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What is race in Australia?

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Australia has been more successful than most countries at banishing the term 'race' from public discourse. Instead, we use the terms 'ethnicity' and 'indigeneity'. It is an interesting context, then, in which to consider whether and how a change of terminology changes the underlying concept of essential biological types. In this essay, we first provide a historical overview of race in Australia before focusing on one area where biological difference is arguably being reasserted: Indigenous genomics. We outline how biological notions of race have been strongly resisted by Indigenous Australians, many of whom have argued that indigeneity is a cultural and social status, and not a biological one. The rise of genomics has led to increasing tensions regarding the construction of Aboriginal and Torres Strait Islander difference in the 21st century. After resisting involvement in genetic research in the 1990s and 2000s, in the current decade Indigenous people have engaged in genomics, including health and ancestry research projects and direct-to-consumer ancestry testing. These engagements have been framed as attempts to include Indigenous people in genomics, often side-stepping the implications of biological difference that 'Indigenous genomics' entails. We ask: what are the implications of Indigenous genomics for conceptions of race in Australia, and how do they matter?

Race and its rejection

The Australian continent was home to over 500 distinct Indigenous language groups when it was colonised by the British at Sydney Cove in 1788. A century later it had been carved into six colonies, and – following the widespread dispossession of Indigenous people across much of the arable south and east of the country – had developed a booming economy built on resource extraction, wool and cattle. By then Australia was home to a culturally-mixed population, as workers from Asia and the Pacific Islands were drawn or dragged to the growing colonies' mines and farms. However, the flow of immigrants and indentured labourers was curbed after the colonies federated to form the Commonwealth government in 1901 and introduced the ethno-nationalist act now known as the 'White Australia policy'. Restrictions on non-European migrants saw the number of people born overseas drop from 23% in 1901 to just 10% in 1947 (Australian Bureau of Statistics, 2010, p. 211).

The descendants of original inhabitants of the country - whose existence presented a more fundamental challenge than immigration to the idea of 'White Australia' – were also ruled and enumerated in a way that greatly diminished their demographic presence. The so-called 'full blood Aborigines' living on the arid and tropical frontiers, widely considered members of a 'doomed race' (McGregor, 1997), were segregated on missions and excluded from national censuses according to Section 127 of the new constitution. Meanwhile, those of less than a 'quarter Aboriginal blood' were counted as white, reflecting the widespread assumption that the so-called 'half caste' Aboriginal population would gradually merge – both culturally and biologically - into settler colonial society (McGregor, 2002). When it became clear during the inter-war period that the mixed-race community remained

distinct from white society, more interventionist steps were taken to encourage absorption. Over the period from the 1910s to the 1970s, thousands of children of 'mixed ancestry' were taken from their families to be raised in institutions, where many were abused, a phenomenon known since the 1990s as the 'Stolen Generations' (Human Rights & Equal Opportunity Commission, 1997; Moran, 2005; Read, 1982).

Events in Europe during the Second World War, the influx of post-war refugees and the rise of an Australian version of the civil rights movement changed the social fabric of the nation. The 1950s and '60s saw the settler-colonial nation gradually accepting its multicultural makeup, on the one hand, and its Indigenous population, on the other. Anti-racist campaigns, which saw the repeal of many pieces of discriminatory legislation in the 1960s, reached a crescendo with the 1967 referendum to change two Sections of the Australian Constitution. A record 90.77% of Australians voted to delete Section 127 of the constitution that excluded Aboriginal people from the census, as well as a section preventing the Commonwealth from making laws pertaining to the "race" of "aboriginal people" (as they had been previously been considered a State, not Commonwealth, responsibility).

The progressive Whitlam government, which came to power in 1972, consolidated these civil rights gains by passing the Commonwealth Racial Discrimination Act (1975), and anti-discrimination and equal opportunity legislation was subsequently introduced in every Australian state and territory. Whitlam also hammered the final nail in the coffin of the White Australia Policy, making 'multiculturalism' a central platform of Australian social policy. Immigration increased dramatically in the decades since, shifting from European in the post-war period towards East and South Asian, predominantly China and India. Recent figures show that 28% of Australians are born overseas, and almost half are second-generation immigrants (Australian Bureau of Statistics, 2018).

