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Decolonizing the Machine

Race, Gender and Disability in Robots and Algorithmic Art

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Decolonizing the Machine: Race, Gender and Disability in Robots and Algorithmic Art

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This paper calls attention to critical race theory, critical disability studies, decolonial theory and their relevance to the study of robotic art and performances that utilise algorithms and other forms of computation. Our purpose is to uncover the veiled links between racial, gendered, and ableist practices that inform theory and practice in media art and performance, and to combat the governing codes that construct – and continue to normalize – practices of dehumanizing exclusions. While robots and cyborgs have the potential to figure posthuman forms of subjectivation, in practice they often reinforce human-machine, self-other, or abled-disabled binaries and gloss over the racist and dehumanizing exclusions that uphold neoliberal forms of power and Western conceptions of the human. Our aim is that this track, and the papers and discussions that follow, will highlight mechanisms for meaningful intervention and instigate critical reflection within media art theory to make visible how artworks and technologies continue to encode colonial hierarchies.

Decolonial theory. Critical race studies. Posthumanism. Disability studies. Critical phenomenology. Robotic art. Robotic performance. Racial technologies. Bias. Algorithmic societies.

1. INTRODUCTION

The goal of this paper and the contributions that follow is to call attention to the need for perspectives from decolonial theory, critical race theory (CRT), and critical disability studies (CDS) in media art theory, and to make explicit their relevance for machine art and media art history. Given these powerful theoretical frameworks, it is disheartening to see how rarely these theories are taken up in the discussion of art works and performances that feature robots, algorithms, and other computational technologies.

The overarching theme guiding the *Politics of the Machine* conference series is the questioning of how machines and technology impact and contextualize artistic practice, cultural production and perceptions of the world. The conference invites scholarly inquiry into the histories, theories and practices of machines and technologies in-between disciplines, and questions the governing ideas in the sciences and the humanities through critical engagement with

activities spanning culture and technology. Decolonial scholars have clearly identified the inextricably linked histories of culture and technology with histories of race, power, and exclusion (hooks; Wynter; Weheliye; Chun; Coleman; Chude-Sokei; Benjamin; Noble; Harrell, Mills). And yet, discussions of race and the linkages between race, bodies, technology and coloniality remain noticeably absent in this field. Our aim with this track is to broaden the discourse to include CRT, CDS, and decolonial scholarship, fields which have long explored these connections, in order to provide a critical platform for questioning problematic and entrenched assumptions and to help imagine new possibilities for scholarship and artistic practice.

As scholars from diverse fields that span theatre, dance and performance studies, media art, sound and music computing, curatorial practice, sociolinguistics, and human-robot interaction, we were keen to bring together diverse disciplinary perspectives and theoretical lenses to learn from one another. We explored these multiple

perspectives in order to understand how and where media artworks and performances that utilize technology encode, re-inscribe, disrupt, intervene or uphold colonial hierarchies and practices of exclusion. We took as a starting point African American Studies scholar Alexander Weheliye's claim that, although critical discourses in the humanities and social sciences have relied heavily on the concepts of the cyborg and the posthuman, these discourses "largely do not take into account race as a constitutive category in thinking about the parameters of humanity" (Weheliye 2008, 321). We hope to cast a wider net to account for more nuanced and expanded critiques of the posthuman that account for race, gender and disability.

One aspect that became clear when preparing this track was that the project of decoloniality, including our own efforts to begin a conversation about what a decolonial critique of machine art might look like, is potentially problematic and nearly paradoxical, as our efforts operate within those very colonial power structures (international academic conferences, peer-review processes, published conference proceedings) that have enabled and perpetuated the very exclusions that we are trying to confront. The social theorist and warrior poet Audre Lorde tells us that when "the tools of racist patriarchy are used to examine the fruits of that same patriarchy," then "only the most narrow parameters of change are possible and allowable" (Lorde 1984, 10). We understand that we are working within conventional power structures, and Lorde's critique is necessary and important to keep at the forefront when reporting on the outcomes of our efforts. However, we also believe that if media art theory and practice are going to participate meaningfully in relevant critique, then the field must begin to understand more comprehensively why the engagement with topics of race, gender, and disability is necessary for the field. Conscious of this critique, we made an effort to gather the voices within those structures that do uncompromising, critical work in an effort to deliberately center these conversations. What follows are some suggestions and summaries of important scholarship in these areas and their relevance for media art theory and practice. We conclude with summaries of the contributions to our track, many of which appear as full papers in this collection.

