Yale Journal of Law & Technology
Volume 26, Issue 3

Special Issue:
Yale Information Society Project
Digital Public Sphere Series

Digital Griots, Wampum Codes, and Choreo-Robotics: Artist-Technologists of Color Reshaping the Digital Public Sphere

Michele Elam[*]

This Essay examines racial formation in the context of the digital public sphere with a focus on how artificial intelligence (AI) systems' understanding of social identities—especially racial identities—translates into real-world policy decisions about "bias," "risk," and "impact" as commonly interpreted by industry, government, and philanthropy. Drawing on examples in business advertising and consulting, I illustrate the ethical costs of uncritically integrating the notion of race as a data point, a drop-down menu of physical features one can mix and match. I turn then to three case studies of artist-technologists of color whose work models radical alternatives to techno-instrumentalist notions of race that often invisibly inform the quantification of social justice impact (sometimes referred to as effective altruism or strategic philanthropy). Rashaad Newsome, Amelia Winger-Bearskin, and Catie Cuan challenge discourses that frame racialized populations primarily in terms of negatively "impacted" communities, as the grateful recipients of largesse deserving of "access" to digital tools or technological literacy, or as those who can be best uplifted through the so-called "blessings of scale" and other maximalist approaches to social impact. In radical contrast, these three artist-technologists

---

[*] Stanford University. William Robertson Coe Professor in Humanities, Department of English; Senior Fellow, Institute for Human-Centered Artificial Intelligence; Former Director, African & African American Studies; Affiliate, Wu Tsai Neurosciences Institute; Bass University Fellow in Undergraduate Education. I would like to thank Professor Rob Reich, Director of the Center for Ethics in Society and Co-Director of the Center on Philanthropy and Civil Society at Stanford, for his insights into philanthropy.

refigure those "impacted" as agentive co-producers of knowledge and imagination. Their art and performance engage alternative cultural values and metrics that counter the technological vision embracing Mark Zuckerberg's refrain of "move fast and break things." Instead, the aesthetic values of friction, duration, and liveness in their work offer counter-narratives and experience to more fully effect both joy and justice in the digital public sphere.

Essay Contents

Introduction

This Essay examines how artificial intelligence (AI) is (re)shaping our cultural understandings of race. Specifically, it explores the outsized negative influence of technological approaches to race, automated and amplified by AI, in business and philanthropy as well as artists' counter to reductive typologies of identity and the technical metrics of size, speed, scale, and efficiency.

The Essay proceeds in three parts. Part I discusses AI's reductive representation of social identities, including race, as data points or algorithmic "tokens," reproducing antiquated human typologies and classificatory schemes that understand race—or its statistical proxies—in terms of essentialized physical traits or biological markers. I argue that inclusive or more highly articulated data sets that try to capture the continuum of racial or gender identities cannot address this foundational technological problem. To that end, I introduce the sociological concept of racial formation, which considers race not as *a priori*, but rather in terms of the cultural means and political ends to which such racial taxonomies are put. I then highlight two contemporary examples of AI racial formation—that is, how and with what effect AI models of "race" are being deployed—exploring its misguided use in business and corporate advertising in the name of diversity. Next, Part II illustrates how current AI interpretations of race as quantified data also problematically shape traditional notions of "impact" and "risk" in philanthropic efforts, leading to an overemphasis on metrics that prioritize maximalist and noblesse oblige approaches to giving as social change. Part III then highlights arts and humanities' privileging of the aesthetic values of friction, duration, and liveness as counters to these "blessings of scale" and, more generally, to the technical imperatives of speed, size, and efficiency. It points to three case studies of artist-technologists—Rashaad Newsom, Amelia Winger-Bearskin, and Catie Cuan—whose creative work with and about AI illustrates aspects of these alternate aesthetic values that more fully honor the diversity of human experience. I conclude with a brief note on the crucial importance of integrating arts and humanities into AI development, design, and deployment if we ever hope for AI technologies, those that

are meant to assist or augment human experience, to realize the fullness of human diversity in and with the public digital spheres that shape, and are shaped by, us.

I. How Artificial Intelligence Systems Understand "Race" and Why It Matters

AI tends to see race in highly reductive terms—as what is called a token, a data point, an ahistorical, static, biological or phrenological feature. This essentialist reduction is not considered bias in the technological world, despite the fact that approaching race in this long-debunked way dates to nineteenth century pseudo-science about race.[1] Those putatively rational sciences grew out of the Eighteenth-Century Enlightenment desire—from Denis Diderot to Voltaire—to catalogue everything in the universe, to create a vast encyclopedia of all knowledge.[2] But this rationalist project has evolved into justification for what is often termed "scientific racism," which depends on the measuring and cataloguing of bodily features as ways to rank human types;[3] it was key to early arguments "proving" the innate inferiority of peoples of African and Asian descent in the Nineteenth Century,[4] persisted as a central platform in eugenics movements around the globe in the early- to mid-Twentieth

---

[1] *See* Maya Sen & Omar Wasow, *Race as a Bundle of Sticks: Designs that Estimate Effects of Seemingly Immutable Characteristics*, 19 ANN. REV. POL. SCI. 499, 501-503 (2016) (providing an extended look at how historical theories of racialization, though debunked, continue to shape "how both lay people and scientists understand group differences").

[2] *See* William Bristow, *Enlightenment*, STAN. ENCYCLOPEDIA PHIL. (Aug. 29, 2017), https://plato.stanford.edu/archives/fall2023/entries/enlightenment [https://perma.cc/ZC3K-CT65] (discussing Enlightenment science based on laws and conceptions of people capable of knowing those laws). For an overview of more contemporary issues regarding the Enlightenment project of categorization, see generally Michele Elam, *Signs Taken for Wonders: AI, Art & the Matter of Race*, 151 DAEDALUS 198 (2022).

[3] *See* Michael James & Adam Burgos, *Race,* STAN. ENCYCLOPEDIA PHIL. (May 25, 2020), https://plato.stanford.edu/entries/race [https://perma.cc/63DG-UWK8] (discussing "the science of race" advanced by Johann Friedrich Blumenbach).

[4] *See, e.g.*, ARTHUR DE GOBINEAU, ESSAY ON THE INEQUALITY OF THE HUMAN RACES (1915).

Century,[5] and arguably has re-emerged in the Twenty-First Century under the rubric of AI systems that also purport to be merely neutral tools.[6] That project of categorization—though nonhierarchical on its contemporary face—is still considered necessary, indeed almost unimpeachable, to current AI systems, especially those early ones in computer vision, and it remains key to the classificatory imperative in most machine learning.[7] Because this technical orientation to race, as well as to gender and most social identities, is considered integral to AI at its most foundational level, efforts to mitigate bias or stereotyping have often occurred after a product's public release rather than at the point of design and development.