While arguments against the viability and benefits of multiculturalism continue to be voiced by conservatives (Hanson, 1997), on the whole Australian multiculturalism is seen as socially and economically successful, at least compared to other diverse societies (Lopez, 2000). Repeated surveys show that between 75% and 85% of Australians believe multiculturalism is a 'good thing' (Markus, 2018; Blair *et al.*, 2017). The same proportion also recognise that racism still exists, and 77% appreciated the need for laws and policies designed to tackle racism (Blair *et al.*, 2017). Explicit interpersonal racism is not socially acceptable and complaints of racial discrimination are investigated by the Australian Human Rights Commission (2018).

At the same time that efforts to eliminate 'racism' have increased, the use of the word 'race' in science, bureaucratic processes and policy-making has decreased. As in the United Kingdom (see Ellison et al., 2017) the term 'ethnicity' came to replace race in scientific writing. The term 'ethnicity' came to replace race in scientific writing. For example, references to 'race' disappeared from articles in the Medical Journal of Australia after World War II, replaced with the laborious term 'ethnic constitutional factor' (Thomas, 2004). The Australian Bureau of Statistics (ABS) also stopped asking residents about their 'racial origin' after the question generated "considerable controversy" in 1976 (Evans et al., 1993). Australians are now asked about their ancestry and Indigenous status, and, according to their response, categorised into one of more than 270 groups recorded in Australian Standard Classification of Cultural and Ethnic Groups (ASCCEG). The Standard defines 'ethnicity' in ways that deemphasise biological or phenotypical factors: as "the shared identity or similarity of a group of people on the basis of one or more factors"; "a cultural tradition, including family and social customs, sometimes religiously based"; "being a minority (often with a sense of being oppressed)" and sharing a common geographic origin, language or religion (ABS, 2017). On the ABS website as a whole, when the word 'race' appears it is almost always in the context of racial discrimination.

Before continuing further, it is important to note that our approach to uncovering the workings of racial concepts reflects research interests in Indigeneity, post-colonial politics and anti-racist

discourses. An important alternate line of enquiry into the displaced effects of biological concepts of human difference could focus on instances of structural injustice against racialized groups. Two major areas of Australian social and political life that are relevant here are the continued disadvantage of Aboriginal and Torres Strait Islander peoples, the result of violent colonial dispossession and discrimination, and the treatment of asylum seekers by Australian governments. Over the last two decades, successive administrations have competed to be the 'toughest' on those refugees who attempt to arrive by boat. For both of these issues - the rights and welfare of Indigenous people and refugees - fear of the racially different 'other' hovers just under the surface. This fear is plain to see in far-right commentary, but also animates more mainstream views of 'concern' about the successful 'integration' of migrants and refugees into Australian society, or complaints that Indigenous Australians 'get too much' from the government (Hage, 2003, 2008; Moreton-Robinson, 2004; Povinelli, 2002).

In the balance of this essay, rather than discussing these instances of racialised harm, we focus on an issue that illustrates the deep contradictions of biological difference when it is applied to altruistic goals such as improving minority health. Our aim is not to uncover seemingly 'benevolent' efforts as racist, or to imply that attempts to improve health are not worth the effort. Rather, we are interested in whether the potential dangers of concepts of biological difference can be countered in a place such as Australia where significant anti-racist infrastructures and discourses already exist (Kowal, 2015).

Race rejection, Indigenous Australians and genomics

The rejection of biological conceptions of difference in Australian policy and public discourse applies to Indigenous people more than any other racialized group. From the 1960s, mixed-race Indigenous Australians living in the 'settled' southeast began to assert their rights to be recognised as Aboriginal, without qualification (Rowse, 2017). Increasing awareness of the 'Stolen Generations' reinforced Indigenous resistance towards biological concepts of Indigeneity from the 1990s. Their successful campaigns for recognition and support, which resulted in the establishment of 'Link Up' services across the country (designed to assist members of the Stolen Generations to find and reconnect with Indigenous family members) and an official apology from the Australian Government, highlighted the potentially dire effects of castebased state classification.

