



Article 'Reparational' Genetics: Genomic Data and the Case for Reparations in the Caribbean

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Abstract: Drawing on my population genomic research among several Caribbean communities, I consider how ongoing Caribbean reparations movements index genomic information. Specifically, I examine the intersection between genetic ancestry and calls for reparatory justice to gain insight into the ways that scientific data are utilized in social articulations of both racial and indigenous identity. I argue that when contextualized within complex historical and cultural frameworks, the application of genomic data complicates notions about biological continuity and belonging, yet is compatible with broader conceptualizations of how people imagine themselves and histories in relation to geographic origins.

Keywords: genetic ancestry; DNA analysis testing; reparations; Caribbean; indigenous and African genetic genealogies

1. Introduction

Four years ago, addressing former colonial powers, several Caribbean nations called for reparatory justice in response to past harms as a result of enslavement and colonialism. Among the calls for compensation including investment in education, infrastructure, and technology transfer, Caribbean nations also required the acknowledgment that harm was done and that the repercussions of this harm are still evident today. Consequently, as part of the argument for reparations, there is a need to perceive the past and its relationship to current times. While there are a variety of lines of evidence that may be used to meet this goal, genetic data, specifically genetic ancestry, has the potential to provide an innovative means to link the past to the present.

In this paper, after briefly describing both analytical aspects and critiques of genetic ancestry testing, I reflect upon how genetic data have been referenced within the call for reparations. In doing this, I focus on a public debate about reparations that occurred at the 2015 International Garifuna Summit and Conference. In a session during this conference, the utility of genetic data was debated within the context of reparations. This debate is illustrative of my broader argument that genetic data as it is mobilized, or not, within the case for reparations, works to add complexity to how living communities reimagine the past and their place in the present. This debate was also illustrative of how emerging technologies, namely genetic ancestry tests, have the potential to create dilemmas regarding processes of identity formation and maintenance at both individual and community levels. Lastly, I argue that the consideration of genetic ancestry within the context of Caribbean reparations also highlights contemporary ways in which scientific data becomes incorporated into social articulations of race and indigeneity.

2. The Case for Reparations

As declared by the United Nations General Assembly (resolution 68/237), the year 2015 marked the beginning of the "International Decade for people of African Descent." In accordance with the theme, People of African descent: recognition, justice, and development, the UN schedule of activities

is designed to "strengthen national, regional and international cooperation in relation to the full enjoyment of economic, social, cultural, civil and political rights by people of African descent, and their full and equal participation in all aspects of society." In the Caribbean, this particular call for social justice is contiguous with ongoing efforts made by the Caribbean Common Market and Community (CARICOM). CARICOM is a conglomerate of 15 member states, three of which, Belize, Suriname, and Guyana, are not islands, and five others are associate members. CARICOM member nations have been working to promote and advance economic integration, human and social development, international relationships, and regional security within the Caribbean region.

In July 2013, CARICOM Heads of Government formed a committee, called the CARICOM Reparations Commission (CRC) (Franklin 2013). This committee is charged with preparing "the case for reparatory justice for the Region's indigenous and African descendant communities who are victims of Crimes against Humanity (CAH) in the forms of genocide, slavery, slave trading and racial apartheid." The creation of this case as a moral, ethical, and legal justification for reparations aligns with CARICOM's self-defined development strategy for the region (Franklin 2013). In this case, the CRC aims to directly connect African enslavement, the genocide of indigenous populations, and economic and political injustices related to colonialism to the systemic contemporary problems of the region. In practice, this would illustrate that the long-term effects of slavery as perpetuated by several European countries remain problematic and pervasive within the Caribbean today. The case is built to specifically address Great Britain as liable to Anglophone islands, France as liable to Haiti, and the Netherlands as liable to Suriname. Currently, a UK-based law firm, Leigh Day, is advising the CRC on the legality of the case. In the CRC's corresponding 10-point plan, the CRC lists elements that are intended to be reconciliatory and corrective acts in response to the injustices of both the enslavement of African peoples and the mass genocide experienced by the regions' indigenous populations (Caribbean Reparations Commission n.d.). Advocates of the commission, including Sir Hilary Beckles, current Vice Chancellor of the University of the West Indies and chair of the CRC, have reiterated that this call for reparations is not to be thought of as some sort of charity but instead, quoting from Beckles' January 2016 speech at Oxford University " ... it is a renewed call for development cooperation between Britain and the Caribbean. It is about Britain making a long overdue contribution to the economic development of the Caribbean through investments in areas such as education, health care, agriculture reform, technology and science to transfer through the universities and colleges" (Erskine 2016).