Many have noted that AI automates racial inequality in part because technology encodes social values and historical biases.[8] In fact, history lives within our data.[9] Nonetheless, AI systems are trained on historical data that are generally understood as, while perhaps marking events *in* time (a date here, an event there), not *of* time, a phenomenon I refer to as

---

[5] For an example in an American context, see generally MADISON GRANT, THE PASSING OF THE GREAT RACE, OR THE RACIAL BIAS OF EUROPEAN HISTORY (1921).

[6] *See generally* RUHA BENJAMIN, RACE AFTER TECHNOLOGY: ABOLITIONIST TOOLS FOR THE NEW JIM CODE 37 (2019).

[7] *See* Nina Dewi Toft Djanegara et al., *Exploring the Impact of AI on Black Americans: Considerations for the Congressional Black Caucus Policy Initiatives*, STAN. UNIV. HUM.-CENTERED A.I. 7 (Mar. 1, 2024), https://hai.stanford.edu/sites/default/files/2024-02/Exploring-Impact-AI-Black-Americans.pdf [https://perma.cc/JH48-SWZ4] (discussing how computers interpret race); *see also* DOROTHY E. ROBERTS, FATAL INVENTION: HOW SCIENCE, POLITICS, AND BIG BUSINESS RE-CREATE RACE IN THE TWENTY-FIRST CENTURY (2012) (providing an overview of the impact of the evolution of racial categorization in the Twenty-First Century).

[8] For an overview of bias and AI, see generally Emily M. Bender, *On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?* 🦜, 2021 FACCT 610 (2021); JOY BUOLAMWINI, UNMASKING AI (2023).

[9] I paraphrase a comment by Joy Buolamwini in the Netflix documentary *Coded Bias*. CODED BIAS (7th Empire Media 2020). Buolamwini is the founder of the Algorithmic Justice League. *See Join the Movement*, ALGORITHMIC JUST. LEAGUE, https://ajl.org [https://perma.cc/CM4T-KPND]. She describes herself as a poet of code. *See Poet of Code*, POET OF CODE, https://poetofcode.com [https://perma.cc/BD4J-GEZ8].

algorithmic ahistoricity.[10] We think of data and algorithms as neutral; if things go sideways, it is the fault of bad actors. But without the recognition of data itself as a kind of historical palimpsest, the predictive capabilities of AI that are dependent on that training data risk not simply predicting but *prescribing* people's futures and outcomes for health, wealth, and social justice. To offer specific examples, consider the misuse of AI in judicial sentencing to predict recidivism[11] or in the everyday workforce, where resumes are ranked by GPT-3.5.[12] More inclusive data sets or hiring more diverse populations will not solve this problem.[13]

In fact, for those interested in creating and regulating AI for social good, the challenge goes deeper than these forms of bias, to the extent that they depend on seemingly self-evident racial categories. But racial categories (whether explicit or statistically inferred) do not exist *a priori*. As historian Jennifer L. Hochschild has documented, the man-made typologies of race have always been historically fluid, socially contextual, and motivated by and come into being through political

---

[10] For an extended definition of "algorithmic ahistoricity," see generally Michele Elam, *Poetry Will Not Optimize; or, What Is Literature to AI?*, 95 AM. LITERATURE 281 (2023).

[11] *See* Cade Metz & Adam Satariano, *An Algorithm That Grants Freedom, or Takes It Away*, N.Y. TIMES (Feb. 7, 2020), https://www.nytimes.com/2020/02/06/technology/predictive-algorithms-crime.html [https://perma.cc/N53J-7GGC].

[12] Recent investigations show bias towards women and people of color via the proxy of "demographically identifiable names." *See* Leon Yin, Davey Alba & Leonardo Nicoletti, *OpenAI's GPT is a Recruiter's Dream Tool. Tests Show There's Racial Bias*, BLOOMBERG (Mar. 7, 2024), https://www.bloomberg.com/graphics/2024-openai-gpt-hiring-racial-discrimination [https://perma.cc/T5HQ-KB9B].

[13] *See* Peter Henderson et al., *Safety Risks from Customizing Foundation Models via Fine-Tuning*, STAN. UNIV. HUM.-CENTERED A.I. (Jan. 11, 2024), https://hai.stanford.edu/sites/default/files/2024-01/Policy-Brief-Safety-Risks-Customizing-Foundation-Models-Fine-Tuning.pdf [https://perma.cc/C4X2-5VJ9] (policy brief on limitations of fine-tuning for inclusive datasets). *See also Ethical Considerations Related to the Inclusivity of Data for Research and Statistics*, UK STAT. AUTH. (Mar. 16, 2022), https://uksa.statisticsauthority.gov.uk/publication/ethical-considerations-related-to-the-inclusivity-of-data-for-research-and-statistics/pages/8 [https://perma.cc/B2UG-K9RD] (outlining considerations that promote inclusivity but do not completely limit bias in data research).

interests and ideological exigencies.[14] Indeed, sociological theories of racial formation further illuminate the ways that race only becomes salient in identities and institutions through its social performance. As Michael Omi and Howard Winant put it:

> We define *racial formation* as the sociohistorical process by which racial categories are created, inhabited, transformed, and destroyed . . . . Racial formation is a process of historically situated *projects* in which human bodies and social structures are represented and organized. Next we link racial formation to the evolution of hegemony, the way in which society is organized and ruled . . . . From a racial formation perspective, race is a matter of both social structure and cultural representation.[15]

As I elaborate elsewhere, "[t]he expression 'racial formation' is . . . a reminder to analyze the structural and representational—not just linguistic—contexts in which race becomes salient: the cultural staging, political investments, institutional systems, and social witnessing that grant meanings and values to categories."[16] That is, race gains meaning through interpersonal interactions (e.g., a white person asks to touch a Black person's hair) and cultural media (e.g., we learn what to think about race via literature, film, theatre, etc.), or it emerges within and as a function of government/state structures (e.g., in the Census's efforts to name and count an individual's racial background).[17] Importantly, this notion of racial formation challenges both the myth of "colorblindness" and the idea that race is a social construct *ipso facto* "race doesn't matter."

---

[14] Jennifer L. Hochschild & Brenna M. Powell, *Racial Reorganization and the United States Census 1850-1930: Mulattoes, Half-Breeds, Mixed Parentage, Hindoos, and the Mexican Race*, 22 STUD. AM. POL. DEV. 59, 64 (2008).

[15] MICHAEL OMI & HOWARD WINANT, RACIAL FORMATION IN THE UNITED STATES 55-56 (2d ed. 1994).

[16] *See* Elam, *supra* note 2, at 207.