These campaigns have led to widespread acceptance of the view that Indigeneity is primarily a social and not biological trait (Grieves, 2014). Reference to 'blood quantums', still commonplace among Native Americans, are now taboo in Australia, and a three-part definition of Indigenous status has prevailed since the 1980s: an Aboriginal person is someone who self-identifies as Indigenous, has some Indigenous ancestry (of an unspecified amount) and is accepted by the Indigenous community. This definitional change has seen a massive increase and diversification of the recognised Indigenous population, as offspring from the increasing number of 'mixed marriages' have overwhelmingly chosen to identified as Indigenous (Heard et al., 2009), and thousands more have come to identify as Aboriginal later in life (Biddle & Markham, 2018). This means that the current Aboriginal population is extremely genetically and phenotypically diverse. While conservative commentators have accused lightskinned Aboriginal-identifiers of opportunism (Bolt, 2009a,b), their identification as Aboriginal has been upheld in Australian's highest court (Federal Court of Australia & Bromberg, 2011).

Given this consensus about the social nature of Aboriginality, it is unsurprising that Indigenous Australians have long resisted genetic research. In the 1990s, when researchers working on the Human Genome Diversity Project identified Indigenous Australia as an "isolate of historical interest" and began soliciting samples, they faced local and national opposition. Aboriginal leaders protested that the sequencing of their genomes could lead to studies that stigmatise Aboriginal people, or "to the cultural, political and social complexity of Indigenous identity and Aboriginal rights being reduced to an arbitrary genetic test" (Human Rights and Equal Opportunity Commission, 1996; Harry *et al.*, 2000). These campaigns were decisive: no Australian samples were collected as part of the international study (Kowal, 2013) (On the Human Genome Diversity Project more generally, see Cunningham (1998); M'charek (2005); Reardon (2005)).

Similar concerns were raised in the landmark report, Essentially Yours: The Protection of Human Genetic Information in Australia report, released a month after the official completion of the Human Genome Project in 2003 (Australian Law Reform Commission, 2003). The scope of this report, that extended over 1100 pages, was enormous: covering every conceivable implication of genetic information (e.g. privacy, access, ownership, discrimination) and its applications (e.g. health, insurance, employment, forensics, immigration, sport). Yet in the section dealing with Indigenous Australia, these varied discussions were deferred. Essentially Yours was published soon after an attempt by some Aboriginal people in Tasmania to use genetic testing to defend their right to identify as Aboriginal in the face of challenges by members of the most powerful Aboriginal organisation in the state (Bevilacqua, 2002). Reflecting this context, the Indigenous chapter of the report focused squarely on concerns that the genomic revolution "could be seen as a return to outmoded and offensive legal classifications of Aboriginality based on 'strains of blood" (Australian Law Reform Commission, 2003, section 36.65). Citing numerous submissions from Indigenous experts and organisations, Essentially Yours reiterated a strong message: Aboriginal kinship in a social concept, not a biological one.

The delayed rise of indigenous genomics

Fifteen years on from the *Essentially Yours* report, much has changed. Having finished mapping the human genome, geneticists have begun to

pinpoint variations across it that may predispose people to, or provide protection from, certain diseases, or change the effectiveness of certain drugs. With the cost of genetic technologies falling, medical professionals are increasingly applying this molecular knowledge to offer clinical care tailored specifically to their patient's genotype. Following other wealthy developed nations, the Australian government has lent support to the development of this 'precision' or 'personalised' medicine, pledging \$500 million dollars to the area in the most recent federal budget (2018-9).

The rise of precision medicine has raised concerns about the lack of diversity in genomic databases (Popejoy & Fullerton, 2016). Scientists have drawn attention to a paucity of population-specific reference samples for Aboriginal people that could see members of this group left behind by these biotechnological advances (Nowak et al., 2018; Rae et al., 2017). Such concerns have driven important developments in the field of Indigenous genetics in the past decade. The Lowitja Institute, Australian's national institute for Aboriginal and Torres Strait Islander health, sponsored national roundtables to generate discussions about Indigenous people and genomics in 2010 and 2011 (Kowal et al., 2011) and has more recently funded research on Indigenous access to genetic health services. In 2013 the Australian National University established the world's first Indigenous-governed genome facility, the National Centre for Indigenous Genomics, to determine the fate of a large collection of blood samples from Indigenous communities collected mainly in the 1960s and 1970s (Kowal et al., 2016).