2. DECOLONIAL SCHOLARSHIP

One aspect of decoloniality means trying to change what the feminist social theorist bell hooks describes as the "white supremacist capitalist patriarchy," and what the sociologist and decolonial theorist Ramon Grosfoguel calls the "Capitalist / Patriarchal Western-centric / Christian-centric Modern / Colonial World-system" (hooks 2015; Grosfoguel 2013). This world system is implicit and normalized, and is being

swiftly reproduced in digital systems, as Safiya Noble, Ruha Benjamin, Timnit Gebru, Joy Buolamwini, Abeba Birhane, and many others have shown. The intention of introducing theories from diverse disciplines is to broaden and deepen the discussion of robotic and algorithmic art. The objective is to examine how cultural and artistic representations of robots gloss over or even reinforce the racist and dehumanizing exclusions that uphold neoliberal forms of power and Western conceptions of the human. This, we hope, may help contribute to urgently needed and radically alternative visions of machine and algorithmic art.

In *The Racial Contract*, the philosopher Charles Mills described the "conceptual partitioning and corresponding transformation of human populations into 'white' and 'non-white' men" (Mills 1997, 12):

"The establishment of society thus implies the denial that a society already existed, the creation of society requires the intervention of white men, who are thereby positioned as already sociopolitical beings. White men who are (definitionally) already part of society encounter non-whites who are not, who are "savage" residents of a state of nature characterised in terms of wilderness, jungle, wasteland" (13).

Mills' definition of the Racial Contract is a response to classic social contract theory that urges a new consideration of how this now-implicit contract establishes a racial polity, whose purpose is "specifically to maintain and reproduce this racial order, securing the privileges and advantages of the full white citizens and maintaining the subordination of the nonwhites" (14). The world of contemporary technology rarely imagines the possibilities for profound disruption because the conceptual foundations upon which that world stands remain unquestioningly entrenched in the colonial episteme.

Mills's Racial Contract is not normally considered alongside cybertheory and posthumanism, but there are important parallels, not least because robots and cyborgs participate in intellectual trajectories that traverse the political, the social, the technical and the cultural. The cyber and posthumanist theorists Donna Haraway, Rosi Braidotti, and Lucy Suchman have all demonstrated that robots and cyborgs have the potential to figure posthuman forms of subjectivation. But in practice these technologies often reinforce human-machine, self-other, or abled-disabled binaries, which is not surprising given that the field of computer science and popular ideas about technology and the future have hitherto centered around a small and largely homogenous group of people (Broussard 2018). Contrary to Haraway's early vision that cybernetic technologies would result in a radical, transformative re-thinking of the self, technologies and "humans" remain trapped in a maze of reductive dualisms. This is partly a

result of institutional practices and also linked to what Meredith Broussard terms “technochauvinism.”

We also aim to question the inequitable and reductive practices of coloniality that continue to dominate scholarly discussions surrounding technology and machine art. Ramon Grosfoguel has proposed that the “epistemic privilege of Western Man in Westernized Universities’ structures of knowledge is the result of four genocides/epistemicides” that monopolize discourses and the authority of knowledge in the world (Grosfoguel 2013, 73). This epistemic privilege marks the Christian, white, European, heterosexual, able-bodied man as the essential human, the default human, from whom other categories of human deviate. The philosopher Sylvia Wynter calls this use of the European white man as a surrogate for all humans “overrepresentation,” and says “the struggle of our times, one that has hitherto had no name, is the struggle against this overrepresentation” (Wynter, 2003, 262). To combat the overrepresentation of white European maleness is not only to focus on artists that explicitly deal with race, gender, and disability in their art works, but, crucially, to expand our notion of what kind of critique is needed. To that end, it is necessary to acknowledge that the theories we use to make sense of technologies shape, in turn, the way we think about human-machine relationships. The Critical Disability Studies scholar Margrit Shildrick (2012) quotes Judith Butler to describe this acknowledgement as central to critical scholarship:

“What (critique is) really about is opening up the possibility of questioning what our assumptions are and somehow encouraging us to live in the anxiety of that questioning without closing it down too quickly. Of course, it’s not for the sake of anxiety that one should do it...but because anxiety accompanies something like the witnessing of new possibilities” (Butler quoted in Shildrick, 31).

