

Uncloaking a Lost Cause: Decolonizing ancestry estimation in the United States

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Abstract

Since the professionalization of US-based forensic anthropology in the 1970s, ancestry estimation has been included as a standard part of the biological profile, because practitioners have assumed it necessary to achieve identifications in medicolegal contexts. Simultaneously, forensic anthropologists have not fully considered the racist context of the criminal justice system in the United States related to the treatment of Black, Indigenous, and People of Color; nor have we considered that ancestry estimation might actually hinder identification efforts because of entrenched racial biases. Despite ongoing criticisms from mainstream biological anthropology that ancestry estimation perpetuates race science, forensic anthropologists have continued the practice. Recent years have seen the prolific development of retooled typological approaches with 21st century statistical prowess to include methods for estimating ancestry from cranial morphoscopic traits, despite no evidence that these traits reflect microevolutionary processes or are suitable genetic proxies for population structure; and such approaches have failed to critically evaluate the societal consequences for perpetuating the biological race concept. Around the country, these methods are enculturated in every aspect of the discipline ranging from university classrooms, to the board-certification examination marking the culmination of training, to standard operating procedures adopted by forensic anthropology laboratories. Here, we use critical race theory to interrogate the approaches utilized to estimate ancestry to include a critique of the continued use of morphoscopic traits, and we assert that the practice of ancestry estimation contributes to white supremacy. Based on the lack of scientific support that these traits reflect evolutionary history, and the inability to disentangle skeletal-based ancestry estimates from supporting the biological validity of race, we urge all forensic anthropologists to abolish the practice of ancestry estimation.

KEYWORDS

ancestry estimation, craniometrics, critical race theory, dental morphology, forensic anthropology, morphoscopic traits, race science

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1 | INTRODUCTION

In rural Virginia, a granite obelisk stands near steps leading to the entryway of the Bedford County Courthouse (Figure 1). The monument, installed in its current location in 1909, is inscribed with the phrase:

“Bedford honors her heroes; proudly rejoicing with the living; sincerely mourning the dead. Their history is its brightest page, exhibiting the highest qualities of patriotism, courage, fortitude, and virtue. This stone is erected to keep fresh in memory the noble deeds of these devoted sons.”

At first glance, this monument seems like a fitting remembrance to the heroic actions of Bedford's citizens. However, upon closer inspection the obelisk is actually a memorial to the soldiers and sailors of Bedford County who fought for the breakaway Confederate States of America during the Civil War (1861–1865).

What is notable about this memorial, along with hundreds of others throughout the United States, is the context surrounding their installation (Southern Poverty Law Center, 2019). Beginning in 1894, efforts to honor Confederate veterans began to accelerate with the founding of the United Daughters of the Confederacy (UDC) (Gulley, 1993). The UDC was an umbrella organization for numerous civic groups in the United States that worked to publicly memorialize Confederate veteran heroism and valor, who by the beginning of the twentieth century were passing away in large numbers due to their advancing ages.

Some readers might wonder how much harm could come from the efforts of organizations like the UDC whose purpose was to memorialize elderly Confederate veterans. Our answer to this question is unequivocally: *a tremendous amount*, especially when such endeavors were successful enough to reconfigure public memory as to the ultimate cause of the Civil War, which of course was slavery. As evidence, recent public opinion polls indicate that nearly half of Americans believe that disagreements over states' rights caused the war (Marist Poll, 2015; Pew Research Center, 2011). Historians call this reimagined history the Lost Cause of the Confederacy or simply the Lost Cause (Nolan, 2000).

Countless numbers of people have seen the Bedford monument, as well as others like it; over the years very few have likely stopped to interrogate their *raison d'être*. Brave citizens bolstered by changing social attitudes have shouldered the responsibility of calling out these memorials; and the illumination of our misrepresented racist history has led to the dismantling of Confederate monuments in numerous cities throughout the United States (Schneider, 2020; The New York Times, 2020). We evoke the symbolism of the Lost Cause in the title of this contribution, as well as that of a previously published editorial (Bethard & DiGangi, 2020), to confront the continued use of macromorphoscopic traits in ancestry estimation in forensic anthropology—a racist harm hiding in plain sight, rarely interrogated or challenged.

