The Black Technical Object: On Machine Learning and The Aspiration of Black Being

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In European philosophy, the concepts of technology and of the technical object are perhaps most often associated with relatively few names – Heidegger, Simondon, Stiegler – as well as a tendency in late 20th century philosophy to utilise the relationship between the thinking computer and thinking organism to reconceptualise the bounds of "thought" itself. For Heidegger, technologies and technical objects become significant in defining the human's reductionist mode of being-in-the-world through the way external tools reveal or conceal material things as an outcome of enframing (Heidegger 1977). Simondon (2017), meanwhile, goes to great lengths to distinguish technologies and technical objects, with the latter referring to specific concretised technological devices that are so sufficiently adapted (individuated) that they come to organise wider techno-geographical *milieux* often vastly in excess of the anticipations of human design. Extending the thought of both Simondon and Heidegger, Stiegler (1998) emphasises how the evolution of technical objects not only exceeds human thought but also *constitutes* it by serving as mnemonic devices that extend human memory and acts of thinking beyond what is already deemed "thinkable". One of the traits of this recent genealogy of technical objects is the argument that research on technology carried out within the philosophical field – and in particular theoretical research seeking to reconceptualise "technology" and the "technical object" – needs to do much more to understand how technologies specifically shape the production of thought and subjectivity through abstract processes often bypassing the perceptive frames of the individuated human subject (Lazzarato 2014). The implication here being that European philosophy has become hamstrung by a failure to understand the creative capacities of technology in the constitution of acts of thinking and processes of ontogenesis (being as becoming).

Despite this commitment to approaching technologies and technical objects to push the boundaries of what philosophy can possibly contemplate, this recent genealogy largely ignores notions of race, Black existence, and alterity. Ramon Amaro's *The Black Technical Object* challenges this erasure by attempting to understand how race and Black being demands a rethinking of social science and philosophy understandings of technology and technical objects. In doing so, Amaro analyses how machine learning and its cultures can be understood besides the logics of a White experience that continues to dominate anglophone scholarly reflection. As with critical

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reconceptualizations of technology and race advanced within and beyond science and technology studies (STS) by scholars such as Ruha Benjamin (2019), Safiya Umoja Noble (2018), and Simone Browne (2015) – to name just a few – the book addresses the racial limits of philosophical and technological thinking. Yet, uniquely it does so by bringing together Simondon's ontogenetic approach to thinking technologies in combination with Frantz Fanon's theorisation of "Black being" – two philosophers whose connections, such as their respective interests in the concepts of ontogenesis and ontogeny, remain an exciting and underexplored area of research.

However, it is worth emphasising that *The Black Technical Object* is not restricted to a philosophical meditation on how race and Black existence intervene in conceptualisations of technical objects. Rather, and perhaps principally, it is an ambitious political re-examination of how machine learning and algorithmic technologies are today variously alienating, dissociating, and dispossessing Black bodies from forms of agency and capacities for determination. The book develops these political lines of thought across seven chapters split into three distinct acts. These acts traverse many intellectual areas, including mathematics, computational theory, the history of science, media theory, continental philosophy, theories of race, as well as developing in detail how programming and algorithmic concepts might be better apprehended within STS.

Working at the limits of philosophical thinking on technology and race (see also Benjamin 2019), one of the major interventions made by *The Black Technical Object* is in its retelling the history of "machine learning". "Machine learning" is developed here "as an assemblage of human, technical, social, economic, and political processes" (p. 101). Different to computer science definitions that describe machine learning as a set of seemingly inert data-driven methods encompassing artificial intelligence (AI) and algorithmic computation, Amaro insists on apprehending the symbolic and representational functions of machine learning – especially as these processes encounter various limits in the way they make sweeping inferences about the future (pp. 108-109). Reminiscent of recent advancements in critical data studies (Chun 2021), Chapter 3 weaves in a history of machine learning by turning to the way computational thinking, especially deriving from the 1970s and 1980s, drew on statistical methods like inference classification trees to develop not just new mathematical equations, but also *non*-mathematical statements. As the book argues, the legitimacy of these non-mathematical statements rarely was put in question, and yet these non-data driven logics – that is, the symbolic functions and common-sense truths that become inferred from mathematic statements and systems – were foundational to early forms of algorithmic science (p. 103). One of the endgames of the book's critical rethinking of machine learning is the idea that an apprehension of specific symbolic, non-mathematical functions can draw attention to the racism and inequalities hardwired into machine learning systems. As Amaro notes, such a task is about pursuing:

> alternative articulations of racial perception mediated by machine learning algorithms. The necessary shift is one bound by the ontological, and it promotes an alternative algorithmic praxis. To unearth this relation is to also recognize a pre-individuated capacity for praxis that might disrupt, dismantle, and rebuild the primal components of both racial and machine perception. (p. 104)