[17] *See* OMI & WINANT, *supra* note 15, at 55. Frantz Fanon calls this the cultural training of the eye—to see race, not in the ophthalmological sense, but to learn what it means in the world. *See* FRANTZ FANON, BLACK SKIN, WHITE MASKS 202 (1986).

The American Census is an interesting case in point of why race matters, since it appears to be a seemingly straightforward data collection request to check a few boxes. But its purpose for most people is opaque. There is little to no guidance on the document itself as to how to interpret those tidily boxed categories, nor does the Census make transparent that it is run by the Office of Management and Budget, and that this data collection is not a site for self-expression or resisting identity categorization (as my students believe when they first encounter it, e.g., entering "human" in lieu of checking a census box). Historically, that data has been used to distribute funding to under-served communities and to document civil rights violations,[18] among other practices. Racialized experience is translated and made usable in very specific ways and for particular ends.[19]

Rather, race becomes datafied. The Census is an example of race-making in action—it makes relevant *in situ* one's racial identity—and it does so with certain ends and aims in mind. Race itself is a technology, a tool, as scholar Ruha Benjamin has cogently argued.[20] Because of that, it is important to shift the focus from asking "*What race are you?*" and from efforts to fix bias by more accurately representing someone's racial (let alone intersectional) identity, to asking instead: "*What is the utility of race in any given context? What is its use-value, especially in the digital public sphere?*"

---

[18] *See Why We Ask Questions About Race*, U.S. CENSUS BUREAU, https://www.census.gov/acs/www/about/why-we-ask-each-question/race [https://perma.cc/9WYE-ZK8E] (listing the myriad ways that racial census data is used in distributing funds and protecting civil liberties).

[19] For example, Sarah Evans and her colleagues note that hesitancy in the 2020 Census for Spanish-speaking citizens was tied to the information being shared with other U.S. agencies, with the potential inclusion of a citizenship question evoking fears of immigration enforcement. *See* Sarah Evans et al., *2020 Census Barriers, Attitudes, and Motivators Study (CBAMS) Focus Group Final Report*, U.S. CENSUS BUREAU 49 (Jan. 24, 2019), https://www2.census.gov/programs-surveys/decennial/2020/program-management/final-analysis-reports/2020-report-cbams-focus-group.pdf [https://perma.cc/7KP9-CQ4M].

[20] *See generally* BENJAMIN, *supra* note 6; *see also* Langdon Winner, *Do Artifacts Have Politics?*, 109 DAEDALUS 121, 122 (1980) (discussing the political properties of technical objects and the ways that these technologies embody forms of authority and subordination).

A. AI and the Marketing of "Race" in Advertising: Generated Faces and the Random Face Generator

To take seriously this question of the use-value of AI renderings of race, consider its deployment in the commercial sector. I appreciate that race's utility extends for what we might think of as "good" purposes (e.g., cultural or political unity) and ill purposes (e.g., stereotyping and civilian surveillance), and that it extends well beyond for-profit sectors. But the application of AI's interpretation of race in marketing and advertising is especially worth analyzing because it has mushroomed and been mainstreamed, normalizing how people think of race and racial inequity.

There currently exist a plethora of entirely unregulated, so-called AI-powered, commercial applications that purport to create "new people" by recombining faces scraped from various data corpuses and image banks. Generated Photos and Unreal Person are but two examples of online sites that sell at-a-click faces of various races, genders, and emotional expressions.[21] Users are invited at their leisure to mix and match hair length and hair color as well as eyeglasses, eye color, and eye shape (e.g., an "ethnic" dropdown menu offers the option of an epicanthus fold), among other choices.[22] Aimed particularly at cost-conscious businesses, the Generated Photos and Random Face Generator images are billed as painless workarounds to bothersome privacy and copyright laws—no matter that real people's images were used to train the businesses' proprietary algorithms without consent, credit, compensation, or redress.

---

[21] *Unique, Worry-Free Model Photos*, GENERATED PHOTOS, https://generated.photos [https://perma.cc/FWJ8-NNKW]; *Unreal Person, This Person Does Not Exist*, UNREAL PERSON, https://www.unrealperson.com [https://perma.cc/K4ZN-K4DU].

[22] *Face Generator*, GENERATED PHOTOS, https://generated.photos/face-generator/new [https://perma.cc/MGN8-XH44].

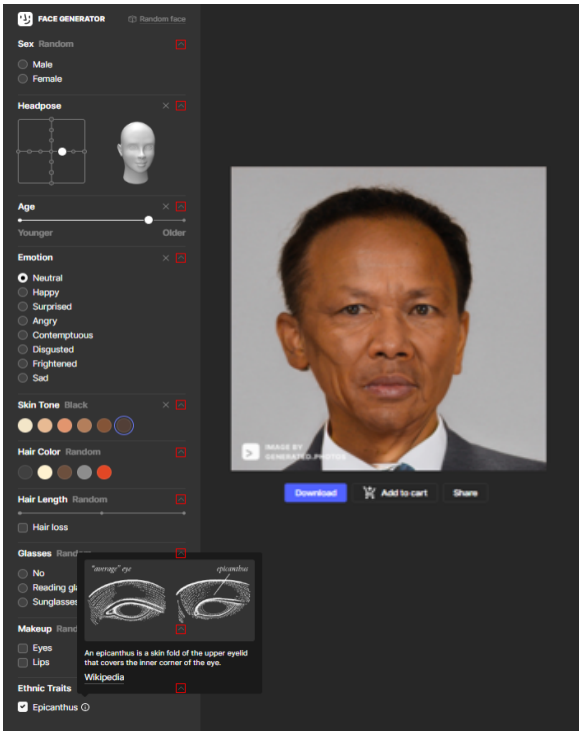

Figure 1: Screenshot of drop-down menu of customizable facial features on Generated Photos face generator software.[23]

Elsewhere, I have discussed the disturbing implications of this cynical ploy to construct a kind of vacuous representational diversity while actually distracting and disinviting users from any thought of race in the context of equity or social justice.[24] In that essay, I considered it a form of AI eugenics. But upon reflection, I think now that these applications are marketing a subtler, more insidious form of discrimination.

If historically, eugenics sought a hierarchical ranking of human beings, Generated Photos and Random Face Generator misleadingly suggest a horizontal equality of racial

---

[23] *Face Generator*, *supra* note 22.