While the history of calls for reparations within North America for enslaved peoples and their descendants dates back to at least the late 18th century (Morgan 2014), according to UC Riverside historian, VP Franklin, the First Pan-African Congress on Reparations meeting held in Abuja, Nigeria in 1993 served as an important impetus to the current movement in the Caribbean (Franklin 2013). Three years after CARICOM established the CRC to build a case for reparations, in February 2016, Barbados' Prime Minister and chairman of the Prime Ministerial Sub-committee on Reparations, Freundel Stuart, sent a formal letter of complaint regarding reparations on behalf of the CARICOM to the British Foreign Office. Though not released publically, Prof. Verene Shepherd, director of the Centre for Reparations Research and the University of the West Indies, Mona, Jamaica, reports that the letter lays out the case for reparations, "There is a case to answer for reparatory justice by those states that forcibly relocated Africans to the Caribbean for centuries, practised chattel enslavement of Africans and are responsible for the genocide of native communities" (Shepherd 2017). CARICOM is prepared to wait two years for a formal response and if there is not an acceptable reply, then CARICOM plans to take the case to the International Court of Justice (Clegg 2014). This formal letter came on the heels of a visit by former British Prime Minster David Cameron to Jamaica in September 2015. During that visit, Cameron addressed the Jamaican parliament and while declining to apologize for slavery or directly addressing reparations, he pledged £300 million for infrastructure and another £25 million towards the construction of a prison to house 600 Jamaican citizens that were incarcerated in the UK (Mason 2015). Since the initiation of the CRC, CARICOM nations continue to develop and

press their case through the media and various region-wide events to raise awareness of their cause (Caribbean Reparations Commission n.d.).

Calculating reparatory measures requires interpretations of the past, an assessment of the present, and an understanding of how both the past and present are related. In order to strengthen this legal case, a crucial aspect of CARICOM's argument would be to establish that contemporary populations have indeed been impacted by the legacy of Britain's colonial policies. Traditionally, such arguments have been built using methodologies employed by historians and other social scientists. However, due to improvements within genetics and increased engagement with genetic data in the forms of Direct to Consumer (DTC) genetic tests, genomic data are increasingly used by scholars, among others, to reevaluate the past within the context of contemporary communities (Benn Torres 2014; Deason et al. 2012; Nelson 2008). Of relevance to the Caribbean reparations movement are particular uses of genetic information, specifically genetic ancestry. Accordingly, genetic ancestry holds the potential to show that living people are the direct descendants of those who were harmed by Britain's colonial policies.

3. Genetic Ancestry: Analysis and Critiques

Genetic ancestry is defined as a quantitative assessment of shared genetic background that is intimately tied to geography and by extension, when individuals share genetic lineages they also share regional origins (Shriver and Kittles 2004). Accordingly, genetic ancestry tests are built upon probabilistic assessments of the relatedness between an individual test taker and reference populations. In these analyses, reference populations are usually derived from broad geographic groups of populations that are believed to have been generally reproductively isolated and remained relatively geographically static over long periods of time. Researchers then use global patterns of genetic variation to make assessments about the ancestry of test takers.

The main concepts that ancestry tests are built upon are the seeming incongruent nature of global patterns of human genetic variation. On the one hand, human variation is clinally distributed across geographic space, meaning that there are no absolute barriers in the distribution of genetic variants. This has occurred because over the course of human history, individuals have typically picked mates that are in geographically adjacent areas. As a result, populations that are near to each other also appear to carry similar genetic variables. This corresponds to a direct relationship between geographic and genetic distance, where, as the geographic distance between two populations increases, genetic distance also increases between those populations (Handley et al. 2007). On the other hand, human variation can be queried in such a way that sub-structure, or relatively homogenous sub-clusters of human groups, becomes a defining characteristic. This is most notable when considering geographically distant regions (Rosenberg et al. 2002). Genetic ancestry tests rely upon sub-structure, or identifying those relatively homogenous sub-clusters, usually among geographically distant groups, to assess the origins of test takers. Increasingly, however, researchers can discern ancestry among geographically close populations, as shown in recent studies among European populations (Ralph and Coop 2013; Novembre et al. 2008). In these types of studies, researchers make methodological adjustments, namely the amount and selection of genetic markers in the analyses to discern ancestry.

In assessing genetic ancestry, the choice and number of genetic markers are important parameters. For genetic ancestry, a series of genetic markers known as ancestry informative markers or AIMs are compared between the test taker and reference populations. AIMs are genetic markers that have variants or alleles that are common in some populations and simultaneously rare in other populations (Halder et al. 2008). By considering a large number of AIMs derived from across the entire genome, statistical approaches, such as maximum likelihood analyses, are used to estimate the source population of the particular allele and correspondingly the proportion of ancestry from each reference group (Alexander et al. 2009; Falush et al. 2000).