Looking at the scholarship and theoretical positioning within media art theory, which draws largely on male European scholarship, it becomes nearly impossible to ignore “the literal and virtual whiteness of cybertheory” (Weheliye 2002, 21). In his critique of literary theorist N. Katherine Hayles’ discourse on posthumanism (Hayles 1999), Alexandre Weheliye reminds us that theories of the posthuman “frequently appears as little more than the white liberal subject in techno-informational disguise” (Weheliye 2002, 23). Thus, when it comes to theories of embodiment and posthumanism that promise the possibility of new forms of subjectivation, “New World black subjects cannot inhabit this version of selfhood in quite the same manner as the ‘white boys’ of Hayles’s canon due to slavery, colonialism, racism, and segregation, since these forces render the very idea that one could be

‘free from the will of others’ null and void” (Weheliye 2002, 24). In his account, “Hayles needs the hegemonic Western conception of humanity as a heuristic category against which to position her theory of posthumanism, in the process recapitulating the ways in which the Western liberal theory of the ‘human,’ instantiated in the eighteenth century, came to represent ‘humanity’ *sui generis*” (Weheliye 2002, 23). In other words, critiques of the liberal subject that do not address the historically raced and gendered nature of that subject end up reaffirming, or “recapitulating” in Weheliye’s term, the status quo they seek to disrupt.

Some scholarship does account for the heterogeneity of subjectivities. The performance and new media studies scholars Grisha Coleman and Thomas DeFrantz have pointed to literary and social theorists who provide good background for considering “the roiling circumstances that produce black subjects, or black ‘undercommons’, or black misery” and identify those artists that “produce Afrofuturist innovations that resist these characterizations/predictions” (Coleman and DeFrantz 2019, 56). Their essay, *Reach, Robot: AfroFuturist Technologies*, asks important questions concerning politics, ideologies and technologies through discussion of an interactive, public media artwork. This kind of work opens up radical conceptions of machine art that involve alternate modes of spectatorship, and, in so doing, calls for attention to the “parallels between our corporeal structure and the electronic ones that mediate our daily lives.” What, the authors ask, could a “viable ‘black robot’ tell us about power, resistance, survival, or mobility?” (p. 53). Their discussion offers one model for transdisciplinary inquiry at the intersection of culture and technology that is grounded in decolonial scholarship.

3. RACISM AND TECHNOLOGY

In this section, we present a brief outline of scholarship on race and technology, with the aim of re-sensitizing white scholars and artists working with art and technology. Re-sensitizing is necessary, because, as a result of the global civil rights movements of the mid-twentieth century, explicitly racist laws and language have largely been barred, and overt racism is no longer the legal and cultural norm. Most white academics, artists and researchers do not consider themselves to be racist, and many in our own fields would ardently align with anti-racism. And yet, reflexes of the colonial wound continue to ensure inequitable experiences and opportunities for non-white people. And as should be clear by now, white researchers are not doing enough. As Charles Mills puts it, “whites’ dominance is, for the most part, no longer constitutionally and juridically enshrined but rather a matter of social,

political, cultural and economic privilege based on the legacy of the conquest” (1997, 73).

These privileges are challenging for white people to discuss, because, in white culture, talking about contemporary racism and coloniality is generally considered uninteresting, irrelevant, or even boorish. For many white people, racism is something that happened in the past, or is happening over *there* but not *here*, or else is something committed by individual, deplorable people. Mills calls contemporary white privilege “a norm whose existence it is now embarrassing to admit” (1997, 56). The literary critic and social theorist Hortense Spillers (1987), writing about America, calls racism and white privilege:

“the Great Long National Shame. But people do not talk like that anymore—it is ‘embarrassing,’ just as the retrieval of mutilated female bodies will likely be ‘backward’ for some people. Neither the shameface of the embarrassed, nor the not-looking-back of the self-assured is of much interest to us, and will not help at all if rigor is our dream” (68).

It is embarrassing for white people to talk about racism, and those of us who are white tend to hide behind what Mills calls an “epistemology of ignorance,” and the novelist Toni Morrison calls “wilful oblivion.” In the realm of cyberspace, the communications scholars Beth Kolko, Lisa Nakamura and Gilbert Rodman note that “when it comes to virtual culture, the subject of race seems to be one of those binary switches: either it’s completely ‘off’ (i.e., race is an invisible concept because it’s simultaneously unmarked and undiscussed) or it’s completely ‘on’ (i.e., it’s a controversial flashpoint for angry debate and overheated rhetoric)” (2000, 1). The ‘off’ switch of race in technology is an unmarked, overrepresented whiteness.

But as Spillers emphasizes, wilful white ignorance and claims to white innocence do not lead to rigor or growth. Those of us who are white must accustom ourselves to the reality that coloniality and racism in contemporary society endure as “a particular power structure of formal or informal rule, socioeconomic privilege, and norms for the differential distribution of material wealth and opportunities, benefits and burdens, rights and duties” (Mills, 1997, 3). As Kolko, Nakamura and Rodman point out, seeing race as a switch that can be turned off is a manifestation of white privilege, with its insistence that whiteness is not a racialized category, but rather the unmarked, implicit norm.