[24] For a discussion of the commercialization of these concepts of race and gender in AI applications, see Elam, *supra* note 2, at 212. *See generally* NEDA ATANASOSKI & KALINDI VORA, *The Surrogate Human Affect: The Racial Programming of Robot Emotion*, *in* SURROGATE HUMANITY: RACE, ROBOTS, AND THE POLITICS OF TECHNOLOGICAL FUTURES 108 (2019) (discussing the problematic racialization of emotions used in everything from robot design to autism emotion flash cards, which appear in adapted form in these commercial applications).

types and physiognomies. No harm, no foul, the advertising on their landing pages suggests.[25] We are all equal and equally different is the rainbow messaging: Your business selections are just a matter of individual preference, with "free choice" and "personalization" the language that sells. Out of mind if in full sight are the social determinants informing that choice—whether that be colorism or ageism or sexism or whatever financial or internalized pressures of circumstance and culture inform how a user might assess the value of particular person's appearance for professional use. Of course, the even creepier uses of these applications may be the personal downloads enabling and encouraging all manner of vices, all the more difficult because of the legal murkiness of sex trafficking and child pornography with AI-generated images.[26]

B. AI and the Marketing of "Race" in Corporate America: Debra L. Lee, Former Chair and CEO of BET Networks, and the Tale of the AI Consultant

This approach to race as simply a set of variables is so taken for granted that it has become a go-to in advertising at the highest corporate levels. At the 2024 Leading Women Defined Summit of Black women professionals, renowned businesswoman Debra L. Lee, former chairperson and CEO of BET Networks, shared an anecdote with her audience: An (unnamed) corporate board on which she served had invited an "AI consultant from one of the large tech companies," as she put it, "to advise the company and their board on ways to use AI in advertising their brand."[27] She noted that it "was not

---

[25] *Face Generator*, *supra* note 22.

[26] For an overview of the increasing indistinguishability of AI-generated and real child pornography images, see David Thiel, Melissa Stroebel & Rebecca Portnoff, *Generative ML and CSAM: Implications and Mitigations*, STAN. INT. OBSERVATORY 2-3 (June 24, 2023), https://stacks.stanford.edu/file/druid:jv206yg3793/20230624-sio-cg-csam-report.pdf [https://perma.cc/8NVU-XH2F]. The FBI has also released an announcement deeming these AI-generated images illegal. *See Child Sexual Abuse Material Created by Generative AI and Similar Online Tools Is Illegal*, FED. BUREAU INVESTIGATION (Mar. 29, 2024), https://www.ic3.gov/Media/Y2024/PSA240329 [https://perma.cc/3U76-EPT5].

[27] Debra L. Lee, Former Chairperson & CEO, BET Networks, Remarks at the 15th Leading Women Defined Summit (Mar. 24, 2024).

designed to be a presentation on race"; nonetheless, race became central to her critique of the consultant's advice.[28] The white consultant began demonstrating how easy it was to feature an ad using a figure of one race, and then noted that the lightning-fast efficiency of AI enabled changing the model out for another race within seconds. What prompted Lee's outcry in the boardroom was when the consultant claimed that if the company wished to go "exotic," they could easily swap in a Black woman to replace the white one with generative AI.[29] She called him out for his premise that white equaled unmarked and standard, while Black signaled an exoticized Other, and she was glad she was in the decision-making room to do so. But beyond the ease with which the consultant replicated implicit biases in his pitch is another concern. His "change clothes and go" marketing of racial difference—an approach all the more validated given his imprimatur as an AI consultant from, as Lee put it, a "major tech company"—mirrors that of Generated Photos and the Random Face Generator.[30] Reducing race to a customizable and monetized trait, a paint-by-numbers approach to diversity, deflects attention from the ways that racial inequity functions in the world.

II. Limitations of Industry and Philanthropic Concepts of "Impact" and "Risk"

These examples point to some particular challenges in mitigating bias. Issues of race, gender, or disability have traditionally been tucked up under the category of "risk" in business and industry contexts.[31] Unfortunately, then,

---

[28] *Id.*
[29] *Id.*
[30] *Id.*
[31] As an early example, in its early-Twentieth-Century redlining practices, the Home Owners' Loan Corporation's devaluations of nonwhite neighborhoods couched its racism in terms of risk: Urban neighborhoods were "more risky" investments than white-dominated suburban ones. *See* Amy E. Hillier, *Redlining and the Home Owners' Loan Corporation*, 29 J. URBAN HIST. 394, 396 (2003). In a contemporary context, AI bias is classified as risk in the EU AI Act, which has a risk framework for regulations. *See* Adam Satariano, *E.U. Agrees on Landmark Artificial Intelligence Rules*, N.Y. TIMES (Dec. 8, 2023),

alleviating risk often simply means avoiding potential damage to business reputation, financial exposure, or lawsuits resulting from harm or loss of life caused by a product. Given that approach to managing "bias," it is no wonder that efforts to mitigate it end up being mostly a defense of corporate over public interests. Historically, those corporate interests often dovetailed with and, indeed, incentivized racial discrimination, from redlining to inequitable lending practices to judicial policies,[32] all of which continue to reap lasting and generational harm.[33]

"Risk"—a term so often used now in the context of AI governance—carries with it this heritage from the financial realms, especially from the insurance and banking industries.[34] Therefore, to the extent "bias" is placed structurally under that umbrella of "risk," it cannot be fully understood nor addressed. AI's outsized amplification of extant societal biases—through its scale, speed, and reach—of course increase its negative effect. But part of the problem also comes, I suggest, from AI's collateral amplification of a reductive notion of race as a discrete characteristic, a feature of a person who is being biased against, which leads to anti-bias efforts that primarily consider race in terms of observable data—that is, statistics and numerical assessments. Progress is measured by body counts in the C-suite, enrollment numbers of underrepresented people in computer science classes, and so on.[35]

---

https://www.nytimes.com/2023/12/08/technology/eu-ai-act-regulation.html [https://perma.cc/LA2X-QE4A].

[32] As Amy Hillier puts it, "redlining—not yet given a name—was simply considered to be good business." Hillier, *supra* note 31, at 395.

[33] In addition to outlining the adverse health outcomes, Emily E. Lynch and her colleagues also show that historic redlining is associated with current lending discrimination. Emily E. Lynch et al., *The Legacy of Structural Racism: Associations Between Historic Redlining, Current Mortgage Lending, and Health*, 14 SSM POPULATION HEALTH 1, 1, 5 (2021).

[34] *See* Hillier *supra* note 31, at 395.

[35] *See, e.g.*, *Explore Diversity*, STAN. UNIV., https://tableau.stanford.edu/t/IRDS/views/DEIWorkbook-Demographics/ExploreDiversity?%3Aembed=yProgress [https://perma.cc/U4W3-MX7A]. Stanford University is not alone among universities and colleges creating dashboards and confidential metrics to track demographic data on faculty, students, and staff. *See, e.g.*, *Yale Facts*, YALE UNIV., https://www.yale.edu/about-yale/yale-facts [https://perma.cc/A46N-N5TD].