Perhaps the most direct way the book tries to unearth some of these alternative articulations is through the concept of the "Black technical object", understood broadly as "an unwitting

link between black pathology and the technical object" (p. 46). Drawing on Fanon, here black pathology refers in part to various alienating psycho-social "imaginary systems" wherein "self-doubt becomes the guiding principle by which the racialised person views themselves as well as the world around them" (p. 47). Rather than position the Black technical object as a superficial disruption to the prototypical place of the "White object" (that is, the dominant abstractions that conventionally define technical objects), there is an attempt to think an aspirational concept of the Black technical object capable of breaking out of the "recurrent dialectic" (p. 53) that traps Black being as an alienated Other within White supremacist technical culture. As an aspirational term, the Black technical object can thus be understood as a concept that tries to expose thought to entrenched "techno-racial" (p. 92) logics and forms "algorithmic prejudice" that materialise correlations "under the illusion of objectivity" (p. 61). These prejudices include, for example, the way that the "algorithm" is today positioned as an unaccountable actant that explains the existence of racist decision-making and rationales within contemporary governance systems (p. 20). Intersecting research into the relationship between racism and algorithmic computation (Magnet 2011; Celis Bueno 2020), in developing the concept of the Black technical object the book highlights significant problems with the way machine learning infrastructures – such as facial recognition technologies – are premised on factors like the "white phenotype" as a "prototypical assemblage from which all future human characteristics are measured" (p. 46). Especially problematic here is the way that these technologies alienate certain bodies *prefiguratively* prior to any contemplative individuated subject.

In developing a novel understanding of the relationship between racism, race, and the technical object, the book draws on Fanon and to a lesser extent Sylvia Wynter (Chapter 6). These philosophers are pivotal for developing a key strand of the book's argumentation: that the Black technical object helps foreground the way machine learning and algorithmic cultures are "always already preconditioned by an affective logic of race" (p. 47). The promise in thinking the Black technical object, in this context, is in the way that it opens up forms of reason capable of building new relationships to machine learning whose purpose is to enact processes of "effective disalienation" (pp. 14-15; also Fanon 2008, 4). If, following Fanon (2008), race must not be understood as a necessary metaphysical state, but an outcome of sociogenetic processes that are socially and individually constituted, then the question of how philosophy begins to think with the Black technical object is not without certain challenges. The alienating and racist outcomes of a dominant White supremacist technical culture are clearly documented in the book – from the discriminatory vision of facial recognition technologies (pp. 42-46), to the racial profiling used to calculate and model student retention rates (p. 116), to the 17th century European colonial history of statistical analyses of racial characteristics (Chapter 5). However, less clear is how to resolve some of the conceptual tensions produced when combining, on the one hand, Fanon's theory of the sociogeny of racialised *individuals* with, on the other hand, Simondon's *non-individuated* theory of technology's ontogenesis in order to produce a singular theory of the Black technical object.

Considering something of the friction between Fanon and Simondon, the final part of the book develops precisely how the Black technical object might come to operate affirmatively and aspirationally by arguing that "Black being" itself can be understood "as an ontogenetic phase of existence prior to the racialized body" (p. 222). Part of the implication here is that

attending to an ontogenetic phase of Black being may help direct thought to the *emergence* of individuated forms of racialised existence, and thus offers potentials for alternative racialised existences. In staging the ontogenetic transformation of Black being and its relation to technics, the book traces how it is precisely the incompatibility of Black and racialised being that, following Simondon, potentialises it with the capacity to engage in transindividual networks of collective subjectivation (p. 224). Here the book departs briefly from Fanon in arguing not for a non-Black Other of technical culture, but for "a return to [Blackness's] nonessentialist origins" (pp. 225-226). Approaching the nonessentialist origins of Blackness means paying closer attention to the "substance of race" that forms the basis of an incompatibility that provides the potential for thinking and individuating Black existence differently. To do so might mean, in part, better understanding how technologies can be made to think with the "incalculability of Black life" (p. 219). It also opens up thought about how the Black technical object might speak to emerging debates around "digital spatial justice" that is attentive to how certain "micro-events" are pivotal for shaping how bodies encounter machine learning infrastructures (Tedeschi 2024, 8). In setting up this wide ranging political project, the book is a formidable contribution to theorisations of race and technical objects, which will appeal strongly to researchers across the social sciences interested in how machine learning, algorithmic logics, and AI are variously shaped, and are shaping, racial existence.

References

Benjamin, Ruha (2019) *Race after technology: Abolitionist tools for the new Jim code*, London, Polity Press.

Browne, Simone (2015) *Dark matters: On the surveillance of Blackness*, Durham, Duke University Press.

Celis Bueno, Claudio (2020) *The Face Revisited: Using Deleuze and Guattari to Explore the Politics of Algorithmic Face Recognition*, in "Theory, Culture and Society", 37(1), pp. 73-91.

Chun, Wendy Hui Kyong (2021) *Discriminating data: Correlation, neighborhoods, and the new politics of recognition*, Cambridge (MA), MIT Press.

Fanon, Frantz (2008) (orig. pub. 1967) *Black Skin, White Masks*, New York, Grove Press.

Heidegger, Martin (1977) *The Question Concerning Technology*, in *The Question Concerning Technology and Other Essays*, New York, Harper and Row, pp. 3-35.

Lazzarato, Maurizio (2014) *Signs and Machines: Capitalism and the production of subjectivity*, New York, Semiotext(e).

Magnet, Shoshana Amielle (2011) *When Biometrics Fail: Gender, Race, and the Technology of Identity*, Durham, Duke University Press.

Noble, Safiya Umoja (2018) *Algorithms of oppression: How search engines reinforce racism*, New York, New York University Press.

Simondon, Gilbert (2017) (orig. pub. 1958) *On the Mode of Existence of Technical Objects*, Minneapolis, University of Minnesota Press.

Stiegler, Bernard (1998) (orig. pub. 1994) *Technics and Time, 1: The Fault of Epimetheus*, Stanford, Stanford University Press.

Tedeschi, Miriam (2024) *Datafication and urban (in)justice: Towards a digital spatial justice*, in "Geography Compass", 18(6), e12763.