BIG DATA & SOCIETY

Commentary

Racial formations as data formations

Big Data & Society
July-December: 1–5

DOI: 10.1177/20539517211046377
journals.sagepub.com/home/bds
SAGE

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Abstract

This commentary uses Paul Gilroy's controversial claim that new technoscientific processes are instituting an 'end to race' as a provocation to discuss the epistemological transformation of race in algorithmic culture. We situate Gilroy's provocation within the context of an abolitionist agenda against racial-thinking, underscoring the relationship between his post-race polemic and a post-visual discourse. We then discuss the challenges of studying race within regimes of computation, which rely on structures that are, for the most part, opaque; in particular, modes of classification that operate through proxies and abstractions and that figure racialized bodies not as single, coherent subjects, but as shifting clusters of data. We argue that in this new regime, race emerges as an epiphenomenon of processes of classifying and sorting – what we call 'racial formations as data formations'. This discussion is significant because it raises new theoretical, methodological and political questions for scholars of media and critical algorithmic studies. It asks: how are we supposed to think, to identify and to confront race and racialisation when they vanish into algorithmic systems that are beyond our perception? What becomes of racial formations in post-visual regimes?

Keywords

Racial formations, data formations, algorithmic culture, Paul Gilroy, post-race, post-visual

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Introduction

Over two decades ago, Paul Gilroy made the contentious proposition that 'the time of "race" may be coming to a close' (1998: 840). Developments in molecular biology and digital imaging techniques, like magnetic resonance imaging and positron emission tomography scans[1], had allowed the human body to be visualized at new, previously imperceptible scales. By rendering the body intelligible in new ways, Gilroy argued, these technoscientific processes challenged the modern representational economy critical to the reproduction of the race. If race operates by differentiating and classifying bodies based on how they *look*, then changes in apparatuses that mediate *how bodies can be looked at* provide new opportunities to reimagine race – or in this case, to repudiate it altogether. Gilroy's proposition was roundly criticized at the time, not least because new forms of racialization tend not to replace older ones but to add to them (Stepan, 1982; Stoler, 2016). Nevertheless, Gilroy's insight that racialization is bound up with techniques of seeing and measuring prompts questions that must still be reckoned with today. Might race be considered an effect, rather than a cause, of the techniques by which it is represented? How is the ontology of race tied to its apparatuses of presentation, production and reproduction? In short, does mediation inform racialization and, if so, how?

In this short essay, we attempt to answer these questions within the context of new regimes of perception made possible by new techniques for sorting, classifying and producing knowledge about the world: namely, artificial intelligence (AI) and algorithmic systems. Our aim is to build on growing critical agendas that seek to address the sociomaterial production of race within this context (see Browne, 2015; Chun, 2013; Coleman, 2009; Nakamura,

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2007). Whereas dominant discussions of race and algorithms have primarily focussed on visual applications, such as facial recognition (see Buolamwini and Gebru, 2018; Raji, 2020), or the disproportionate impacts of systems on communities that are racialized visually (see Benjamin, 2019; Browne, 2015; Eubanks, 2018; Noble, 2018), our essay addresses the challenges of studying race when it is constituted in ways that cannot be seen, either because its constitution occurs beyond human scrutiny or because it is deliberately obscured and opaque (Amoore, 2020; Hong, 2020)[2].

We begin by situating Gilroy's provocation within the context of what we describe as a post-race, post-visual discourse. We argue that formations of race dependent on visual regimes are giving way to structures that manage bodies through non-visible processes. As many scholars have noted, using state-of-the-art ordering techniques to classify and sort populations has always been essential to the project of racialization (e.g. Amin, 2010; Hacking, 2005). The modes of classification that concern us figure racialized bodies neither as single, coherent subjects, nor as populations stratified according to characteristics that find their genesis in bodily difference, but instead as shifting clusters of data. In this new regime, race emerges as an epiphenomenon of automated algorithmic processes of classifying and sorting operating through proxies and abstractions – what we call 'racial formations as data formations'.

Gilroy's turn to molecular biology may not have delivered on its utopian-abolitionist promise. Nevertheless, its provocation – to consider how race is transformed when the processes that mediate it make it disappear from view – feels more urgent than ever.