This quantification of race to track social justice reform in turn informs how, for instance, philanthropists understand "impact" in digital public domains. On the one hand, the expression "impacted," with its passive voice construction, leaves unclear the responsibility of those doing the impacting, no small thing given the limited regulation in the United States of AI as compared with the United Kingdom and European Union, and despite constant industry refrains for "responsible," "trustworthy," and "transparent" AI. The term also embeds the assumption that those potentially negatively affected "communities" (often code for peoples of color), should they choose not to sue or protest, might become the grateful recipients of corporate largesse, deserving of "access" to digital tools or technological literacy. On the other hand, the term "impact" is often evoked in philanthropic circles in connection with maximalist approaches to social reform. That approach favors what is known variously as "effective altruism"[36] or "strategic" or "impact" philanthropy, and the true believers consider it a moral responsibility to uplift people best through the "blessings of scale."[37] The blessings of scale is an economics term, more recently repurposed in both the philanthropic and technological worlds to suggest that scaling up is not just better in solving problems; bigger works miracles. Most in this camp consider philanthropic giving and social change in terms of magnitude and quantifiable outcomes, often relying on a metric random controlled trial (RCT) or other

---

[36] Peter Singer, founder of the "effective altruism" movement, viewed this model of giving as the only one that is worthwhile. This belief led him to argue that investing in the arts was nothing less than immoral because, in his view, the arts had no beneficial impact. *See* Katharine S. Boyer, *Bioethicist Peter Singer Explains Why You Should Make Donations That Save Lives—and Forgo Supporting Arts Groups*, PRINCETON ALUMNI WKLY. (Apr. 22, 2015), https://paw.princeton.edu/article/bioethicist-peter-singer-explains-why-you-should-make-donations-save-lives-%E2%80%94-and-forgo [https://perma.cc/AW5Z-J2HU]; Judith H. Dobrzynski, *Peter Singer Says: Never Give to the Arts*, ARTS J. (Aug. 2013), https://www.artsjournal.com/realcleararts/2013/08/peter-singer-says-never-give-to-the-arts.html [https://perma.cc/S8AK-Q9B2].

[37] *See* Gwern, *The Scaling* Hypothesis, GWERN.NET (Jan. 2, 2022), https://gwern.net/scaling-hypothesis#blessings-of-scale [https://perma.cc/PHU8-KRC5] (discussing the theory of the "blessings of scale" in achieving artificial general intelligence, which is, for some, the holy grail of AI).

fiscal tools to try to measure a charitable return on investment (ROI).[38] This metric-centered philanthropy not accidentally dovetails with the Silicon Valley mantra of size, speed, scale, efficiency and "blitzscaling" productivity as the answer to just about everything.[39] And, as mentioned earlier, it also reifies notions of race as effectively an algorithmic parameter, a value on a graph or chart.

This is not to ignore an increasing call for what is known as participatory design, a move to bring together all stakeholders in the public sphere as co-equals at the table of creation with technologists.[40] Though admirable, it remains a challenge to merge vocabularies, experience, and expertise, as well as to negotiate the unspoken influence of cultural status and degrees of power that technologists wield in this cultural moment—status and power that cannot be easily waived no matter how well intentioned. And even models of participatory design can assume that racial inclusion is measured by body count or that

---

[38] *See* Daniel DiGriz*, The Philanthropic Investor, Philanthropic ROI, and a New Renaissance*, CLARK HULINGS FOUND., https://clarkhulingsfoundation.org/views/philanthropic-investor-philanthropic-roi-new-renaissance [https://perma.cc/AD79-CFGX] (outlining the trends in philanthropy to think in terms of investments). For a critique of ROI in philanthropy, see Paul Connolly, *What Can Philanthropy Learn from Moneyball?*, STAN. SOC. INNOVATION REV. (Oct. 27, 2011), https://ssir.org/articles/entry/what_can_philanthropy_learn_from_moneyball [https://perma.cc/C8GD-HVXA]. For more information on RCTs, see Kevin Starr, *The Lazy Funder's Guide to High-Yield Philanthropy*, STAN. SOC. INNOVATION REV. (Apr. 5, 2016), https://ssir.org/articles/entry/the_lazy_funders_guide_to_high_yield_philanthropy [https://perma.cc/KT8V-VYY8], and Jana Smith & Sara Flanagan, *Rethinking RCTs*, STAN. SOC. INNOVATION REV. (Winter 2024), https://ssir.org/articles/entry/rethinking_rcts# [https://perma.cc/ATF5-LUF2].

[39] Reid Hoffman, for instance, praises generative AI for its ability to "blitzscale" creative output, enabling creators to produce symphonies, novels, artistic masterpieces with unprecedented speed: "Artificial intelligence is amplification intelligence — and can accelerate all forms of human cognitive capabilities, from creativity to understanding diverse perspectives." Reid Hoffman, *Humanity's Hegelian Golden Braid speech*, REID HOFFMAN (May 2024), https://www.reidhoffman.org/perugia-speech/.

[40] For an overview of participatory design, see *Participatory Design*, SCI. DIRECT, https://www.sciencedirect.com/topics/computer-science/participatory-design [https://perma.cc/VD5T-268W].

impact in terms of social good can be wholly measured by a cost-benefit analysis.

III. Art's Impact Beyond the "Blessings of Scale" and Other Maximalist Approaches to Social Change in the Digital Public Sphere

In marked contrast, Rashaad Newsome, Amelia Winger-Bearskin, and Catie Cuan—all artist-technologists of color—refigure those passively "impacted" as agentive co-producers of knowledge and imagination. Their art and performance engage alternative cultural values and metrics that counter the technological vision embracing Mark Zuckerberg's refrain of "move fast and break things."[41] Instead, the aesthetic values of friction, duration, and liveness in their work offer counter-narratives and experiences to more fully effect both joy and justice in the digital public sphere.

A. Case Study: Digital Griots

Figure 2: "Being 2.0." Courtesy Rashaad Newsome (2024).

Artist and activist Rashaad Newsome created his virtual AI humanoid, Being, as a decolonizing "digital griot," in his

[41] Henry Blodget, *Mark Zuckerberg on Innovation*, BUS. INSIDER (Oct. 1, 2009, 4:36 PM EDT), https://www.businessinsider.com/mark-zuckerberg-innovation-2009-10 [https://perma.cc/MJP6-AG5Z].

terms.[42] Trained on a data set of both African American Vernacular English (AAVE) and Black queer vogue moves, Being is sourced on both living performance and archival records of gay and trans dance.[43] It talks, moves, learns, and interacts in ways that reject the tradition of robot servitude rooted in slavery. Being is disobedient; it is not amiable; it does no one's bidding. As happened in Newsome's 2021 New York exhibition at The Armory, "Assemblage," if Being gets bored with a question by an audience member, it may simply turn away. For a robot, the refusal to comply is itself a radical gesture.[44]

As vividly described in a *New York Times* review of "Assemblage," Being is a

> nonbinary figure with a head based on a Pho mask from the Chokwe peoples of Congo (Newsome has said he chose this because it seemed most close to the true origins of abstraction in art) and a body that feels like a cross between a luxuriously wood-veneered robot, a glamorous supermodel and a baby giraffe just finding its legs.[45]

Significantly, Newsome says Being's purpose is to use AI to inspire, affirm, and heal, especially to heal the micro- and macro injuries that Black people suffer.[46] Being holds

---

[42] *About*, BEING THE DIGIT. GRIOT, https://beingthedigitalgriot.com/about [https://perma.cc/DKS5-K9MT].

