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### **Design Justice and Usability Testing: Reimagining Data Collection for Equity**

In *Design Justice*, Sasha Costanza-Chock outlines a framework that challenges us to rethink the assumptions and power dynamics embedded within traditional design practices. Chapter 5, “Design Pedagogies: There's Something Wrong with This System!” particularly underscores the importance of equity-centered data analysis. As I conduct a usability test for a Garmin fitness watch in this class, these principles prompt me to consider how my methods of data collection and analysis might unintentionally replicate systems of exclusion, especially for users whose experiences fall outside dominant norms of ability, gender, race, or class.

Traditional usability testing tends to privilege objectivity and efficiency, often relying on standardized metrics and statistical analysis. However, these methods can obscure or flatten the lived experiences of users who do not conform to a presumed "average" user. Costanza-Chock argues that sociotechnical systems are never neutral; they encode values and assumptions that mirror the dominant culture. In the context of my usability test, this means that if I rely solely on quantitative data such as completion times or error rates, I risk overlooking the nuanced barriers that marginalized users might face when interacting with the Garmin watch interface.

Take, for example, the watch's data display options and interface navigation. If I test these features only with able-bodied users or those familiar with wearable tech, I may never see the friction points encountered by users with visual impairments, neurodiverse processing patterns, or limited tech literacy. In the video, Costanza-Chock reflects on being repeatedly flagged by TSA scanners due to a mismatch between binary gender expectations and their

nonbinary body. This example highlights how data-driven systems interpret deviance from the norm not as diversity, but as error or risk. In usability testing, similar logics may manifest when non-normative behavior is dismissed as “user error,” rather than signaling a flaw in the design.

One of the core principles of the Design Justice Network is that we must prioritize the voices of those most affected by design decisions. Applying this to my Garmin usability study means critically examining who participates in the test and whose feedback shapes the evaluation criteria. If the test participants are homogenous in age, gender, race, or ability, the resulting data will reproduce the blind spots of those demographics. In contrast, including users from marginalized communities would not only enrich the findings but also bring to light previously unseen pain points. For example, a trans user may have different expectations around biometric data or privacy settings, especially if the watch syncs with apps that rely on gendered data inputs. If such concerns are left unacknowledged, the design may ultimately exclude or alienate these users.

Costanza-Chock’s discussion of algorithmic surveillance and biometric technologies reinforces this concern. In the talk, they describe how systems that enforce gender norms, such as TSA scanners, become “misgendering machines” by design. These insights are directly applicable to wearables like the Garmin watch, which collect and analyze deeply personal data including heart rate, sleep cycles, and menstrual tracking. If these features are designed with rigid binary assumptions or exclude gender-diverse experiences, the product not only fails to serve a portion of its user base, but it also actively reinforces their marginalization.

A design justice approach to usability would entail not just inclusive recruitment for testing, but also participatory design methods where users help define what success looks like. Rather than measuring only efficiency, accuracy, or satisfaction, I might include metrics such as

emotional comfort, sense of agency, or identity affirmation. For example, does the watch interface support the user's sense of self, or does it erase or misrepresent them? These are questions that traditional usability metrics don't typically ask, but they are essential if we hope to create technologies that truly serve all users.

Moreover, usability testing should include reflection on power dynamics in the testing environment. As a researcher, I must ask: Whose interpretations of the data matter most? Whose discomfort is legitimized, and whose is minimized or pathologized? The principles of design justice suggest that equity must be embedded not just in the product, but also in the research process itself. That means decentering the "expert" evaluator role and treating participants as co-creators of knowledge.

Ultimately, incorporating design justice into usability testing shifts the focus from efficiency to equity. It asks us to move beyond universalist assumptions and toward intersectional, community-accountable practices. For my Garmin watch study, that means seeking out diverse voices, embracing qualitative complexity, and designing a test that values lived experience as much as it does statistical significance. This transformation won't be immediate, and it won't be easy, but as Costanza-Chock reminds us, more inclusion isn't always the answer. It depends on what the systems are being used to do. If our systems are used to uphold the status quo, then even inclusive data collection is not enough. We must ask deeper questions about justice, power, and liberation, and let those questions reshape our usability practices from the ground up.