Given the methodological requirements of conducting an ancestry test, the quality of any given ancestry test is heavily reliant on the series of AIMs used, as well as the number, composition, and

comprehensiveness of reference populations. One primary critique of ancestry tests involves the

concept of a population. From a population genetic perspective, a population is the unit of evolution and can be thought of as a group of co-existing interbreeding individuals (Relethford 2012). However, the concept of populations, as applied to humans, becomes more complicated as one begins to consider factors such as class, language, geographic distance, religion, or other dynamics that potentially act as barriers to how individuals choose mates and form populations. In the context of genetic ancestry testing, when test takers are assigned ancestry among reference populations, there is the assumption that these reference populations are currently as they existed generations ago, ignoring, for example, the possibility of the influx of migrants, or movement of the population to different regions. Additionally, the notion of geographic and reproductive isolation among reference populations, in the strictest sense, has also been heavily critiqued as these are not characteristic features of human groups across time or space (Fullwiley 2008). Another critique of genetic ancestry is that there is the danger of conceiving of these reference populations as naturally occurring discrete biological groups, in other words, racial groups. As has been argued by a variety of social scientists, because of the way that genetic ancestry is estimated, and more recently, marketed by DTC ancestry testing companies, the estimation of genetic ancestry has the potential to reify biological notions of race (Bolnick 2008; Bolnick et al. 2007).

Despite these critiques, genetic ancestry nonetheless has utility for understanding how geographic barriers or social structures regarding mate choice have affected patterns of genetic variability across human groups. In addition, with careful consideration of the underlying assumptions regarding populations, the use of genetic ancestry is illustrative of how socio-cultural views about human differences, as well as historical factors, affect how science is produced and consumed. For example, as both the Anglophone Caribbean and United States have general histories that include capitalist exploitation of human labor in conjunction with the convergence of people from specific regions within Africa, the Americas, Asia, and Europe, it follows that, within the Caribbean or US context, considerations of genetic ancestry would focus on patterns that emerge relative to these specific geographic regions of the world. That is, because of the histories within the Caribbean and the US, the way in which North American researchers query scientific data emanates from a particular history and way of understanding human difference. Finally, though some researchers have raised concerns that genetic ancestry can reify, or make real, notions of biological race, it should also be noted that genetic ancestry also has the potential to undermine these same ideas. As has been illustrated within the popular press and to some extent in scholarly works (Bryc et al. 2015; Suresh 2015; Zimmer 2014), for some test takers, genetic ancestry and self-identification are non-concordant. In these cases, test takers learn that they have ancestors that, if living, would likely self-identify in different ways than themselves. These instances challenge assumptions about the relationship between biology (i.e., genetics) and race. Such cases illustrate that ideas about race are indeed culturally constructed ideas of difference rather than biological realities.

Due to its utility in population genetic research and use in recreational genetic testing as offered by DTC companies, genetic ancestry testing has become more widely accepted as a way to learn about how the past has influenced the present. Arguably, this technology also has the potential to disseminate into other areas of society including the quest for reparatory justice.

4. 'Reparational' Genetics

The CRC case for reparations is built upon moral, ethical, and legal arguments including supporting the idea that contemporary populations still live with and are affected by the legacy of slavery and indigenous genocide. At the foundation of this argument is the belief that those alive today are indeed the descendants of those who were harmed over 150 years ago. Within the Caribbean, this belief is particularly acute, especially with regard to the calls for reparations for indigenous genocide. As I have noted in previous work, within the Anglophone Caribbean, there is a common narrative that the native population was decimated as a consequence of European colonization and no

longer exists in any meaningful way today (Benn Torres 2014). In addition to narratives of indigenous extinction, there are also historical records that note that both indigenous Caribbean and African descended peoples have relocated to and from the Caribbean since colonial times. As a result of these purported historical factors, critics of reparations question how any group can rightfully claim reparations for people that supposedly no longer exist or may have not been within the region at the time of institutional genocide and slavery. Furthermore, critiques against reparations include the question of how contemporary people can prove that they are indeed the direct descendants of those who were harmed (Shelton 2012; Davis 2007). This last point is particularly notable given that genealogical records may not have been collected or are simply not available for the relevant communities. Moreover, as has been illustrated by critical historians, the issue of having relevant documentation that connects past populations to contemporary groups is further complicated because colonial governments systematically discounted individuals in order to disenfranchise and exploit the land and labor of indigenous Caribbean and enslaved African peoples.

Since there are significant limitations to what may be learned from historical documents and oral histories, in response to critiques, reparations activists have looked for other potential lines of evidence to support their cause, asking if the technologies that are fueling the work of genetic genealogists can be utilized to substantiate claims for reparations. The idea behind this particular use of genetic tests is to illustrate relatedness to the people that experienced harm as a result of being enslaved or otherwise persecuted. The case can then be made that restitution is due to those who were harmed, which, in this instance, would include the descendants of enslaved Africans and indigenous Caribbean people. Effectively, DNA could be used as a means to build legal standing where legal standing refers to making a compelling argument that one is sufficiently tied to and affected by the harm enacted by those from whom one seeks redress (Norgle 2005). As of now, genetic data have not yet been integrated into legal arguments for reparations in the Caribbean. However, this approach has been utilized in the United States.