Post (visual) race

While Gilroy was perhaps overly optimistic about the potential for new technologies to 'end race', his argument must be understood within a broader project, which he called an 'anti-anti-racism'. Gilroy was cynical about the cooptation of anti-racist discourse by corporate actors. He also worried that anti-racist groups were themselves guilty of fetishizing and reproducing what was, for him, an irredeemable 'racial-thinking' (Gilroy, 2002). Why, he questioned, would these communities be holding on to and reinscribing racial differences when the newest science was providing evidence that no such difference existed? In this context, his argument can be understood as a provocation for racialized communities to emancipate themselves from racial-thinking and to imagine identities and solidarities outside its bounds. In his words, 'there is here a chance to break away from the dangerous and destructive patterns that were established when the rational absurdity of "race" was elevated into an essential concept… to free ourselves from the bonds of all raciology in a model and ambitious abolitionist project' (2002: 14–15).

What Gilroy perhaps underestimated was just how complex this task could be. First, the science on which he hung his argument – genomics and molecular biology – had much more to say about race than he anticipated. Almost as soon as the race was declared biologically meaningless, it found new meaning in human population genetics. The tools of the genomic revolution reinvoked racial categories in order to study evolution, ancestry, disease and health (see Kahn 2012; Reardon 2005). Moreover, new environmental epigenetic techniques have been explicitly used by racialized communities (especially Indigenous communities) to evidence how environmental stressors impact the body on a cellular level in ways that can be carried through to future generations (Warin et al., 2020). In contrast to Gilroy's claim that the gene could be an agent of racial transcendence, epigenetics reconceived the gene as a new site for racial solidarity and a means to pursue racial justice (Kowal et al., 2016).

Second, like many critical race scholars, Gilroy framed his argument in relation to a concept of race that was 'predicated on an epistemology of visibility' (Kawash, 1997: 130). His argument hinged on the capacity for imaging techniques to transform our conception of humanity by reconfiguring the relationship between what is seen (bodies) and what is normally unseeable (genes). Because 'bio-racial differences… vanish at (the) levels of resolution' made possible by such techniques (1998: 846), he argues, the 'whole integral body' ought to no longer delimit the 'scale' upon which 'assessments of the unity and variation of the species are to be made' – or, indeed, to inform our ontological conceptions of humanity at all (845). The capacity to image at the nanoscale undoes the epistemological regime of visibility on which concepts of race rest, because imaging – which introduces a novel conceptual-technical apparatus for mediating scale – is irreducible to seeing. In this way, Gilroy's post-race polemic was attached to a post-visual discourse.[3] Of course, race eluding perception at nano-scales does not mean that its machinations are not still at work in visual registers. The force of racism was never derived from somatic difference alone. Moral codes, bodily comportment and good or bad taste are all non-phenotypical indexes used to make 'assessments' of racialisation; indeed, the interplay of seen and unseen underpins racialisation (Stoler, 2016: 245). What Gilroy draws our attention to is how this interplay is mediated by the emergence of new techniques for making-visible – or, indeed, for making what is visible appear to disappear. It's this post-visual logic that poses crucial questions for our conceptions of the race today.

The increasing datafication of our lives has arguably refigured contemporary racial formations by revivifying this logic. In Michael Omi and Howard Winant's hugely influential formulation, racial formations have clear visual contours:

> Race is ocular in an irreducible way. Human bodies are visually read, understood, and narrated by means of symbolic meanings and associations. Phenotypic differences are not necessarily seen or understood in the same consistent manner across time and place, but they are nevertheless operating in specific social settings. (Omi and Winant, 2015: 28)

In studies of media and digital culture, moreover, processes of racialization have typically been conceptualized as visual processes and studied using visual methods.[4] For us, the concept of the 'racial formation' is a powerful one: it describes how racialization operates via more-or-less durable, more-or-less mediated, collectivities of people, technologies and beliefs. But what happens to race once processes of racialization begin to be implemented in fundamentally post-visual regimes?[5]

Algorithms, data and platforms have visual elements, but can't necessarily be studied using visual methods. Numerous scholars have noted that computational processes not only reproduce existing forms of racism, but increasingly produce wholly new ones (see Benjamin, 2019; Browne, 2015; Noble, 2018). The same is arguably true of *race*. While race's trajectory through algorithmic systems has been primarily reading through the principle of 'garbage in/garbage out',[6] we contend that the concepts of race entered into such systems are not necessarily the same as those they produce. In some ways, Gilroy was arguably right to suggest that post-visual regimes would lead to race's disappearance. Race – and its primary effect, racism – is increasingly rendered invisible by such technologies, elided and obfuscated even as it's reproduced differently and anew. The effects of racism might be patently clear, but race's location is not.