Digital media scholar D. Fox Harrell discusses how to make the invisibility of whiteness and other categories more visible, using the idea of phantasms. His concept of Phantasmal Media (2013) connects to Mills’ Racial Contract, pointing

to the invisibility of the logics and concepts that undergird computational programs (e.g., AI, virtual engines, symbolic logic). Harrell (2013) sees possibility in the potential of media technologies to create and reveal phantasms by making clear:

“how phantasms, which often operate invisibly because they are immediately understood and uncontroversial in meaning in their native cultural settings, can be revealed through their contrast with multiple phantasms based in other worldviews and images. Revealing a phantasm means making conscious the awareness of the cultural worldview from which the phantasm is drawn, rather than off-loading meaning onto the image itself for immediate apprehension” (10).

In this conception, implicit cultural assumptions can be revealed through comparison with other cultural or demographic perspectives. The practice of inclusive comparison can prevent assertions of white, or male, or able-bodied ignorance.

Non-white artists and researchers have never had the option of white ignorance or innocence, and have painstakingly, across many disciplines, outlined the fundamental racialized nature of western society and its technologies. Kolko, Nakamura, and Gordon edited an early volume exploring *Race in Cyberspace*, with Kolko calling the internet a “cultural map of assumed whiteness” (2000, 225), together with an unmarked maleness. The digital studies scholar Kishonna Gray notes that we are “operating under oppressive structures of masculinity and whiteness that have manifested into digital spaces” (Gray 2012, 176). The new media scholar Wendy Chun edited a special journal issue *Race and/as Technology*, which considers the “interrelationship between technical and racial productions” (Chun 2009, 24). The communications theorists Geoffrey Bowker and Susan Leigh Star detail how classification technology helps operationalize race and gender as categories (1999). The African American Studies scholar Louis Chude-Sokei details the entwined history of “ideologies of racial dominance and of technological advancement” (2015, 27).

A growing body of scholarship is tracing how oppressive structures that pre-exist digital tools are being rapidly replicated in technology. In her prize-winning book, *Race after Technology*, the African American Studies scholar and sociologist Ruha Benjamin demonstrates how technology and racism are intimately tied together, as technological applications make people of color more vulnerable. She describes this process as one in which segregationist Jim Crow practices “feed the ‘New Jim Code,’ –automated systems that hide, speed, and deepen racial discrimination behind a veneer of technical neutrality” (Benjamin 2019b, 422). Analogously, the communications scholars Nick Couldry and Ulises Mejias call the ecosystem of

data collection “digital colonialism” (2019a, 2019b), which “combines the predatory extractive practices of historical colonialism with the abstract quantification methods of computing” (2019b: 337). The cognitive scientists Abeba Birhane and Olivia Guest trace the histories of computational sciences to show how they are rooted in colonialism, and argue that “it is paramount to acknowledge the present ecosystem of the computational sciences for what it is and obtain our liberation from our conditioned internalized coloniality, white supremacy, and Anglo- and Euro-centrism” (Birhane and Guest 2021, 69).

Colonial legacies appear frequently in technology. In their ground-breaking research, computer scientists Joy Buolamwini, Timnit Gebru and Deborah Raji demonstrated that facial recognition software often mis-classifies people of color, especially women with darker skin (Buolamwini and Gebru 2018, Kantayya 2020). Safiya Noble, the Co-Director of the UCLA Center for Critical Internet Inquiry, details how internet search technology and data discrimination harm people of color, especially Black women and girls (2018). Data scientist and mathematician Cathy O’Neil traces the rise of what she calls ‘Weapons of Math Destruction’—mathematical models that “encoded human prejudice, misunderstanding, and bias into the software systems” (O’Neil 2016, 3). Data journalist Meredith Broussard catalogues inequities in technology, and identifies the problems with technochauvinism, the unquestioning belief that technology is always the preferred solution (2018).

Abeba Birhane (2021) points out that conventional solutions to the problem of technological unfairness are inadequate, showing that:

“Unjust and harmful outcomes, as a result, are treated as side effects that can be treated with technical solutions such as “debiasing” datasets rather than problems that have deep roots in the mathematization of ambiguous and contingent issues, historical inequalities, and asymmetrical power hierarchies or unexamined problematic assumptions that infiltrate data practices” (2).