Within the US, the use of genetic data as part of building a case for reparations has been detailed in Alondra Nelson's book, The Social Life of DNA (Nelson 2016). In brief, Nelson discusses how, in 2002, a class action lawsuit was filed against 17 corporations for their involvement in slavery, including the Trans-Atlantic trade and exploitation of enslaved African Americans. The case was heard and later dismissed in 2003 by the US District Court for the Northern District of Illinois. One of the reasons Judge Charles Norgle cited for dismissing the case was a lack of standing. In other words, the plaintiffs had not sufficiently made a compelling argument that they were tied to and affected by the harm enacted by those they sued. In response to this, three of the plaintiffs took genetic ancestry tests that indicated shared ancestry among the peoples in present- day Sierra Leone, the Gambia, and Niger. In the appeal, the plaintiffs used the genetic testing result to support standing by showing that they had ancestry among the peoples that were involved in the Trans-Atlantic Slave trade. Ultimately, this appeal was also dismissed, with Judge Norgle concluding that, "The notion that standing can be inherited (the 'genetic' theory of standing) is ... legally ... suspect; and the notion that groups, rather than individuals, have standing to sue, is legally insupportable" (Miller 2004; Norgle 2005).

The questions of time and standing are critical to the issue of reparations for slavery and have been debated extensively (Miller 2004; Posner and Vermeule 2003; Shelton 2012; Westley 1998). In reviewing potentially similar cases, Norgle's decision regarding the inheritance of standing, seemingly contrasts to at least two other cases that occurred in the United States, the French Spoliation Claims, and Haiti's Independence Debt (Craemer 2015). Briefly, in the French Spoliations case, individuals claimed compensation from the United States for goods taken by France during an international dispute between the two countries. In the Haiti Independence Debt, the US inherited a debt paid to France to compensate former plantation owners for losses of property (including enslaved peoples) during the Haitian Revolution. In both of these cases, there was little debate about the need for reparations because it was understood that harm had occurred to the claimants. Accordingly, compensation in response to that harm was acknowledged and reparatory claims were paid over several generations; 125 years in

the French Spoliations claim and 156 years in Haiti's Independence debt. In these cases, the courts did not debate the standing of descendants, but instead debated how much and to whom reparatory measures would be made. As a result, archival research was done to support the claimants' eligibility to receive compensation based on their ancestor's original claims (Craemer 2015). These cases are in contrast to reparations movements in the US and in the Caribbean in that it has taken nearly 150 years for respective governments to acknowledge the harm caused by slavery. In 2006, Former British Prime Minister, Tony Blair, made a statement about regretting the slave trade (Blair 2006). This statement, however, was viewed by critics as not quite an apology (Smith 2006). In 2009, the US Senate issued a formal apology but as part of this resolution, also noted that it in no way, "authorizes, supports, or serves as a settlement of any claim against the United States" (Congress, U.S. 2009). In the case of reparations for slavery, the length of time it has taken for formal recognition of the harm that ensued due to slavery has made standing a critical factor.

While the French Spoliation Claim and the Haiti Independence Debt cases might seem instructive for multigenerational reparations, I argue that there is at least one other important distinction between these cases and the case for reparations for slavery; that distinction is political will. In an article about slavery reparations in the US, author Robert Westley points out that, "Time and standing in American law are interrelated concepts . . . and . . . are socially constructed" (Westley 1998). Craemer aptly notes that as social constructions, issues of time and standing become political issues (Craemer 2015). As such, both the French Spoliations and the Haiti Independence Debt were supported with enough political will to see the claims to fruition. There has not been comparable political will for reparations for slavery among some stakeholder communities and in governing bodies in the US and in the former Caribbean colonial powers (Armange and Mullet 2016; Clarke 2017; Mackey 2010; Moore 2014). Consequently, the issue of time and standing with regard to current reparations movements will remain contentious and difficult to utilize in current legal frameworks.

Despite the current lack of political will and issues of standing, it is nonetheless instructive to consider how the case for reparations may evolve. Though genetic data has not been given the same level of attention by scholars and activists in the Caribbean as it has in the United States, considering how genetic data might be utilized in the context of the Caribbean reparations movement is insightful for thinking about the biological ties that link ancestors to descendants and how people incorporate technologies into contemporary ideas about themselves and their communities. Akin to marginalized communities within the United States, Caribbean indigenous and some African descended communities also face substantial political and economic challenges to their communities as a result of centuries-long systemic discrimination. However, as highlighted in Amy Strecker's 2016 article "Revival, Recognition, Restitution, Indigenous Rights in the Eastern Caribbean", indigenous communities within the Eastern Caribbean have utilized a variety of methods to (1) acquire national recognition of their existence within in the contemporary Caribbean; (2) assert community identity in their own terms by replacing pejorative references to their communities in official and state documents; and (3) increasingly pressed for, and in the case of Trinidad have received, clearly articulated land rights (Strecker 2016). The fact remains, that despite these advances, indigenous Caribbean communities still live within a historical backdrop in which native peoples were methodically removed or otherwise excluded from the historiography of the region and this history specifically remains relevant to the issue of reparations.