In a critical engagement with Gilroy, Brett St Louis notes that '(e)liminating the category and concept of race' – in theory, that is, if not in practice:

> …will not end racism but may enable a better understanding of the discriminatory practices performed in the name of the idea of race without the diversionary obfuscating effects of epiphenomenal racial categories (2015: 134).

Let's say race disappears – in theory, that is, if not in practice. This disappearance raises theoretical, methodological and, of course, political questions. How are we supposed to think, identify and, confront race when it vanishes into systems beyond our perception? What becomes of racial formations in this post-visual regime?

Racial formations as data formations

Our contention is that large-scale data processing generates novel racial formations: what we call data formations. These technologies are striking because they have a distinct relationship to the visible. As Louise Amoore notes, 'critical accounts of the rise of algorithms have placed great emphasis on the power of algorithms to visualize, to reprogramme vision or indeed to "see" that which is not otherwise available to human regimes of visuality' (2020: 15). Yet, algorithms cause great anxiety because 'they operate on a plane in excess of human visibility and at scales that are inscrutable to the human' (ibid). Crucially, the application of inductive techniques to large data sets produces novel classifications. These classifications conceive us in new ways – ways that we ourselves are unable to see.

For instance, the 2013 Snowden leaks revealed that the U.S National Security Agency used a procedural algorithmic tool to determine whether an individual could be classified as 'foreign' for the purposes of state surveillance (Cheney-Lippold, 2016). Under U.S law, U.S citizens are afforded privacy protections under their Constitution's Fourth Amendment. To bypass this law and justify their expansive 'collect-it-all' surveillance programme, the U.S government created a method of determining citizenship by measuring 'foreignness' as a likelihood percentage. Put simply, 'If an individual's foreignness is found to be at or above "51 percent confidence", then that individual legally becomes a foreigner and thus loses the right to privacy'. (Cheney-Lippold, 2016: 1722). The data points used to determine 'foreignness' are explicitly non-visual, yet operate in ways that reproduce and reconstruct ethnic, racial and cultural ideas of national identity (Cheney-Lippold, 2016: 1736). Similarly, between 2016–2020, social media platform Facebook allowed its advertisers to target users based on three broad racial categories: 'African–American', 'U.S.-Hispanic' and 'Asian American' (Angwin and Parris, Jr, 2016). Labelled as 'ethnic affinities', these categories were controversial because they were, similarly, algorithmically determined using behavioural data. In both instances, people were unaware that they were being classified or of these classifications' consequences. Significantly, these racialized determinations were made indirectly using proxy indicators, such as language use, interests and I.P addresses (see Phan and Wark, forthcoming).

These examples demonstrate that in the absence of explicit racial categories, computational systems are still able to racialize us. Bernhard Rieder has recently described such computational systems as 'engines of order'; that is, systems that use classificatory techniques to make order out of a surfeit of data. However, such techniques don't just homogenize. They 'not only imply forms of standardization, homogenization and "commensuration" but also produce their own vectors of differentiation' (2020: 122). The differences they propagate take real people as their objects, but do so in ways that are extremely difficult to reverse engineer, and, consequently, to resist. Because these technologies are inductive, the categories they produce depend on the data they're trained on (Amoore,

2020; Mackenzie, 2017). In the absence of a category explicitly labelled 'race', these technologies produce racialisations indirectly, inferring them from correlations between other categories or through the use of proxies that act as stand-ins for explicitly racial categories (Barocas and Selbst, 2016; Speicher, 2018). With enough data, the invisible correlates of race (such as postcode, language group, degrees of contact with institutions like the criminal justice system) render race actionable once again. These techniques change race's epistemological basis, establishing a novel, non-visual ground for a novel racializing logic.