Overarchingly, these scholars demonstrate that racism and technology are mutually constitutive to a larger degree than most white computer scientists, researchers and digital artists would like to acknowledge. As Mills puts it, “a crucial manifestation” of the racial contract “is simply *the failure to ask certain questions*” (Mills 1997, 73). Researchers and artists working to break the links between race, coloniality and technology demand that we ask many questions. Google’s former director of research, Peter Norvig, says the “pressing questions” for artificial intelligence are “Whose interests are you serving? Are you being fair to everyone? Is anyone being left out?” (Lynch 2021). Safiya Noble asks of search results, “For

whom is this the best information? Who decides?” (Noble 2018, 18). The computer scientist Shakir Mohamed and their colleagues ask, “What values and norms should we aim to uphold when performing research or deployment of systems based on artificial intelligence? In what ways do failures to account for asymmetrical power dynamics undermine our ability to mitigate identified harms from AI?” (Mohamed, Png, and Isaac 2020, 2). More simply, Meredith Broussard asks “Did you think about what possibly could go wrong?” (Broussard 2018, 69).

4. CRITICAL DISABILITIES STUDIES

CDS offers critical frameworks for understanding issues of visibility, normative assumptions and justice from disability-led perspectives. These frameworks help scholars unpack a technological culture and view of machines that is built on assumed able-bodiedness and biopolitics. The underlying premise of much CDS scholarship stems from the recognition that “disabled people’s needs and well-being are often misunderstood by the non-disabled majority” and that “making space for the testimony of disabled people is a matter of epistemic justice that involves recognizing disabled people as credible knowers” (Goering and Klein 2020, 624). Given the integration of technology into the everyday lives of disabled people, it is striking how little consideration is given to these perspectives. If the internet can be considered a “cultural map of assumed whiteness,” then the field of human enhancement and the material realities of robotic and AI-assisted technologies might be considered a cultural map of assumed ableism.

An important perspective that CDS offers the study of robots and AI art works and performances is the intersection of transhumanism and human enhancement. CDS acknowledges that disability, like race and technology, is socially constructed: “it is a product of power relationships, discourses, institutions, and contingent and historical circumstances” (Hall 2020, 634). CDS scholar Melinda Hall argues that transhumanist support of human enhancement is “inimical to disability justice projects,” and the arguments “rely on the denigration of disabled embodiment and lives” (Hall 634). She calls for the need to generate a counter-discourse to the ableist views of enhancement and human augmentation that allow for alternative visions of enhancement and relations between people and technology that “shifts attention from the body to the social and the political” (pp.634).

Within the field of human-computer interaction, Katta Spiel has been an ardent advocate for inclusion and Critical Participatory Design through her research that incorporates marginalized perspectives on design in computer science and

engineering. Spiel notes how “bodies and how we design for them are products of social norms,” and these norms contain dangerous adverse consequences for bodies and people that do not fit readily inside these normative categories. Much of HCI, HRI, and literature on embodied interaction equate being human with white, male, non-disabled bodies. The implicit male, white and ableist assumptions contained within the conceptualisations and artefacts in the field of wearable computing are more than mere blindspots, they materialize and encode bias and do not account for the experiential differences in lived embodiments of BIPOC, people with disabilities, or white women. Practices in the field of embodied computing fail to account for the “axes of oppression” that reify certain forms of power, and render it all but impossible to rethink or design for bodies outside of normative categories.

CDS scholar Margrit Shildrick proposes a notion of embodiment and embodied interaction that links technologies and devices with affective experiences and subjectivity. Shildrick’s notion of embodiment and embodied interaction explores the “affective significance of prosthesis and devices that transform the body, demonstrating how corporeal transformations can work to undo the conventional limits of the embodied self” (Shildrick 2013, 270). But unlike the transhumanist perspective, the “celebratory re-imaginings of the multiple possibilities of corporeal extensiveness” (Shildrick 2013, 271) do not fall into the trap of dualisms. Her critical-phenomenological approach recognizes that embodiment is never complete nor secured against otherness, but manifests through a nexus of constitutive assemblages that contest the very idea of a singular human being” (Shildrick 2013, 272):

The parallel modes of theorising corporeality make it clear that embodiment is never less than a highly complex and indeterminate state, held only in place by particular forms of psycho-social imaginary that privilege corporeal wholeness and integrity. What is at stake in the conventional deployment of prosthesis has been, then, the maintenance of, and yet an inevitable transformation in that imaginary” (272).

5. ROBOTS AND CYBORG ART

For centuries, robots and cyborgs (both real and imagined) have embodied complex cultural imaginaries that are rooted in both the promise of technological liberation and anxiety-fueled projections about threats of technology and the loss of human agency. As Section 3 made clear, race and technology are deeply intertwined. In this section, we explore the links between robot and cyborg art with attention to more recent scholarship that make these connections explicit.

