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Engaging the Black Ethos: Afrofuturism as a Design Lens for Inclusive Technological Innovation

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Abstract

*In his essay "Technology & Ethos", Amiri Baraka (Leroi Jones) states that "**Black creation – creation powered by the Black ethos brings very special results**" (Baraka, 1965). This article explores Baraka's assertion and proposes Afrofuturism 2.0 as a liberatory design lens which enables the technology designer to engage a Black ethos in seeing - as articulated by Baraka - "everything fresh and 'without form' to "then make forms that will express **us** <Blacks/African-Americans> truthfully and totally". In elucidating this proposal, a case study is presented that offers an Afrofuturistic reimagining of connected fitness technologies for Black/African-American women that addresses the often socially and culturally exclusionary form of current designs. It is the author's belief that engaging Afrofuturism 2.0 would support the development of future technologies that are more relevant and responsive to the Black mind, body, and spirit. Furthering this trajectory of thought, discussion is offered on how Afrofuturism further catalyzes efforts in evolving a conception of Afrocentric or Black Cultural Design.*

Keywords: Afrofuturism, Black Panther, Marvel, Inclusive Design, Liberatory Design, African-American Health, Black Cultural Design, Vision Concepts.

> *"Afrofuturism is not just an aesthetic—it's just as much a framework for activism and imagining new technologies", Ian Forrester*

Traditionally viewed simply as an aesthetic, nascent conceptions of Afrofuturism (i.e. Afrofuturism 2.0) situate it at the intersections of Black cultures, imagination, liberation, and technology. As such, Afrofuturism can function just as much a framework for activism as a lens for imagining new and more inclusive technologies. Marvel's Black Panther clearly elucidates this premise. The film's many depicted Wakandan technologies reflect design outcomes resultant of a reinterpretation, a *re-imagining - in essence*, of a Nation's technological trajectory through a Black cultural or Afrofuturistic lens. Featured technologies such as the Kimoyo Beads[1], an advanced wearable communication technology powered by Vibranium, provide a provocative and compelling depiction of this notion.

This engagement of Afrofuturism in technological design, while fictional, both evokes and provokes real methodological possibilities and results. Echoing Amiri Baraka in his essay "Technology & Ethos", *"Black*

creation – creation powered by the Black ethos brings very special results" (Baraka, 1965). These special results – "*forms that will express us truthfully and totally"*, affirms Baraka (1965), respond, conceptually, to the importance of more inclusive technologies: *technologies that take into consideration the sociocultural diversity of users and contexts of use*. And, as technology, is becoming more deeply embedded in the daily lives and activities of all of humanity (e.g. health and wellness), this need is growing.

In meeting this need, the technology designer must not only grapple with technical considerations and concerns but the sociocultural implications of their practices and designs. Unfortunately, today's designer is often methodologically ill-equipped to appropriately understand and address these non-technical concerns. This narrowed perspective leads to a more monolithic view of both user and context of use that could lead to technological solutions that are devoid to any responsiveness to the needs and considerations of socioculturally diverse groups. Sengers (2018) echoes this sentiment: "*How we design technologies reflects what we value; who we think is important, and in what ways; which places, people and possibilities are in our imaginations, and which are not. Current ways of designing technologies frequently narrow these possibilities...*" While "unintended", the consequences of this narrowed view can be profound.

Afrofuturism, as a methodological antidote to Sengers' assertion, liberates design possibilities and offers a means by which the technology designer can garner perspective to both grasp and galvanize what Sengers (2018) affirms as "*values and experiences outside of mainstream technology design logics*". While specifically supporting in the identification and understanding of those salient sociocultural factors that Blacks/African-Americans bring to the technologies that they use, leveraging Afrofuturism presents a lens by which designers can facilitate and gain perspective and, ultimately "see the complexities of marginalized identities as a positive foundation for innovation" (Harrington & Piper, 2018).

Afrofuturism in Design: Enacting Equitable and Inclusive Design Approaches

In operationalizing this assertion, connecting Afrofuturism to human-centered design (HCD) approaches that more explicitly incorporate the concepts and considerations of equity, such as equityXdesign (Guzman & Marie, 2017) is proposed. In enacting the construct of "foresee" within the equityXdesign framework (see Figure 1), Afrofuturism, as a mechanism for focusing substantiating discursive design tactics like speculative design, extends the bounds of the plausible solution space through engaging "design from the larger landscape of the future rather than the limited and biased present-day mental maps" (Spencer, 2016).