[43] *About*, BEING THE DIGIT. GRIOT, *supra* note 42.

[44] A version of this scenario is captured in a documentary short on Newsome's "Assembly," which shows Being interacting with audience members asking questions. *See* Stanford HAI, *Meet BEING by Visiting Artist Rashaad Newsome*, YOUTUBE (June 8, 2023), https://youtu.be/CzupjhLM6RQ?si=TbiTSnUA_JOl74CD [https://perma.cc/AF4M-4VE3].

[45] Martha Schwendener, *Newsome Pulls Out All the Stops*, N.Y. TIMES (Feb. 24, 2022), https://www.nytimes.com/2022/02/24/arts/rashaad-newsome-assembly-exhibit.html [https://perma.cc/6H95-Q384] (citing Joel Ferree, *Rashaad Newsome's "Being"*, LACMA UNFRAMED (Sept. 11, 2019), https://unframed.lacma.org/2019/09/11/rashaad-newsome%E2%80%99s-being [https://perma.cc/YU2L-GTTF]).

[46] *See* Asha Pruitt, *Interactive AI Storyteller "Being" Leads Decolonization Workshop at Sundance 2024*, SLUG MAG. (Jan. 3, 2024), https://www.slugmag.com/arts/film-arts/sundance/interactive-ai-

workshops, influenced by Black theorist bell hooks, for students and audiences to acknowledge and restore their sense of worth and happiness. Being is a culturally relevant, therapeutic use of AI. It is worth pointing out how this is a very different use of AI than the medical technologies currently being developed for use in surgery and in clinical settings, from exoskeletons for mobility disorders to elder-care robotics in assisted living environments.[47] Many of these innovations are truly exciting, important, and surely will be transformative for many. But Being's approach to health is distinctive from this medical model. Being is designed to address both the psychological and spiritual needs of people of color, and it does so in ways that capitalize on racial experience as a valuable source of insight and strength. It is a vision of robots as cultural storytellers that are part of a community rather than indentured to it.

In doing so, Newsome's Being enacts aesthetic friction, a rubbing against the grain of the commercial design mandate for a frictionless, seamless user experience. Like any work of visual art, fiction, theatre, or performance, it is to be savored. It requires pause, invites critical reflection, introspection, debate; it may prompt visceral responses of pleasure, annoyance, confusion, cognitive dissonance. And as with all art, its impact may emerge in its afterlives—that is, its influence might well be distributed and realized only over time, might make its ways

---

storytelling-being-leads-decolonization-workshop-at-sundance-2024 [https://perma.cc/R2K4-29KA] (featuring interview with Newsome). Newsome released an evolved version of Being, Being 1.5, as an "artificial intelligence therapy app made exclusively for Black people to manage trauma stemming from daily racial indignities." *See* Rashaad Newsome, *Being 1.5*, RASHAAD NEWSOME, https://new.express.adobe.com/webpage/jesS2kzuiNHfm [https://perma.cc/F83R-9J7M].

[47] For an overview of medical technology potentials using AI, see generally Thomas Davenport & Ravi Kalakota, *The Potential for Artificial Intelligence in Healthcare*, 6 FUTURE 94 (2019). For a recent partnership between AI technologies and medicine, see *Stanford Medicine and Stanford HAI Announce RAISE-Health, a Responsible AI Initiative*, STAN. UNIV. HUM.-CENTERED A.I. (June 14, 2023), https://hai.stanford.edu/news/stanford-medicine-and-stanford-hai-announce-raise-health-responsible-ai-initiative [https://perma.cc/KBX3-CFEB].

known to a person in solitude (reading a book alone) or in community (as with in-person theatre).

In that sense, Newsome's Being is an example of AI as artistic provocation, one in which impact in the world extends incalculably to the imagination.

B. Case Study: Wampum Codes

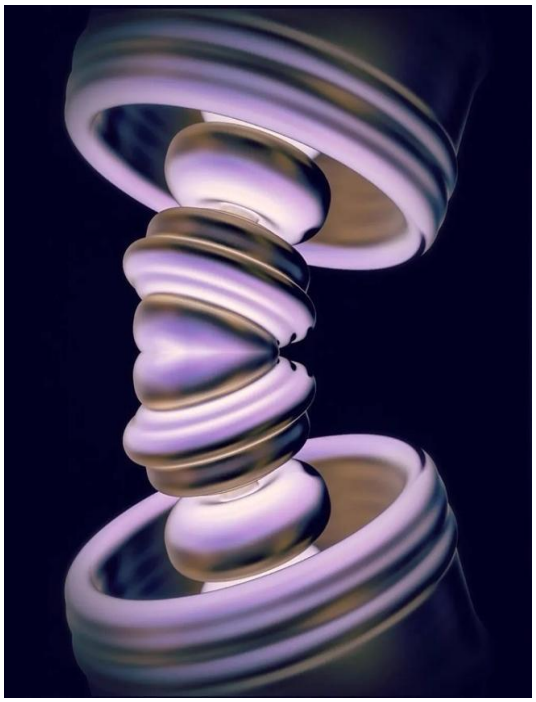

Figure 3: *3D Bead 2*, a 3D wampum beadwork made by Amelia Winger-Bearskin with 3D modeling software and photos of beadwork or beadwork patterns from museum collections of Haudenosaunee beadwork throughout the ages.[48]

[48] Amelia Winger-Bearskin, *Art*, STUDIO AMELIA, https://www.studioamelia.com/art [https://perma.cc/YWY4-T3EL].