In the previous sections, we summarized the extensive literature from CRT and CDS that demonstrate how normative assumptions and knowledges, such as whiteness, maleness, and able-bodiedness, operate as social tropes or phantasms that can be identified (at least in part) by their invisibility. These social tropes are the presumed “natural” or invisible cultural values that reify a status quo, especially in scientific and technical discourses but also within media art theory and practice. The implicit whiteness and maleness can be seen in depictions of robots and AI in science fiction from the Enlightenment to the present. If we take seriously Haraway’s observation that

Technologies and scientific discourses can be practically understood as formalizations, i.e. as frozen moments, of the fluid social interactions constituting them, but they should also be viewed as instruments for enforcing meanings. The boundary is permeable between tool and myth, instrument and concept, historical systems of social relations and historical anatomies of possible bodies, including objects of knowledge. Indeed, myth and tool mutually constitute each other (83).

then it is important to examine the ways that robots and AI and other transformational tools have historically intersected with conversations about race and colonialism, and understand how these linkages are manifest in contemporary culture. Louis Chude-Sokei and Beth Coleman (among others) have argued convincingly that race has always been both an implicit and explicit factor in thinking about technology, science and posthumanism. The way artists dream and speculate about robotic futures shape and inflect our visions of technology and influence what values are embedded within these systems. As literature and media studies scholar Jennifer Rhee writes in *The Robotic Imaginary* (2018),

“(N)ormative knowledges inscribe certain experiences as familiar, rendering those not represented as outside of knowledge, as the unknown, the unfamiliar, the strange. In the context of AI’s and robotics’ explicit anthropomorphic mission, normative knowledge does not just inscribe what constitutes knowledge and intelligence, it inscribes the human itself. Thus, nonnormative and unfamiliar modes of knowing and inhabiting the world become not only unrecognizable as knowledge and intelligence, but are also unrecognizable within the boundaries of a narrowly and exclusionarily constructed human” (75).

The links between robots and narratives about dehumanizing colonial practices can be traced back to the genesis of the word “robot”. Although robots have existed in various forms since ancient times, the word “robot” does not appear until the 1920s, when Karel Čapek coined the term in the

theatre performance titled *Rossum's Universal Robots (R.U.R.)*. The word "robot" originates from the Slavic word "robota" meaning hard labor, and from "rabotnik" which stands for serf. Čapek's concept of robot carries an implicit dehumanizing connotation, since the plot centers on a group of humanoid robots who can think and feel, but whose human "masters" gradually eliminate their human-like qualities, except for the capacity to work hard and productively for humans.

Mainstream scholarship on humanoid robots and social robotics usually draws a straight line from Greek mythology to Enlightenment automata to contemporary robots like the ultra-realistic humanoid robots by Hiroshi Ishiguro and Hanson Robotics' Sophia robot. Nearly all of these accounts omit the "minstrel machine" called Mr. Rastus Robot, the Mechanical Negro (also called the "Mechanical Slave") developed by Westinghouse Research Laboratory in the 1930s in the United States. The robot was equipped with early sound playback technologies and a 16mm projector, and was dressed as a stereotypical southern Black worker and programmed with a Black voice (Chude-Sokei 2015, 51). Rastus was one of a series of domestic robots that Westinghouse used to promote the company and its products, not unlike contemporary staging of domestic robots by big tech companies such as Honda and Boston Dynamics in their efforts to humanize robot technologies (see Rajko 2022). The failure of scholars and historians of technology to account for Rastus Robot in the history of robotics speaks to Mills' epistemology of ignorance and points to the continued reluctance of roboticists to talk about race.

Like robots, the figure of the cyborg has served as a powerful metaphor for automation, dehumanization and oppression. In the late 20th century, Haraway reconfigured the cyborg both as a metaphor and promise for feminist empowerment through technology (Haraway, 1991). Haraway's vision of the cyborg as a powerful posthuman identity extends beyond feminist practices to empower different "others" and bound up with issues of race, class and sexuality. The concept that we are all cyborgs (Haraway, 1991:150) becomes a paradigm for difference in which boundaries are dissolved, hierarchies are disrupted, and the figure of the normative, liberal subject is subverted. Later theories related to cyborgs and cybertheory developed posthuman metaphorical subjectivities also tightly linked to technology and capable of defying the normative, liberal subject (i.e. the ideal model of white, successful, heterosexual man). N. Katherine Hayles develops an embodied posthuman hybrid, a subject inseparable from cybernetic information (Hayles, 1999), whereas Rosi Braidotti develops post-anthropocentric subjectivities that transition from embodiment to matter and towards cross-species hybridity (Braidotti, 2013).