Though genetic data are not central within the Caribbean reparations movement, activists hold a variety of perspectives about the use of genetic data, ranging from enthusiasm to deep concern. The range of ideas regarding using genetic data as support in the case for reparations, was evident in a panel discussion at the 2nd annual International Garifuna conference held in March 2015 in Kingstown, St. Vincent. During this discussion, panelists considered questions about indigeneity, race, and community membership given the history of admixture within the Caribbean. Albert Deterville, a member of the Human Rights Council's Expert Mechanism on the Rights of Indigenous Peoples, cited research noting the high percentage of people in Puerto Rico, upwards of 60%, and to a lesser extent, the Dominican Republic, that have Native American (Caribbean) genetic ancestry. In referencing genetic information, Deterville worked to combat the notion of indigenous extinction and instead highlighted continuity of Native peoples within the region. Additionally, Detterville, who specifically identified himself as a Native person from St. Lucia, was addressing members of the Garifuna community, who are the Afro-indigenous community of St. Vincent and the Grenadines. In referencing the genetic data, Deterville was also simultaneously advocating for unity in the movement for human rights and reparations between indigenous communities across the Caribbean. Deterville's sentiments for unity were mirrored, though in a different way, by another panelist, Mr. Jomo Thomas, Esquire, who is currently Speaker of the House of Assembly in the Vincentian parliament and chair of Vincentian Reparations Committee. Thomas voiced concerns over the inclusion of genetic data within the context of reparations. He commented on the potential abuse of genetic data as a means to define who is indigenous, as well as on the limitations of genetic genealogies in establishing a comprehensive picture of an individual's ancestry. According to Thomas, an uncritical use of genetic data had the potential to disrupt, distract, and diminish the needed unity in the call for reparations. Furthermore, Thomas also questioned the role that race, in reference to African and indigenous Caribbean peoples, might have on the case for reparations, reiterating his position that unity is fundamental in making a case for reparations.

Thomas' concern about the uncritical use of genetic data reflects a broader concern that genetic data could be conflated with race and other markers of identity. As noted in Thomas' comments, in the case of Caribbean reparations, there is the potential that genetic data would be (mis)applied to highlight who is indigenous, who is of African descent, and who has varying amounts of these and other ancestries. This type of misapplication can have the effect of fragmenting communities by reinforcing colonial-based social hierarchies between indigenous Caribbean and African descended peoples. Similar situations have occurred in the Caribbean and specifically in St. Vincent. Approximately 220 years ago, British authorities distinguished "Yellow Caribs" from "Black Caribs" based on skin tone in conjunction with the 1797 exile of native peoples to Baliceaux then Honduras (González 1988). This discrimination separated families and reified stereotypes that African-descended peoples were rebellious and violent, while indigenous Caribbean peoples were passive and would submit to colonial assimilation. Thomas' concern reflects a fear that new technologies could be used to revive old prejudices. These prejudices could work to diminish claims for reparatory justice by prioritizing one group's claim of injury over another group's claim and thereby work to distract stakeholders from achieving the ultimate goal of reparations for their communities.

As was illustrated in the class action lawsuit in the United States, as well as in the panel discussion at the Garifuna conference, genetic data has a potential role within the case for reparations. Moreover, the referencing of genetic data within this particular context is useful for thinking about contemporary iterations of indigeneity, as well as the role of race within the contemporary Caribbean. These two panelists at the Garifuna conference, though sharing similar visions for reparatory justice, presented perspectives that illustrated how the meanings and value of genetic data can differ in the context of community identity formation and maintenance. On one side of the issue, genetic data worked to combat centuries-long fictions of indigenous extinction while eliciting solidarity among the region's indigenous populations. Here, genetic data received a privileged position in the argument as a source of authority and authenticity. The data support the notion of continuity, something that some, but not all, Native Caribbean peoples have always understood. In other words, though genetic data was never really necessary evidence needed by some Native Caribbean community members, activists wielded genetic data in order to incite awareness and unity within Native Caribbean peoples. This particular reference to genetic data in the case for reparations consequently becomes in and of itself an argument for reparations. The need to "prove" one's existence is reflective of the ongoing profound harm that initially occurred with the genocide and the continuous repression of Native Caribbean peoples. The need to "prove" indigenous Caribbean continuity illustrates the history, and to some extent, current notions of indigeneity, in the Anglophone Caribbean. Such ideas about indigenous populations

were illustrated by Jamaica's former Prime Minister Portia Simpson's 2015 Hero's day speech, in which she referenced Jamaica's native population as relics of the country (Simpson Miller 2015). Furthermore, negative connotations surrounding indigeneity were evident in an opinion piece about Jamaica's coat of arms, in which Bishop Rowan Edwards associated the bow in the indigenous man's hand as emblematic of violence (Bishop Takes Issue 2016). Both examples highlight contemporary ideas about indigeneity in Jamaica, and likely other regions of the Anglophone Caribbean, and these ideas are still very much influenced by the lived experiences of genocide and colonialism by Native communities.