Australia has also seen an upturn in publications about Aboriginal genetics. A 2012 review revealed only 37 genetics studies published on this subject since 1976 (Kowal *et al.*, 2012). In the years since, genetics has been used to investigate a range of diseases in Indigenous populations, including vulvar cancer (McWhirter *et al.*, 2014), diabetes (Anderson *et al.*, 2015), hepatitis B (Littlejohn *et al.*, 2014), rheumatic heart disease (Gray *et al.*, 2017), and renal disease (Hoy, 2014).¹

¹ Another line of genetic research that has increased greatly in recent years, but that is beyond the scope of this brief

The return of race?

Evidently, the risks of reinforcing biological notions of Aboriginality have not been an unsurpassable obstacle to Indigenous participation in genetic research and precision medicine. Over the past 15 years, the march of technology has seen increased Indigenous involvement in this field as leaders of new institutions, participants in genetic research, patients receiving personalised medicine, or consumers of direct-to-consumer genetic ancestry tests. Unlike in neighbouring Aotearoa/New Zealand, where research with Maori on what was dubbed the 'warrior gene' was a source of considerable controversy (Hook, 2009), Indigenous genomics in Australia has proceeded without controversy so far. The work of Aboriginal-led organisations like the Lowitja Institute and the National Centre for Indigenous Genomics, combined with longstanding Indigenous-specific ethical guidelines for research (National Health Medical Research Council, 1991, 2003), means that the publication of research that stigmatises Aboriginal people, or attempts by state actors to use DNA tests to 'prove' Aboriginality, are unlikely.

Does this mean that fears of genetics expressed by Indigenous people in the 1990s and 2000s were misplaced? In our view, the answer is both yes and no. While the protocols in place tightly control the use of these new technologies, the very idea of 'Indigenous genomics' can imply that Indigenous Australians are biologically different from the presumed norm of the European Australian majority, requiring distinct methods of diagnosis and treatment of disease. As researchers from the United States have noted, this 'biologisation' of Indigeneity has potential social implications far beyond the immediate goal of improving health care (Reardon & TallBear, 2012; TallBear, 2013). For now, the tensions between the idea of 'Indigenous' genetic information and the huge diversity of the Aboriginal population remain unresolved.

In another sense, the fear of the 'return' of biological race expressed in the Essentially Yours report is misplaced because biological race never 'left'. While the word 'race' may have disappeared from official documents, scholars have long been sceptical about the substance of this linguistic shift. Rather than changing biological concepts of difference, they argue, eschewing the language of 'race' may merely displace these concepts onto others, and make their effects more difficult to track (Gannett, 2014; Kahn, 2012; Nash, 2005; Outram & Ellison, 2010). As Jonathan Kahn puts it, "using the less politically charged term 'ethnic'" can act "to elide the difference between social and biological constructions of race" and "the resonance and significance of the concept of race as it relates to historical practices of racism" (Kahn, 2012, pp. 4, 10). In short, 'ethnicity' and 'culture' can absorb and conceal biological concepts of difference.

Many scholars have demonstrated that a "durable preoccupation with difference" exists in the realm of medicine in particular (Pollock, 2012). While histories of 19th and early 20th century science and medicine provide many examples of explicitly harmful racialised practices, more recent medical interventions that aim to address racial inequalities may also harbour notions of biological race that negatively impact on minority groups. Jonathan Kahn's work on Bidil, the first 'ethnic drug' released in 2005, is useful here. Among many critiques of Bidil, Kahn argues that the decision to licence the drug for self-identified African Americans irrevocably racialised the drug. "Self-identification' may serve for collecting census data", he writes, "but it is often inappropriate or misleading in a biomedical context. It has become a fig leaf that covers a broad array of implicitly biologized conceptions of race" (Kahn, 2012, p. 14).