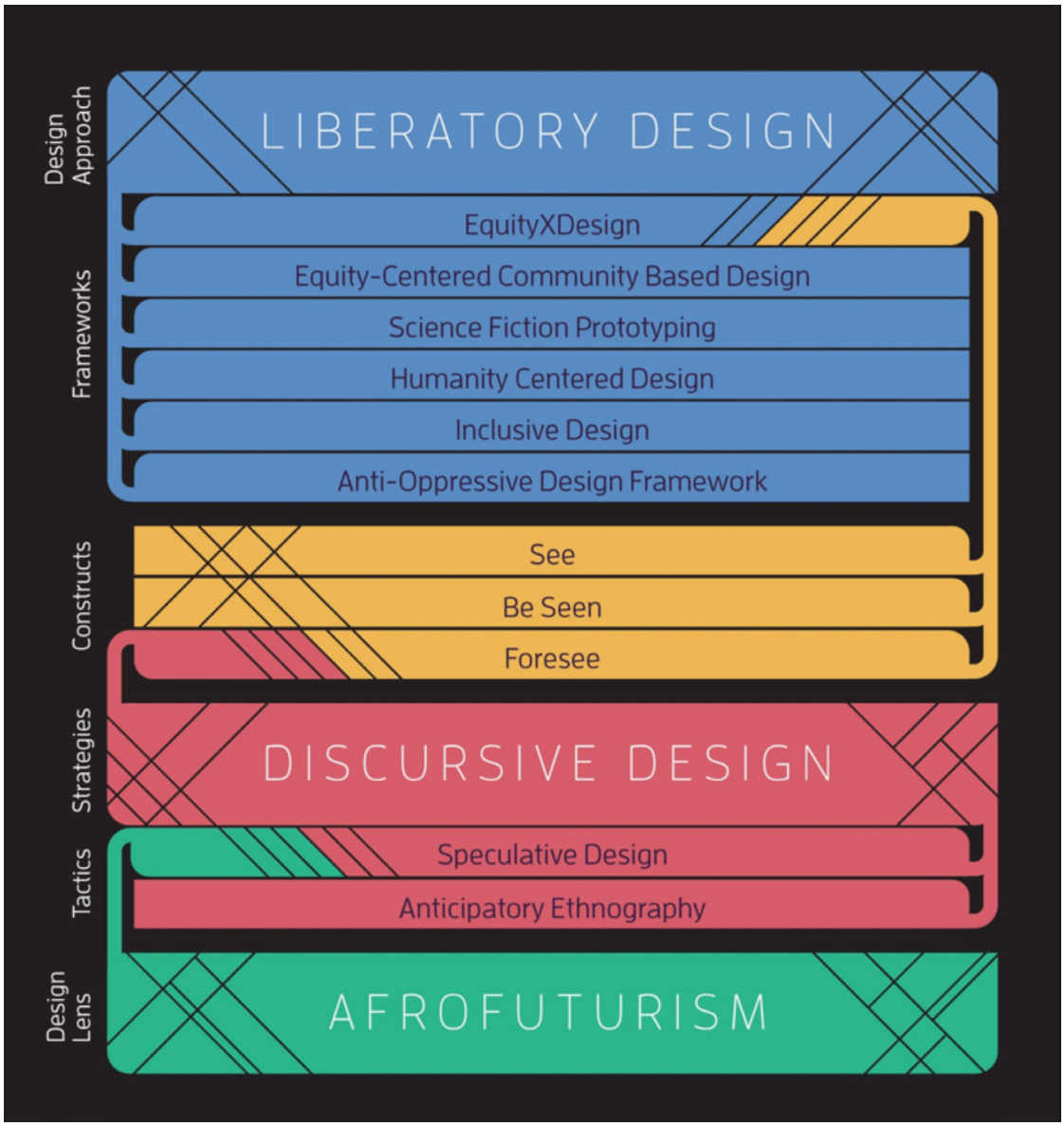

Figure 1. Engaging Afrofuturism as a Design Lens

The intent is to create artifacts - *vision concepts* - that catalyze and enable more inclusive design conversations about both user and context of use. Analogous to how concept cars are used as futuristic artifacts in spurring more innovative near-term designs in the automotive industry, vision concepts enable the designer, though engaging with future possibilities, to think through the sociocultural implications/consequences of design decision-making. This author's efforts in re-imagining consumer connected fitness technologies (e.g. Fitbit devices) for Black/African-American women, disproportionately affected by many health conditions associated with insufficient physical activity (PA) levels, elucidate this approach.

Engaging Afrofuturism in Technological Design: A Case Study in Wearable Technologies

Connected fitness technologies/devices are being explored as promising means by which to increase physical activity (PA), primarily in the context of weight loss (Cheatham, Stull, Fantigrassi, & Motel, 2018). However, evidence exists that suggests that their potential is not being realized; with many arguing that "*wearables are totally failing the people who need them most*" (Herz, 2014). Echoing Neff and Nafus (2016), if these technologies are "to help the sickest and the poorest, then tools will need to be designed for those communities in mind. Analysts are already calling the activity tracker market crowded, even though to us this oversight is fairly glaring".