Chude-Sokei (2015) proposes that the figure of the cyborg, in its part-human/part-machine serves

"among many things as an image of both the possibility of cross-cultural and cross-racial interaction (i.e. they were almost human, they were almost like us) as well as its denial due to absolutist notions of racial difference (i.e., they were machines, a different species, not like us at all). The goal of technology became then not to create machines to supplant humans but to use technology to extend human capabilities. This led to a growing sense of intimacy between hardware and the organic and an intensified sense of the uncanny racial histories and politics of that intimacy" (149).

Following this, it becomes nearly impossible to consider theories and philosophies of posthumanism and transhumanism and their associated technologies designed for human augmentation, without also questioning how increasingly invasive technologies produce cyborgs (intelligent prosthetics, brain control interfaces, gene editing technologies) and interrogating the modes of capital surrounding them. The tendency in cyborg theory and posthumanism to celebrate the transcendence of the human body through technology is not and should not be disconnected from contemporary conversations concerning race, gender and disability. Building on CDS scholarship (among others), Marco Donnarumma's critical artistic and scholarly practice experiment with new forms of embodiment that challenge dialectic of human-nonhuman, abled-disabled binaries in search of radical new possibilities and assemblages. Donnarumma repositions hybridity (a concept with a charged history of racial violence) as a methodology for investigating new possibilities for corporeal expression that allows for the traversing and discarding of bodily and disciplinary boundaries in theatre and performance (Donnarumma 2020). His work explores somatic experiences deemed abject by regimes of neoliberal normativity, and actively questions "what aspects of embodiment are normalized, by whom, for what reason and in which context" (Donnarumma 2020, 38).

6. SUMMARY OF TRACK CONTRIBUTIONS

Our track includes contributions that span a range of art works and emerging technologies, including conversational agents and embodied AI, sound technologies, digital tools, and robotics. The critical inquiries explicitly consider the relations between race, technology and power and also address topics of ethics and inclusion in connection with AI/robot/digital art works and approaches.

Two presentations look explicitly at race and technology as they relate to embodied AIs, chatbots, and software. Clareese Hill's text-based

performance lecture *Black Quantum Oracle* uses AI-generated texts that confront the ubiquity of predictive policing. Hill presented her ongoing artistic practice that develops a custom AI that produces coded poetic and scholarly contributions in performances that interweave knowledge of Caribbean philosophy and experimental ritual. Hill's *Black Quantum Oracle*, which at the time of this writing is still in development, functions as a provocation for revising prediction-based models centered on identities of color. The work points to the violent predictive models in policing and other models of reducing a marginalized identity to an objectified body, the role of predictive policing using AI, and how these predictions become tangible through indoctrinated ideologies of stereotypes and bias. The performance lecture centered on rejection of the biased predictions made on marginalized identities that have ultimately caused death, incarceration, and lower socioeconomic status. Like Hill's other works, *Black Quantum Oracle* demonstrates the potential of poetics to offer new vantage points for simultaneously experiencing, past, present and future standing in while informing the "now moments" – those moments where authentic being is activated. For Hill, poetics realized through AI and computational technologies contain within them the possibility of "foreclosing on the impoverished condition of segregating cultures and race by extorting its inherent hierarchy by pitting those who are othered against their fellow dwellers of the undercommons," (Hill 2021, np).

Suhun Lee's discussion of racial data and identity construction in art works by Stephanie Dinkins and Martine Syms in *Racial Data in Identity Construction of 'Intelligent Agents* offers a comparison of two art works with humanoid robots and digital avatars that utilize conversational agents and embodied AI. Lee uses a conversational analysis framework of the interactions between artist Stephanie Dinkins and the robot BINA48, (Breakthrough Intelligence via Neural Architecture 48), a humanoid robot head and bust made by Hanson Robotics. Lee's comparison of the two chat-bots and their approaches to virtual identity construction and black subject formation opens up new insights on race, robots and AI using analytical tools from discourse and interaction analysis.

Jessica Rajko's paper on dance and labor considers the interinvolvement of computing and engineering research with dance and robotics, and demonstrates the ways in which corporations that showcase their technologies appropriate Black culture and reinscribe practices of cultural appropriation (Rajko 2021). Building on Thomas DeFrantz's observations on the transformation of Black social dance into white dance spaces, Rajko analyses how racialized embodied movement aesthetics found in robot choreographies help maintain white-supremacist ideology. Through a detailed critique of Boston

Dynamics' promotional film featuring their industrial and mobile robots, she examines how neoliberal practices perpetuate the exclusion and erasure of Black movement philosophies through the exploitation of Black aesthetics.