To some degree, this particular use of genetic data within the context of reparations aligns with the main arguments in TallBear (2013). In this article, Tallbear contrasts indigenous and scientific (genetic) articulations of indigeneity, where indigenous notions of indigeneity are related to socio-political status, relationship with land, culture, and genealogy. This contrasts with genetic articulations that focus on shared haplotypes for defining populations. While contrasting these two articulations, Tallbear notes that, "Genomic ideas of indigeneity are founded in the expectation of inevitable disappearance. In other words, indigenous characteristics are valuable precisely because indigenous peoples are seen as disappearing" (TallBear 2013). She follows this with a discussion on how genomic articulations can undermine Native autonomy and the ability to define themselves in their own terms. For Native Caribbean peoples that exist in contexts where they supposedly have already disappeared, genomic articulations are actually used to undermine extinction narratives and to work towards more self-determination. Here, different historical contexts distinguish the contemporary experiences of indigenous communities within the Caribbean relative to other global regions. Despite political and social marginalization, increasingly Native communities across the Caribbean are mobilizing calls for human rights and genetic data is simply another tool to add to the arsenal for the fight for recognition and reparatory justice (Benn Torres 2014; Feliciano-Santos 2017; Forte 2006).

On the other side of the issue, just as genetic data has been referenced to illustrate biological continuity, as discussed by Thomas, genetic data simultaneously holds the power to fragment the same communities that seek to use it for rectification. Here, similar critiques as voiced by Royal and colleagues (Royal et al. 2010), caution against essentialist uses of genetic data to categorize or otherwise reify antiquated notions of difference. With Thomas' hesitancy to reference genetic data, he alludes to the potential use of genetics in determining who is a member of the relevant communities. Furthermore, as Thomas suggests, genetic testing could detract from the need to make a unified effort in the call for reparatory justice. In stating his reluctance over genetic information, unlike Detterville's perspective, Thomas de-prioritized genetic data because it did not further the cause but instead had the potential to regress efforts in unifying people around the issue. Thomas' reasoning reflects larger issues, highlighting that there are unfinished discussions on the part of social and biological scientists about the nature and meaning of the relationship between genetics, race, and other social identities.

The unfinished discussions about race and biology between social and biological scientists have created a space in which people can and have argued that existing social inequalities and hierarchies are simply a reflection of our biologies and, as such, nothing should or could be done to rectify the dismal current conditions of some communities (Nugent 2007). This sentiment, that our social realities are a reflection of our biologies, does not bode well in the push for reparations. Similarly, nor does an uncritical application of genetic data in exploring community identity. Thomas' hesitancy in referencing genetic data within the context of reparations is, as I see it, a reflection of a larger issue that social scientists need to thoroughly address: how, given the new information gained from emerging technologies, are we to make sense of fundamental aspects of being human- inclusive of individual and community identity and race? Regardless of the fate of the current call for reparations for indigenous genocide and African slavery, among scholars, there is still some reconciliation to be made about best practices for describing the nature of human difference.

As the movement for reparations within the Caribbean continues to progress, communities will decide if and how to reference genetic information within their cause. What is evident, however, is that in a post- genomic age, genomic data has increasingly seeped beyond the laboratory and holds

the potential to shape how communities define themselves and govern their relationships with other communities. As is illustrated in the calls for reparations in the Caribbean, genetic data can serve as evidence of a history of unaddressed abuse and exploitation, but can also serve as a tool to reconcile that same history.