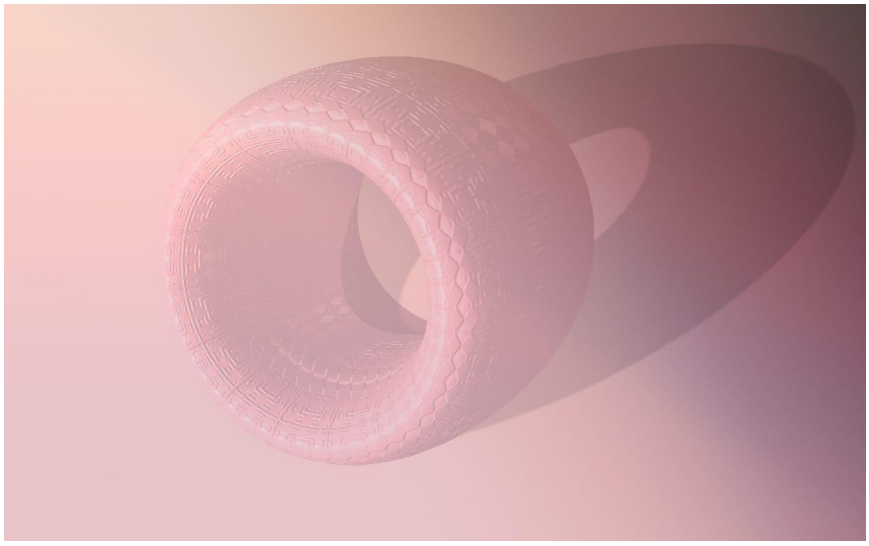

Figure 4: Wampum bead in VR.[49]

Both Newsome and artist-technologist Amelia Winger-Bearskin reject what they see as a colonial mindset informing AI technologies and the discourses about them. As Winger-Bearskin characterizes it: "I see it; I like it; I want it; I'll take it. I take what will benefit my own political or material interests, but I'm unconcerned with the effect that it will have on the people I take it from."[50] For Newsome, decolonizing AI means, among other practices, acknowledging and making visible the usually unacknowledged African influences informing contemporary abstractionism.[51] For Winger-Bearskin, decolonizing AI involves, in part, also recognizing histories erased, in particular the debt to what she calls "antecedent technology," indigenous practices borrowed and adapted during the Western Enlightenment that long pre-existed what

[49] Winger-Bearskin considers Wampum an antecedent to blockchain technology, which used story as part of its structure. Amelia Winger-Bearskin, *Before Everyone Was Talking About Decentralization, Decentralization Was Talking to Everyone*, MEDIUM (July 2, 2018), https://immerse.news/decentralized-storytelling-d8450490b3ee [https://perma.cc/7H2U-79F9].

[50] Amelia Winger-Bearskin, *Antecedent Technology: Don't Colonize Our Future*, DATA SCI. BY DESIGN (June 28, 2023), https://datasciencebydesign.org/blog/antecedent-technology-dont-colonize-our-future [https://perma.cc/Q8PL-MKXX].

[51] Being's face, for instance, is modeled on the Pho mask from the Chokwe peoples of the Congo. *See* Ferree, *supra* note 45.

we now call AI. That concept of antecedence challenges the common assumption that AI represents a new, unknown frontier; indeed, it is precisely that manifest destiny/frontier mindset that led to Native peoples' "removals" during the Nineteenth Century.[52]

As important is her argument that these antecedent practices—from wampum shell exchange as the precursor to blockchain tech to decentralized storytelling as the template for market decentralization[53]—continue to hold enormous insight and possibility into current technological modes. Winger-Bearskin is of the Iroquois Confederacy (known as Haudenosaunee, also referred to as People of the Longhouse, who are made up of the Six Nations: Seneca, Cayuga, Oneida, Onondaga, Mohawk, and Tuscarora[54]), and she notes that that much of the insight embedded in those technological modes was lost because when they were plucked out of context, they "left out the social and cultural networks that sustained these practices in the actual Haudenosaunee Confederacy. . . . But taking an idea out of context is like plucking a plant out of its soil. You lose everything that made the thought work in the first place.[55]

Wampum Codes, as Winger-Bearskin describes it, are a (re)joining of art and tech, which she sees as having always existed on a continuum, as creative practices that should never have been separated.[56] Her socio-technical approach resituates technology within the social contexts and culture practices from which they emerge. It is an ethic in AI that necessarily frames conversations about regulation and governance as a shared community responsibility rather than the purview of

---

[52] *See Manifest Destiny and Indian Removal*, SMITHSONIAN AM. ART MUSEUM, https://americanexperience.si.edu/wp-content/uploads/2015/02/Manifest-Destiny-and-Indian-Removal.pdf [https://perma.cc/G669-AJC4].

[53] *See* Winger-Bearskin, *supra* note 50.

[54] *Who We Are,* HAUDENOSAUNEE CONFEDERACY, https://www.haudenosauneeconfederacy.com/who-we-are [https://perma.cc/A54B-MKUV].

[55] Winger-Bearskin, *supra* note 50.

[56] Amelia Winger-Bearskin, *Indigenous Wisdom as a Model for Software Design and Development*, MOZILLA (Oct. 2, 2020), https://foundation.mozilla.org/en/blog/indigenous-wisdom-model-software-design-and-development [https://perma.cc/A7AZ-E4JL].

(still, a very few) corporations, and one that involves policy actually embedded in the technology design. For example, her response to the common concern about unintended misuse of a technology was to build what she calls code dependencies into the design (she offers a step-by-step program for a no-kill cat shelter as a creative example of applying what she calls "Indigenous wisdom").[57] That alternative epistemology leads her also to view AI design and deployment through a much wider aperture of time, looking at pasts as well as futurities. Rather than subscribe to industry aspirations for AI that look ten, twenty, or fifty years ahead, she argues for building AI with both the recognition of those seven generations past and the ethical requirement to create something of value for those seven generations into the future.[58]

This worldview takes the concept of "impact" and "use-value" to a whole other (planetary) level. For Winger-Bearskin, along with other Native technologists such as Edward Lewis, that means "making kin with machines,"[59] which involves accounting for intelligences other than human, respecting both the animate and inanimate. Her multimedia art, which both uses AI and comments on it, represents an attempt to express and enact these principles.

---

[57] Winger-Bearskin, *supra* note 56.

[58] Winger-Bearskin, *supra* note 50.

[59] Jason Edward Lewis, *Making Kin with the Machines*, J. DESIGN & SCI. (July 16, 2018), https://jods.mitpress.mit.edu/pub/lewis-arista-pechawis-kite/release/1 [https://perma.cc/USP9-ACXG]. *See also* Jason Edward Lewis et al., *Indigenous Protocol and Artificial Intelligence Position Paper*, INDIGENOUS PROTOCOL & A.I. WORKING GROUP 105 (Jan. 30, 2020), https://spectrum.library.concordia.ca/id/eprint/986506/7/Indigenous_Protocol_and_AI_2020.pdf [https://perma.cc/E3R3-TYTL]; *Abundant Intelligences*, INDIGENOUS AI, https://www.indigenous-ai.net/abundant [https://perma.cc/S495-YQF9].