This may apply to all sorts of medical interventions offered on the basis on self-identification,

essay, is population genetics (a field that overlaps with evolutionary biology and anthropological genetics). Population geneticists have recently published wholegenome studies confirming that modern Aboriginal people are descendants of those who left African some 72,000 years ago (Malaspinas *et al.*, 2016), and mitochondrial genome studies suggest that this population expanded rapidly across the continent rapidly, diversifying in the process (Tobler *et al.*, 2017).

not just interventions based on assumed genetic differences. While there is no equivalent of Bidil in Australia (i.e. no drugs developed specifically for Indigenous people), Australian doctors are encouraged to ask patients if they are Aboriginal or Torres Strait Islander (Australian Institute of Health and Welfare, 2010; Kelaher *et al.*, 2010), and to offer those that identify more extensive health checks, access to additional immunisations and subsidised medications (Department of Health, 2017; Department of Human Services, 2018).

As a 2013 report by the Australian Institute of Health and Welfare (AIHW) about Aboriginal identification in primary health care settings points out, these "differential health services for Aboriginal and Torres Strait Islander people are based on evidence that the health disadvantage of Indigenous people is largely independent of financial/educational factors" (Australian Institute of Health and Welfare, 2013, p. 56). Yet to support this rationale, they cite a comparative analysis that focused exclusively on tropical and arid northwestern states with discrete Aboriginal communities - Queensland, South Australia, Western Australia and the Northern Territory (Glover et al., 2004). Reports that included more urbanised, south-eastern states, which have much higher rates of intermarriage and new-identification, paint a very different picture. For example, statistics from 2013-2014 show that, while Aboriginal people in the Northern Territory are hospitalised twice as often non-Aboriginal people, Aboriginal people in Tasmania and Victoria are hospitalised at a slightly lower rate than their states' respective non-Aboriginal populations (Australian Health Ministers' Advisory Council, 2015).

By downplaying the variables that cut across ethnic groups, such as socio-economic status, education and geography, critics argue that differential health services and statistics may reinforce the idea that inheritable characteristics are the source of minority ill-health (Ellison *et al.*, 1997; Rata & Zubaran, 2016). Organisations such as the AIHW are clearly aware of this risk. After making the cited statement about Aboriginal health discrepancies in their 2013 report, they immediate qualified it, stating: "at the same time, misconceptions that Aboriginal and Torres Strait Islander people are inherently unhealthy (due to genetics or race-based flaws) need to be rebutted" (Australian Institute of Health and Welfare, 2013, p. 56). This illustrates the tension inherent to racial or ethnic categories: efforts to highlight and address group-level disadvantage inevitably reinforce notions of biological race.

We must emphasise here that we fully support attempts to address health inequalities experienced by Indigenous Australians. However, given the specificity of each region in Australia, huge diversity across the continent, and rapid demographic changes in many places, we question whether the evidence for health services targeting the entire Indigenous population outweighs the potential risks of using this category in a biological context. For current health providers, and perhaps for Aboriginal and Torres Strait Islander patients, differential services may imply differential biologies. In this light, the potential 'return' of biologized race through Indigenous genomics seems less surprising.

As Kahn and others have observed, racialised biological categories are often presented as a 'temporary' measure – a "useful fiction" – for 'the meantime', pending a future when 'truly' personalised genomic information can be produced and interpreted quickly and cheaply. So far, the progression of genomics has belied this prediction: "far from withering away, race is persisting and even proliferating as genetic information increases" (Kahn, 2012, pp. 164, 168).

In Kahn's words, the history and present of science and medicine repeatedly shows "there is always a place for race". In the case of Australia's Indigenous population, identity-based health services have arguably left open 'a place for race' that genomics has readily taken up. It may be, as Pollock argues, that racialised medicine is inescapable as long as racial categories exist. The question, then, is not how to eradicate the racialisation of biologies, but how to do so in a way that minimises social harms and promotes social justice (Pollock, 2012).

What will be the implications of Indigenous genomics for notions of biological difference?

Time will tell if the intersection of genomics and Indigenous people leads to an inclusionary future where precision medicine helps to 'close the gap' of differential health outcomes, a regressive regime of state policing of Indigenous identity by genomic means, or most likely, something in between.

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