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References

- Alexander, David H., John Novembre, and Kenneth Lange. 2009. Fast model-based estimation of ancestry in unrelated individuals. *Genome Research* 19: 1655–64. [CrossRef] [PubMed]
- Armange, Roseline, and Etienne Mullet. 2016. Slave descendants' views regarding national policies on reparations: A Martinican perspective. *Social Science Information* 55: 511–30. [CrossRef]
- Benn Torres, Jada. 2014. Prospecting the past: Genetic perspectives on the extinction and survival of indigenous peoples of the Caribbean. *New Genetics and Society* 33: 21–41. [CrossRef]
- Bishop Takes Issue. 2016. Bishop Takes Issue with Jamaican Coat of Arms, Says it is Portrays an Image of War. Available online: http://jamaica-gleaner.com/article/news/20160805/bishop-takes-issue-jamaican-coatarms-says-it-it-portrays-image-war (accessed on 7 December 2017).
- Blair, Tony. 2006. Text of Tony Blair's Statement on Slavery. Available online: http://historynewsnetwork.org/ article/32322 (accessed on 1 December 2017).
- Bolnick, Deborah A. 2008. Individual ancestry inference and the reification of race as a biological phenomenon. *Revisiting Race in a Genomic Age*, 70–85.
- Bolnick, Deborah A., Duana Fullwiley, Troy Duster, Richard S. Cooper, Joan H. Fujimura, Jonathan Kahn, Jay S. Kaufman, Jonathan Marks, Ann Morning, Alondra Nelson, and et al. 2007. The science and business of genetic ancestry testing. *Science* 318: 399–400. [CrossRef] [PubMed]
- Bryc, Katarzyna, Eric Y. Durand, J. Michael Macpherson, David Reich, and Joanna L. Mountain. 2015. The genetic ancestry of African Americans, Latinos, and European Americans across the United States. *American Journal of Human Genetics* 96: 37–53. [CrossRef] [PubMed]
- Caribbean Reparations Commission. n.d. CARICOM—Caribbean Reparations Commission. CARICOM—Caribbean Reparations Commission. Available online: http://caricomreparations.org/caricom/ (accessed on 12 October 2017).
- Clarke, Paul. 2017. Let's Talk Cooperation Not Reparation—British State Minister. Available online: http://jamaicagleaner.com/article/news/20171113/lets-talk-cooperation-not-reparation-british-state-minister (accessed on 1 December 2017).
- Clegg, Peter. 2014. The Caribbean Reparations Claim: What Chance of Success? *The Round Table* 103: 435–37. [CrossRef]
- Congress, U.S. 2009. S.Con.Res.26—A Concurrent Resolution Apologizing for the Enslavement and Racial Segregation of African Americans, 2009–2010. Available online: https://www.congress.gov/bill/111th-congress/senate-concurrent-resolution/26 (accessed on 24 January 2018).
- Craemer, Thomas. 2015. Estimating Slavery Reparations: Present Value Comparisons of Historical Multigenerational Reparations Policies. *Social Science Quarterly* 96: 639–55. [CrossRef]
- Davis, Angelique M. 2007. Proceedings of the scholarly conference taking reparations seriously: Multiracialism and reparations: The intersection of the multiracial category and reparations movements. *Thomas Jefferson Law Review* 29: 161–313.
- Deason, Michael, Antonio Salas, Simon Newman, Vincent Macaulay, Errol Morrison, and Yannis Pitsiladis. 2012. Interdisciplinary approach to the demography of Jamaica. *BMC Evolutionary Biology* 12: 24. [CrossRef] [PubMed]
- Erskine, Marcia. 2016. Sir Hilary Presents Model for Reparations at Oxford University. Available online: http://sta.uwi.edu/news/releases/release.asp?id=1519 (accessed on 18 October 2017).
- Falush, Donnelly, Matthew Stephens, and Jonathan K. Pritchard. 2000. Inference of population structure using multilocus genotype data. *Genetics* 155: 945–59.
- Feliciano-Santos, Sherina. 2017. How do you speak Taíno? Indigenous Activism and Linguistic Practices in Puerto Rico. *Journal of Linguistic Anthropology* 27: 4–21. [CrossRef]