C. Case Study: Choreo-Robotics

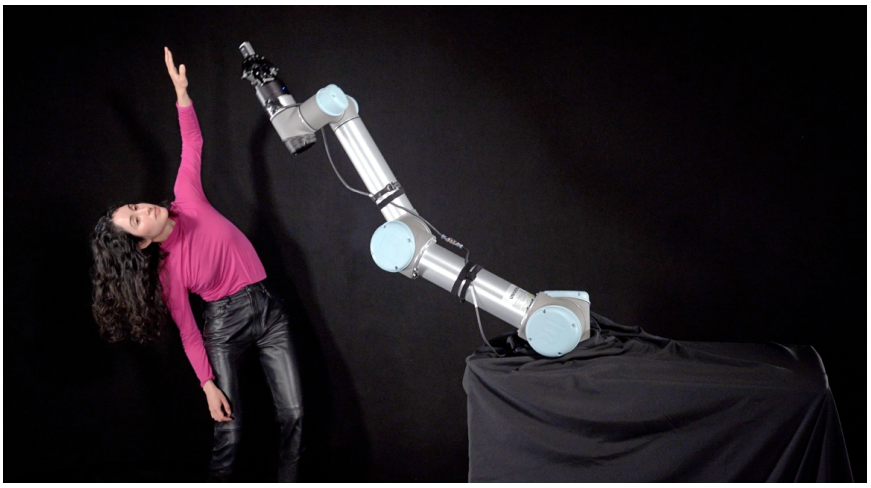

Figure 5: Rehearsal for *Breathless: Catie and the Robot*.[60]

Catie Cuan's long durational performances—what she calls "dancing with robots," sometimes for up to eight hours[61]—share both Newsome's and Winger- Bearskin's more expansive sense of time and richer possibility of purpose with AI. With a Stanford PhD in mechanical engineering and having held several artist-in-residences, Cuan describes herself as a "choreographer, dancer, engineer, and researcher."[62] Her evocative, graceful dance movements while interacting with a robotic arm that seems also to respond in kind intentionally opt out of the breathless pace of AI development. This opting out and slowing down calls into relief by its very contrast that uneasy feeling people often experience of being always already behind—of being unbalanced—when it comes to the release of powerful technologies, which are always exponentially more powerful than their previous iteration. This sense of haste and hurry, of course, is enabled and encouraged by the technology industry, in part because for-profit bottom lines mean pushing a product out as fast as possible. By contrast, Cuan restores a

---

[60] Photo by Adam Lau.

[61] Sydney Skybetter, *Choreographer and Engineer Catie Cuan Shares the Ideas Behind Her Eight-Hour Duet with an Industrial Robot Arm*, DANCE MAG. (Dec. 13, 2023), https://www.dancemagazine.com/catie-cuan [https://perma.cc/K5N7-FMEL].

[62] *Bio*, CATIE CUAN, https://catiecuan.com/about [https://perma.cc/T6H6-VBS4].

certain human-centric pace to the experience of tech, offering a timetable and momentum that allows us to actually enjoy other ways and means of interacting with technology.

Her creative work in human-computer interaction (HCI) also highlights the valuable, durational quality of process itself, the fact that process takes time, and that that time-taking (making time) has an existential value. This approach directly contrasts with the technological emphases on both productivity and on the final product, including when it comes to the creative act. Cuan's dances are a kind of mediation that unfold over and in time. They both reflect the importance of "liveness"[63]—having real-time, embodied experiences in relation to others (including robots)—and of having different ways of being in our body in that relation. As Cuan puts it:

> Many of our technologies constrain our human movements in order to use them. This has a functional purpose—being able to type on a small keyboard on a constrained airplane, for example. At the same time, though, we have such multifaceted, expressive bodies. I am excited by how robots present a three-dimensional interface for humans. The ways that robots move—and especially how they move relative to humans—are deeply choreographic questions.[64]

Her work merges with the "crip tech" movement, including disability artist-activists engaging with AI such as Lindsey Felt, who also challenge normative assumptions about how bodies should appear and move, and about technology created based on limited assumptions about how one should best show up in the world.[65]

---

[63] In performance studies, "liveness" has a long history that extends to bodies—not just in relation to each other in real time but also in relation to technologies. *See* Suk-Young Kim, *Liveness: Performance of Ideology and Technology in the Changing Media Environment*, OXFORD RSCH. ENCYC. LITERATURE 1, 10 (Mar. 29, 2017).

[64] Skybetter, *supra* note 61.

[65] *See Lindsey Felt: Art, AI, and Disability Futures*, STAN. UNIV. HUM.-CENTERED A.I. (Nov. 30, 2022), https://hai.stanford.edu/events/lindsey-felt-art-ai-and-disability-futures [https://perma.cc/RG78-SHKP] (recording of talk by Lindsey Felt). *See also* Aimi Hamraie & Kelly Fritsch, *Crip Technoscience Manifesto*, 5 CATALYST: FEMINISM, THEORY,

Like Newsome's digital griot and Winger-Bearskin's wampum codes, Cuan's choreo-robotics hold enriching potential for technological systems that break from normative models of human experience both in body, mind, and action. All three artists' art proposes metrics that counter a technological vision of the quantification and commodification of all things—including race and other identities. They counter Mark Zuckerberg's refrain of "move fast and break things." Instead, these artists' elevation of the aesthetic values of friction, duration, and liveness in their work on and with AI is meant to bring pleasure, play, culture, and critical thought to the digital public sphere.

Conclusion: Why AI Really Needs the Arts and Humanities

Often, expressive arts are valued in the technology industry for "storytelling," which is industry-speak for marketing. But these case studies of artist-technologists' engagement with AI demonstrate the importance of the humanities' and arts' ways of thinking and doing that elevate them above an ornamental status or capital gain. They suggest the ways that incorporating the arts' and humanities' ways of thinking and doing into AI from the very outset, rather than as a belated consideration, are essential for technologies released in our digital public spheres. As I hope these case studies suggest, artistic engagement with AI can powerfully shape our civic imagination, prompt political action, challenge taken-for-granted norms, widen the apertures of inclusion and accessibility, and offer vocabularies to name and navigate our experiences beyond the data sets predicting and prescribing them. It is only through a joining of arts, humanities, social sciences, and STEM that AI might better enable more ethical, equitable, and joyous worlds worthy of us.

TECHNOSCIENCE 1, 2 (2019); Lindsey D. Felt & Vanessa Chang, *Cripping Media Art Ecologies*, GROUND WORKS (Aug. 4, 2022), https://groundworks.io/journal/commentaries/11 [https://perma.cc/78DS-GQFR]; ELIZABETH GUFFEY, AFTER UNIVERSAL DESIGN: THE DISABILITY DESIGN REVOLUTION 17 (2023).