web and mobile accessibility resources for Iranian designers. This work will be led by an Iranian PhD student. We focus on Iranian web and mobile designers for several reasons: 1) Iran has a fairly recent history for establishing disability rights (2009) vs the US (1973); 2) There are distinct differences between Farsi and English (e.g., reading/writing order and grammatical structure), which likely influence design layout variances and could affect accessibility; 3) There is scarce prior work that compares accessibility and usability practices of Iranian designers with reported US practices; and 4) WCAG - the gold standard web and mobile accessibility resource – is not available in Farsi and a straightforward translation may not be a sufficient solution.

2 BACKGROUND AND MOTIVATION
2.1 Digital Accessibility
Websites and mobile apps play an important role in society and enhance how we communicate, learn, socialize, and work [4, 5, 16]; this makes it critical that these digital spaces are accessible for people with disabilities who make up just over 1 billion people worldwide [51].

Although designers can make digital spaces accessible through a combination of following guidelines, using appropriate design tools, and conducting user evaluations [27], there is a significant body of work that continues to identify the persistence of inaccessibility for both web and mobile technology (e.g., [15, 25, 37, 41]). Web accessibility-related lawsuits are also increasing [49], indicating that more research is required to improve a worsening situation by better supporting web and mobile designers. Some reasons for inaccessibility include: a lack of sufficient education on accessibility in design, limited project time and funds, clients who prioritize other design requests over accessibility, confusing guidelines, and inadequate tools (see: [9, 30, 36, 44–48]). Overall, inaccessibility is never usually the result of a single issue but one that can be traced back to several factors falling on a spectrum of intrinsic to extrinsic causes [40], such as a developer’s software not warning about accessibility violations (intrinsic) and a company adhering to a culture where the importance of product accessibility is dismissed as being unimportant or too costly (extrinsic).

To address the widespread problem of inaccessibility in digital spaces, it is necessary to explore all possible avenues that may account for accessibility violations and then develop solutions to address those barriers. One under-researched area is a critical evaluation of the suitability of established accessibility practices for international designers who have different cultural norms, language systems, perspectives, and understandings. Prior work has demonstrated cultural differences can influence design and design can be closely linked to the accessibility of the system because it is a significant part of the interface we interact with (e.g., colors, font style, layout, navigation structure). Identifying international differences and challenges is an important first step toward the introduction of protocols that could result in a more synergistic global attitude toward accessibility.

2.2 Cultural and Visual Design
The aesthetic design of a digital space is often intentionally created in a way to complement its purpose so that specific emotions and reactions are evoked from the user [6, 10, 31]. Yet, people from
different cultures can vary in their preference for use of color and amount of text [13], how information is organized [7], and the design of icons [21]. Design must include both elements that are considered universal to improve the usability on a global scale and specific localized design elements [14]. Websites can be designed to represent the cultural values of the country the designer is from and it can result in distinct design differences [35]. This should motivate designers to carefully consider how content is created to appeal to different audiences [20, 42].

The effect of culture runs deeper than simply visual design preferences and it can influence how people approach information seeking, navigation behaviors, and decision-making outcomes when people work in a group [12, 23, 24, 39]. Visual and interaction design preferences may be in conflict with accessibility recommendations.

2.3 Cultural Differences and Usability Testing

Chavan [8] argues that little work has been done to culturally adapt design process methods and tools. Common design methodologies used in industry include user-centered design [33] and co-design [38], where designers actively consider and involve future users in the design process, and running evaluations can help with design refinement [45]. User involvement may result in misunderstandings or conflict with socio-cultural conflicts if proper planning is not implemented.

For example, a series of studies conducted in the Netherlands and South Korea demonstrated that different factors and expectations need to be adapted to maintain similar levels of participant engagement [50]. Another study on design method tasks with Dutch and Korean participants also found differences in levels of engagement and forthrightness (Korean participants were less spontaneous) due to cultural norms, but this could be overcome when applying appropriate adjustments (e.g., by increasing communication to boost motivation) [28].

Evaluations may also use standardized instruments to record data to inform the development of a design. The System Usability Scale (SUS) is a popular evaluation metric created in English and used within HCI since the 1980s, which takes the form of a standardized questionnaire and allows participants to indicate their feelings toward the usability of a system [29]. There have been translations of this tool so that users who are not native speakers can use the test. Dianat et al. [11] created a translated version of the SUS into Farsi for Persian participants. In addition to the translation, the Persian SUS was evaluated with 202 participants and 10 experts and determined it remained reliable.

2.4 Accessibility and Cultural Differences

Sections 2.2 and 2.3 covered many cultural difference design-related studies which focused on usability. We want to build upon this work and investigate the effects on accessibility, which is unknown since it was not the focus of prior studies.

Usability is often determined based on a person’s expertise and prior experiences, whereas, accessibility determines if a user can complete tasks regardless of ability [19]. To expand on this distinction with some examples, a system that is designed to be more usable will not only cater to expert users but novice users and make it easy to complete tasks (e.g., clear labeling in the menu) and a system that is designed to be accessible provides alternative access or avoids creating barriers for the user (e.g., avoid assigning meaning to colors and using high contrasting colors to make it easier for a color blind person read) but these two dimension can be in conflict. For example, if a designer uses low-contrasting pastel colors to appeal to cultural preferences of the user, then these could be difficult for people with color blindness and low vision. Similarly, research in the previous section discuss preferences for layout and amount of text, which could conflict with accessibility guidelines determined from a western perspective.

Since 1999, WCAG [22] has become the gold standard for ensuring Website and Mobile app (e.g., iOS [2]) accessibility, but it has not always been clearly implemented within law and policy further challenging the implementation of accessible digital spaces [26]. A simple translation of WCAG may also be ineffective, since, as an accessibility resource, WCAG is already often criticized by designers for being difficult to use [44]. Instead there may be an opportunity to work closely with international designers to establish a more culturally sensitive set of accessibility guidelines.

A collection of research has investigated how accessible websites in other countries – with most focusing on government websites in India [37], Pakistan [3], Saudi Arabia and Oman [1], South America [34], Taiwan [17], UK [25]. The research suggests that reasons for these accessibility violations may be caused by a lack of laws and policies [3, 34], but it is unknown whether those designers are adequately supported in meeting accessibility guidelines because the work primarily focused on quantitative methods. We can leverage the advantages of qualitative methods to better understand the needs and concerns of international designers.

3 OUR WORKSHOP GOALS

We have several reasons for wanting to attend the CHI 2021 Workshop: Decolonizing HCI Across Borders. We would like to:

- Get feedback on our project so that we can further refine the research plan.
- Receive guidance on how to navigate through this work in a culturally sensitive way. Although our PhD student is Iranian, we will likely look at different cultures when the opportunity arises so that we can understand similarities and differences.
- Understand how best to conduct remote work across borders (e.g., what are the common challenges to consider? and how do researchers in this area overcome those challenges?).
- Learn about the most up-to-date work that is being led by experts in this research area.
- Network with other researchers who are passionate about ‘decolonial’ thinking within HCI.

In addition to our own needs, we also want to contribute to the success of the workshop through active participation and offer feedback on other work that is presented. We can share with the attendees our knowledge on Web and mobile design, digital designer’s work practices, and accessibility, in additional to our expertise in qualitative data collection methods.
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