For Black/African-American women, this lack of relevancy is particularly problematic. Current connected fitness technologies are not relevant to the body, mind, and spirit of Black/African-American women. As an example, error rates in heart rate detection are often higher for individuals with dark skin as the optical heart rate sensors used by many of these wrist-worn devices have difficulty inferring pulses rates of individuals with higher melanin levels, reflective of many Black/African-American women (Kim, 2017 and summarized in August 1, 2019 article in The Conversation[7]). In addition, while it is understood that one's sociocultural background influences thoughts around health and wellness (Joseph, Pekmezi, Allison, & Durant, 2014), many current connect fitness technology designs, particularly from an user interface or interaction design perspective are not reflective of this understanding (Stowell et al., 2018).

Moreover, a growing body of research exists that demonstrates the relationship between spirituality and health promotion among Black/African-American women (Musgrave, Allen, & Allen, 2002). *Interventions should focus on spirituality and emphasize the mind–body relationship between physical activity and an African American women's inner-being and her connectedness with a higher power*" concludes a 2017 study (Joseph, Ainsworth, Mathis, Hooker, & Keller, 2017). Again, while evidence exists that supports the value in tailoring PA insights in this manner in increasing PA, this consideration of spirituality is all but absent in current technological designs.

These gaps prompt the question, "What if we centered the design of these wearable health technologies on Black/African-American women?" In response, a collaboration was forged with Pittsburgh artist Marcel L. Walker in re-imagining these technologies through an Afrofuturistic lens. Inspired by collectivism, a core tenet of Afrofuturism, and the Afrofuturistic imagery of the warriors of the Dora Milaje—Wakanda's Special Forces, several vision concepts were envisioned.

Figures 2 offers an exemplar vision concept. This concept conveys the importance of community and both the need and desire to connect to a greater collective in contextualizing health and wellness; inclusive of PA. From an interaction design perspective in particular, this speculative concept invites a deeper dive around ways that data and information offered by these technologies can be better synthesized, situated, and visualized in being more responsive to the Black/African-American women. As the type and nature of insights traditionally offered by these devices are more quantitative in nature (e.g., number of steps taken), this vision concept, as probe, inspires thoughts and, as important, research around more qualitative representations of insights in motivating increased PA levels for this group. For example, GirlTrek3, an organization that inspires Black/African-American to change their lives through walking, leverages such strategies: "*They don't talk about hypertension or body mass index, but about feeling less anxious and having more energy. They don't talk about looking good, but about looking alive:* ***having the "GirlTrek glow****." They inspire women with images of courage and dignity. "They have lots of process motivators around black history — walking as Harriet Tubman did or retracing the steps at Selma…*" (Bornstein, 2016).