- Forte, Maximilian Christian, ed. 2006. Indigenous Resurgence in the Contemporary Caribbean: Amerindian Survival and Revival. New York: Peter Lang, p. 298.
- Franklin, V. P. 2013. Commentary—Reparations as a Development Strategy: The CARICOM Reparations Commission. *Journal of African American History* 98: 363–66. [CrossRef]
- Fullwiley, Duana. 2008. The Biologistical Construction of Race: 'Admixture' Technology and the New Genetic Medicine. *Social Studies of Science* 38: 695–735. [CrossRef] [PubMed]
- González, Nancie L. Solien. 1988. Sojourners of the Caribbean: Ethnogenesis and Ethnohistory of the Garifuna. Urbana: University of Illinois Press, p. 253.
- Halder, Indrani, Shriver Mark, Thomas Matt, Fernandez Jose R., and Frudakis Tony. 2008. A panel of ancestry informative markers for estimating individual biogeographical ancestry and admixture from four continents: Utility and applications. *Human Mutation* 5: 648–58. [CrossRef] [PubMed]
- Handley, Lori J., Andrea Manica, Jérôme Goudet, and François Balloux. 2007. Going the distance: human population genetics in a clinal world. *Trends in Genetics TIG* 23: 432–39. [CrossRef] [PubMed]
- Mackey, Robert. 2010. France Will Not Repay Haiti Reparations. Available online: https://thelede.blogs.nytimes. com/2010/07/15/france-will-not-repay-haiti-reparations/ (accessed on 24 January 2018).
- Mason, Rowena. 2015. Jamaica Should 'Move on from Painful Legacy of Slavery', Says Cameron. Available online: https://www.theguardian.com/world/2015/sep/30/jamaica-should-move-on-from-painful-legacy-of-slavery-says-cameron (accessed on 8 December 2018).
- Miller, Eric J. 2004. Representing the Race: Standing to Sue in Reparations Lawsuits. Harvard BlackLetter LJ 20: 91.
- Moore, Peyer. 2014. YouGov | Overwhelming Opposition to Reparations for Slavery and Jim Crow. Front Page, Politics & Current Affairs. Available online: https://today.yougov.com/news/2014/06/02/reparations/ (accessed on 24 January 2018).
- Morgan, Lynda. 2014. Reparations and History: The Emancipation Generation's Ethical Legacy for the 21st Century. *Journal of African American History* 99: 403–26. [CrossRef]
- Nelson, Alondra. 2008. Genetic Genealogy Testing and the Pursuit of African Ancestry. *Social Studies of Science* 38: 759–60, 783. [CrossRef] [PubMed]
- Nelson, Alondra. 2016. *The Social Life of DNA: Race, Reparations, and Reconciliation after the Genome*. Boston: Beacon Press, p. 200.
- Norgle, Charles. 2005. African-American Slave Descendants Litigation. WL 1561509 (ND 111).
- Novembre, John, Toby Johnson, Katarzyna Bryc, Zoltán Kutalik, Adam R. Boyko, Adam Auton, Amit Indap, Karen S. King, Sven Bergmann, Matthew R. Nelson, and et al. 2008. Genes mirror geography within Europe. *Nature* 456: 98–101. [CrossRef] [PubMed]
- Nugent, Helen. 2007. Black people 'less intelligent' scientist claims. The Times of London, October 17.
- Posner, Eric A., and Adrian Vermeule. 2003. Reparations for Slavery and Other Historical Injustices Essay. *Columbia Law Review* 103: 689–748. [CrossRef]
- Ralph, Peter, and Graham Coop. 2013. The geography of recent genetic ancestry across Europe. *PLoS Biology* 11: e1001555. [CrossRef]
- Relethford, John H. 2012. Human Population Genetics. Hoboken: John Wiley & Sons, vol. 7.
- Rosenberg, Noah A., Jonathan K. Pritchard, James L. Weber, Howard M. Cann, Kenneth K. Kidd, Lev A. Zhivotovsky, and Marcus W. Feldman. 2002. Genetic structure of human populations. *Science* 298: 2381–85. [CrossRef] [PubMed]
- Royal, Charmaine D., John Novembre, Stephanie M. Fullerton, David B. Goldstein, Jeffrey C. Long, Michael J. Bamshad, and Andrew G. Clark. 2010. Inferring Genetic Ancestry: Opportunities, Challenges, and Implications. *The American Journal of Human Genetics* 86: 661. [CrossRef] [PubMed]
- Shelton, Dinah. 2012. Reparations for human rights violations: How far back? Amicus Curiae 2002: 3–7. [CrossRef]
- Shepherd, Verene A. 2017. Britain remembers its past but urges others to forget theirs. *The Royal Gazette*. November 20 Opinion. Available online: http://www.royalgazette.com/opinion/article/20171120/britain-remembers-its-past-but-wants-others-to-forget-theirs&template=mobileart (accessed on 14 December 2017).
- Shriver, Mark D., and Rick A. Kittles. 2004. Genetic ancestry and the search for personalized genetic histories. *Nature Review Genetics* 5: 611–18. [CrossRef] [PubMed]
- Simpson Miller, Most Hon Portia. 2015. 2015 National Heroes Day Message by THE Most Hon. Portia Simpson Miller, ON, MP. Available online: http://jis.gov.jm/2015-national-heroes-day-message-by-the-most-hon-portia-simpson-miller-on-mp/ (accessed on 11 December 2017).

- Smith, David. 2006. Blair: Britain's 'Sorrow' for Shame of Slave Trade. Available online: https://www.theguardian. com/politics/2006/nov/26/race.immigrationpolicy (accessed on 11 December 2017).
- Strecker, Amy. 2016. Revival, Recognition, Restitution: Indigenous Rights in the Eastern Caribbean. *International Journal of Cultural Property* 23: 167–90. [CrossRef]
- Suresh, Arvind. 2015. Claims that US is a Genetic Melting Pot Appear Overblown–If You're White | Genetic Literacy Project. Available online: https://geneticliteracyproject.org/2015/01/07/claims-that-us-is-a-genetic-melting-pot-appear-overblown-if-youre-white/ (accessed on 12 January 2015).

TallBear, Kim. 2013. Genomic articulations of indigeneity. Social Studies of Science 43: 509–33. [CrossRef]

- Westley, Robert. 1998. Many billions gone: Is it time to reconsider the case for Black reparations. *BCL Review* 40: 429.
- Zimmer, Carl. 2014. White? Black? A Murky Distinction Grows Still Murkier. *New York Times*. December 24. Available online: http://www.nytimes.com/2014/12/25/science/23andme-genetic-ethnicity-study.html? _r=0 (accessed on 12 January 2015).



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