We want to identify a break instituted by technology that employs these inductive logics. Some forms of data processing are racist because they incorporate data that bears the trace of a racist society – garbage in/garbage out. But large-scale, inductive data processing also institutes another, more pernicious kind of racism. This racism emerges in and through correlative models and is endogenous *to* those models. Though data has the capacity to import the contexts in which it is captured, these systems that process it can also generate entirely new contexts altogether by 'impos(ing) and normalis(ing) certain modes of contextualization at the expense of others' (Seaver, 2015: 1106). Behind the ideological smokescreen that such technology is 'post-racial', the power to classify, to differentiate and, crucially, to determine context produces a wholly novel capacity to racialize. The infrastructure of racialization instituted by such technologies might ultimately reproduce existing forms of racialized inequality. Nevertheless, their capacity to produce race by other means turns racial categories into something else entirely: emergent epiphenomena of large-scale, automated data processing. In short, racial formations as data formations.

Conclusion

In this essay, we have used Gilroy's provocative theorisation of a 'post-visual' regime as a foil to argue that the proliferation of AI and algorithmic systems increasingly mediate racialized differences non-visually. If categories of race are inextricable from the technologies of classifying and sorting that makes the production of distinctions between people possible, it follows that technological innovations engender innovative ways of producing and policing difference. While it's important to note that algorithmic systems can recapitulate or perpetuate already-existing regimes of inequality, like racism, our argument is that they carry out a more fundamental operation: they have begun to transform the category of the race itself. Algorithmic systems allow 'race' to emerge in and through correlations, inferences or proxies that may or may not be traceable, in the last instance, to what one looks like. Our concept of 'racial formations as data formations' is designed to capture this novel form of racialization – and to expand the purview of race-critical analyses of AI and algorithmic systems.

The 'post-visual' regime we've begun to sketch in this essay raises methodological and political challenges for scholars of race and technology. Correlated, inferred and acted on via proxies, racial formations as data formations not only transform the category of race; they also locate the sites at which racialization might be identified – and, indeed, contested – out of sight and out of easy reach. To study the novel racial formations that are produced by such systems, we need to go beyond analyses of how racism gets encoded in data. We need to go beyond how such modes of racialization are felt. Most critically, we also need to go beyond critical accounts of mediated racialization that operate in visual registers. While a programme for identifying, analysing and critiquing racial formations as data formations doesn't have to begin from scratch, what we want to underscore is this: any such programme has to be able to apprehend the interrelationship between racialisation and mediation; how, that is, race is produced and, crucially, *re*produced when it is subject to mediating techniques.

Acknowledgements

We would both like to thank the reviewers for their generous feedback and the special issue editors Kate Henne and Renee Marie Shelby for their valued editorial advice and endless patience as we wrestled to put this piece together during the pandemic.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

The authors disclosed receipt of the following financial support for the research, authorship and/or publication of this article: Thao Phan's research for this article was supported by the ARC Centre of Excellence on Automated Decision-Making and Society. Scott Wark's research for this article was conducted as part of the 'People Like You': Contemporary Figures of Personalisation project, which is funded by a Wellcome Trust collaborative award 2018–2022 (205456/Z/16/Z).

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Notes

1. Nuclear magnetic resonance spectroscopy (NMR/MRI) and positron emission tomography (PET)
2. Browne (2015), Benjamin (2019), and Noble (2018) have been central to articulating the forms of gendered anti-blackness that structure practices of surveillance, targeted advertising, personalisation, automated decision-making and more. The concepts and questions raised here are intended to build on this work by

asking how systems of racial discrimination continue despite "race" itself being ostensibly eliminated as a perceptual category.

3. For alternative discussions of the rise of "post-racial logic," see Atanasoski and Vora (2019) and Phan and Wark (forthcoming).
4. See Nakamura (2007) and Browne (2015). Nakamura describes the Internet as operating through an explicitly "racio-visual logic", which she analyses using visual cultures methods. Similarly, Browne employs a theoretical framework informed by Fanon's visual schema of epidermalization. Our intention is not to challenge or critique these approaches – indeed, they are foundational to the study of race and digital culture – but rather to build on their scholarship and to offer new provocations for the field.
5. While there are many studies that examine aural and other non-visual markers of race (see Lawrence, 2021; Phan, 2019; Sweeney, 2016), our use "post-visual" is intended to encompass all modes of perception beyond human sense capacities
6. "Garbage in/garbage out" is commonly used in computer science to describe how human biases are incorporated into computational models. See Buranyi (2017).

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