Budhaditya Chattopadhyay is an artistic researcher and theorist working in the field of sound studies, bringing decolonial theory and CRT to the fore in sound studies and histories of media technology (Chattopadhyay 2022). His paper *Connecting Resonances: On Pre-modern Indigenous (Sound) Technologies* addresses an urgent and highly relevant topic concerning the disruptive effects of sound recording technologies on indigenous practice in South Asia, and discusses the resistance of Dhrupad musicians to the technologies and tools of cultural imperialism. The main concern of the paper is a close listening of the rudra veena, a pre-colonial Indian string instrument, and the trajectories of sound and media technologies within South Asia. The contribution also deals more broadly with the colonial invention of so-called "modernist technologies" and offers a redefinition of "TechArt" that gives voice and credit to tech-artists from the Global South - artists whose work remains largely absent or underrepresented on the international media art scene.

Moisés Horta Valenzuela's *Neltokoni in cuicatl* and Najam Al Ussar's *Ethics of Digitizing Public Heritage* highlight important topics at the intersection of media art, ethics, and cultural heritage. Valenzuela uses generative learning models trained on pre-Columbian sounds, poetry and images to produce a performance of sonic and visual resistance to colonial logics, weaving AI together with ancestral cultural forms. Al-Ussar unpacks and problematizes the ethics of digitising public heritage, especially in emerging countries in light of digital colonialism. His argument makes clear that the distribution of technological resources and capital across the world is neither equitable nor accidental (e.g. the Digital Divide). Al-Ussar presents a set of six questions to be considered when approaching projects on digital heritage, with the goal of establishing an ethical framework that can help artists and especially organisations in choosing whether and how to engage ethically in a digital cultural heritage project.

Finally, Stacy Hsueh's *Politics of Inclusion and Lessons of Access from Disabled Artists* considers the social model of disability and its relation to discourses surrounding AI and assistive technologies. Hsueh charts the negative effects of technosolutionism and the cultural force of narratives surrounding disability, asserting the need for counter narratives that address the real, lived, diverse experiences of disabled individuals. Her discussion of art works by Emery Blackwell, Jenny Sealey, and Tarek Atoui reveal how art works can productively interrogate developments and

practices in assistive AI while envisioning radical new ways of being.

7. CONCLUSION

Frameworks and strategies that aim at decolonizing the machine have been proposed by critical thinkers across several disciplines, many of which are summarised in this article. Thus far, however, critiques of colonial legacies and white supremacy have been largely absent in media art theory and posthumanism, especially in the fields of robotic and cyborg art. This track, we hope, offers a first outline of extant critiques that can contribute towards a significant shift in the study and practice of robot and algorithmic art, and media art history more broadly. Each of the contributions to the panel articulated specific ways in which the colonial wound continues to fester in computation and digital art. Hortense Spillers accounts for the continuing presence of the wound as caused by the fact that “the ruling episteme that releases the dynamics of naming and valuation remains grounded in the originating metaphors of captivity and mutilation so that it is as if neither time nor history, nor historiography and its topics, shows movement, as the human subject is ‘murdered’ over and over again” (Spillers 1987, 68). Because of colonial ideologies, the white liberal subject is the only subject named and valued as fully human in contemporary society, and this deformed, impoverished representation of the human creates ongoing conditions of violence – both metaphorical and literal murder – for other human and posthuman subjects. We cannot decolonize the machine if we cannot address the underlying colonial racial contract. We must work both to reject coloniality, and work toward liberation. Grisha Coleman and Thomas DeFrantz ask:

“What if we all made creative interventions to the onslaught of normative temporalities and racial assumptions, to make fugitive circumstances where something else happens for a brief moment?” (Coleman and DeFrantz 2019, 62).

As scholars and performers working with art and technology, we have the possibility to imaginatively create fugitive moments that encourage “the possibilities for a multivalent collective” (Coleman and DeFrantz 2019, 66) that recognize all of us as being in affective relation with one another. As Grosfoguel puts it, our work is to:

“bring epistemic diversity to the canon of thought to create a pluri-verse of meanings and concepts where the inter-epistemic conversation among many epistemic traditions produces new re-definitions of old concepts and creates new pluriversal concepts with ‘the many defining for the many’ (pluri-verse) instead of ‘one for the rest’ (uni-verse)” (Grosfoguel 2013, 89).

We hope this article helps direct attention to the abundant and valuable trove of critical scholarship from CRT, CDS, and decolonial theory that is essential for media art theory and practice in the twenty-first century. The contributions that follow offer examples of critical inquiry that question problematic and entrenched assumptions, and help artists and scholars imagine new possibilities for critical practice.

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