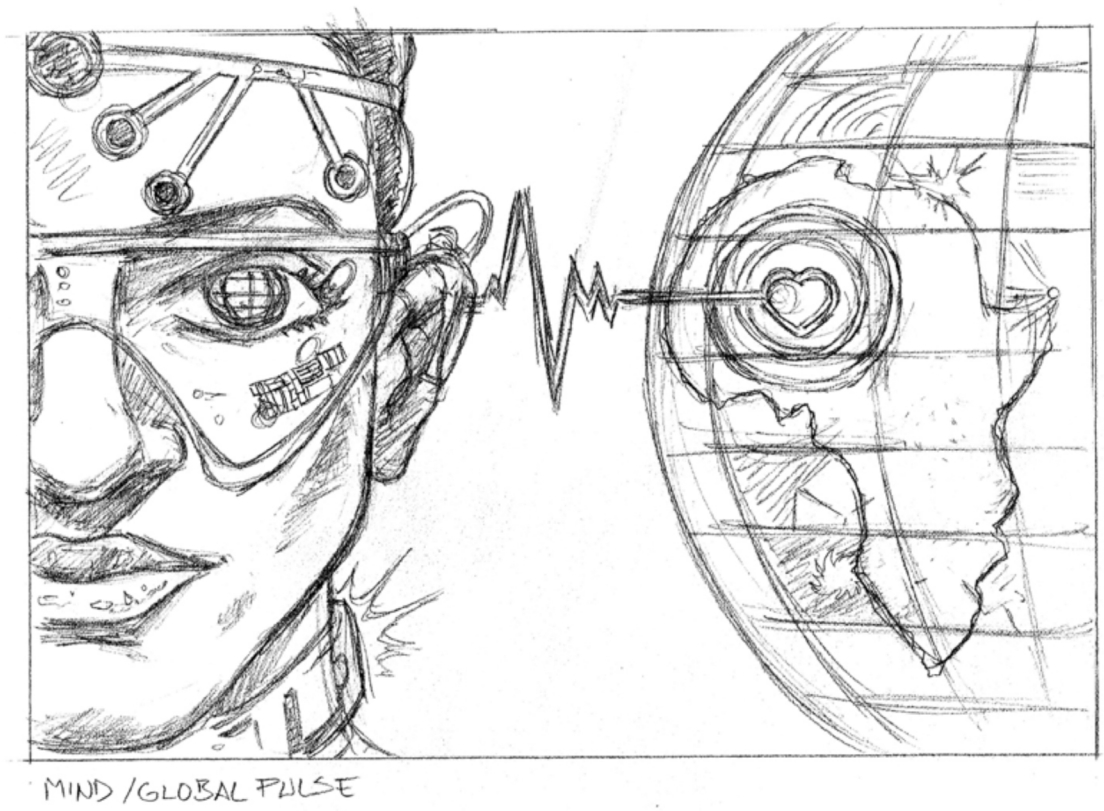

Figure 2. Exemplar Connected Fitness Vision Concept

Through the lens of Afrofuturism as enacted through the produced vision concepts, the Black voice becomes central in the design narrative of connected fitness technologies. This enables the designer to focus decision making (including the supporting design research activities) on uncovering, understanding, and responding to those salient sociocultural considerations relevant to the given design dilemma. Again, while increasing the likelihood of more empathic, culturally responsive/sensitive (i.e. inclusive), and, thus, innovative design concepts and solutions, the engagement of a design lens such as Afrofuturism equips the technology designer to engage with notions of difference. Design decisions and activities are encouraged and fostered that more actively take the desires, values, and needs of underrepresented, marginalized, disenfranchised groups into consideration within the given technological design dilemma.

Ceasar McDowell, Professor of Civic Design within the MIT Department of Urban Studies and Planning (DUSP), as an example, has coined this Black-centrist viewpoint to design as "Design for the Margins". McDowell (2018) states that "*the idea here is that if you design an intervention or change to work for (and with) those who are most marginalized, then you inevitably cover them and those who are in the majority. Within the structure of the United States, it is blackness that defines the fundamental marginal group*." Engaging Afrofuturism not only supports this philosophical stance but provides a framework by which to enact this belief.

Moreover, the discussed formalization of an application of Afrofuturism to technological design also aligns with an emerging movement in defining Afrocentric or Black cultural design philosophies. Black American architects Jack Travis and Sharon Sutton, as an example, have proposed Black design guidelines[2] that, in application, have been central in the current re-imaging of Seattle, WA's (USA) Central District (Long, 2018). It is also important to note that these

conceptions also connect with design movements that seek to decolonize design; crystalizing efforts that critique Western or Eurocentric design approaches in offering more culturally responsive practices and solutions[4].

Afrofuturism in Design: A Pathway Forward

> *Think of yourself, Black creator, freed of European restraint which first means the restraint of self-determined mind development. Think what would be the results of the unfettered blood inventor-creator with a nation behind him. To imagine – to think – to construct – to energize !!!! (Baraka, 1965).*

In understanding the user, technology designers often don't have much other than themselves in mind. "*Designers have been slow to respond to demographic shifts, designing for only a narrow segment of the population*" (Tauke, Smith, & Davis 2015). While work is happening (of particular interest in regards to a Afrofuturistic framing is Lonny Avi Brooks and Andrea Saveri's work in leveraging futuretypes in design[5]), more is needed in advancing the formalization of approaches and methods for integrating culture in technology design. The proposed engagement of Afrofuturism advances these critical understandings. "*Designers are the key cultural intermediaries as they actively promote consumption through attaching to products and services particular meanings and lifestyles with which users might identify"* states Moalosi (2007). And, "*through improved design processes – processes that include diverse perspectives and voices – designers increase the likelihood of improving physical, emotional, and social well-being*" (Tauke et al., 2015). For, as Baraka (1965) asserts, "*it must begin by being "humanistic."*

Innovations in and through design are truly needed as we look to technological responses that meet all of humanity. Currently there are gaps and consequences are being realized **- design has unintended consequences**. Tools and techniques are needed to aid the technology designer in grappling with difference. As articulated by Nicol Turner Lee in her March 2019 congressional testimony during the hearing on "Inclusion in Tech: How Diversity Benefits All Americans" the "*tech sector must be more proactive in developing solutions that reduce, or better yet, eliminate bias from newer and emerging technologies in part through employing tools that ensure that cultural biases are identified upfront and checked throughout the process*".[6]

Engaging Afrofuturism as a design lens supports this assertion. As a tool, Afrofuturism facilitates the ideation and reflection on design concepts within a deeper and richer sociocultural context. As such, Afrofuturism offers (a) a means to make biases visible and (b) a methodological framework for challenging and addressing them. It is the intent that, appropriately deployed and supported, the engagement of Afrofuturism and comparable approaches will foster more inclusive and consequential design thinking that not only aids in uncovering salient sociocultural considerations and offering a means by which to appropriately respond but, provides a framing for technological innovation.

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Notes

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