Reminiscent of the battles that continue to rage over the removal of Confederate monuments, many of us have seemingly sworn a pledge of allegiance to ancestry estimation, a pledge that we are loath to rescind on the basis that it helps get people identified, that its use is legitimized and affirmed by the use of advanced statistical methods,



FIGURE 1 Bedford County Courthouse in the Commonwealth of Virginia. Note the Confederate monument located on the left. Retrieved from Google Maps

that social race can be predicted by analysis of the skull because of correspondence to population distributions, and/or that law enforcement or other stakeholders have a say in the methods we employ, among the points argued by Stull et al. (2021) and Ousley et al. (2009); as well as several others.

2 | CRITICAL RACE THEORY AND FORENSIC ANTHROPOLOGY'S COLOR BLINDNESS

In this contribution, we use the lens of critical race theory (CRT) to continue to situate and contextualize our challenge to the use of macromorphoscopic (hereafter, morphoscopic) traits, as well as introduce critiques of craniometric and dental morphological analysis in ancestry estimation. Conceptualized in response to entrenched racism in the American legal system, CRT attempts to address and redress systemic wrongs by interrogating how racism has become normalized in our legal and social structures and its resultant practical consequences (Delgado & Stefnacic, 2001). Reticence by local and state governments and citizens to abolish persistent Confederate symbols in our public spaces is one example of a problem that CRT is uniquely suited to address, because this disinclination is a symptom of structural racism (Benjamin et al., 2020; Strother et al., 2017). The body of theory is therefore used as a mechanism to elucidate and dismantle the structures that uphold white supremacy and privilege (Bracey II, 2015; Byfield, 2019). Here, we define white supremacy as racially constructed social systems that privilege whites (Bonilla-Silva, 2010; Mills, 1998), and as systemic, pervasive, and embedded in global institutions (Beliso-De Jesús & Pierre, 2019; Rana, 2019) to include science, anthropology, and the academy (Beliso-De Jesús & Pierre, 2019; Blakey, 1999; Fuentes, 2020; Harrison, 1995, 2012; Smedley & Hutchinson, 2012).

One of the structures that CRT deconstructs is the idea that 21st century America is post-racial and color-blind (Bonilla-Silva, 2010; Kendi, 2016). This specific narrative espouses the values of equality for all, while insidiously implying that since everyone is treated equally (or should be), racism is either not a problem at all or a minor, isolated one; and that any demonstrated inequalities are therefore caused by essential aspects of the people affected rather than to deliberate structural and institutional design (Apfelbaum et al., 2012; Bonilla-Silva, 2010). As discussed by Fields and Fields (2015), a perspective such as this is racist because it “short-circuits arguments about inequality and reroutes them into conversations about what’s unequal *naturally* between ‘Black’ people and ‘white’ people” (emphasis ours). Part of cultural shifts stemming from the Civil Rights Movement, this increasingly common contemporary attitude is known as “racism-lite” because it maintains white privilege while allowing people the fiction of being anti-racist (Bonilla-Silva, 2010, p. 3). This fiction serves the interest of the United States perfectly because it is a race state, meaning that the state itself could not exist without the creation and maintenance of racial categories (Goldberg, 2002). Since there is a tension between

maintaining such categories and changing attitudes about blatant racism such as that from the Jim Crow era, color-blind notions are the solution for cementing the dominant ideology of white supremacy (Bonilla-Silva, 2010; Kendi, 2016; Plaut et al., 2018).

Forensic anthropologists are cogs in the wheel of the race state as we perform color-blind ancestry estimations in the name of justice; color-blind because in so doing we ignore structural racism and its effect on our epistemology. CRT is useful to help understand why US-based forensic anthropologists are reluctant to abolish morphoscopic traits from our practice and why we fail to accept the consequences of overall ancestry estimations. Therefore, here we will deconstruct and interrogate: (a) the science behind morphoscopic traits as compared to craniometrics and dental morphology; (b) how ancestry estimations essentially bolster the public’s understanding of race as biological, despite our protest to the contrary and debunking of the biological race concept; and (c) the fallacy of ostensibly understanding anthropology’s racist past while simultaneously performing ancestry estimations. Further, we will expand on evidence used to construct our earlier hypothesis (Bethard & DiGangi, 2020) that racial bias may delay or prevent identification, situate how the kinds of questions we ask are influenced by our personal identities versus those of decedents, and conclude by advocating for the abolition of ancestry estimation in forensic anthropological praxis.

We remind readers that our critiques are not novel (Albanese & Saunders, 2006; Blakey, 1999; Goodman, 1997; Goodman & Armelagos, 1996; Smay & Armelagos, 2000), although as board-certified forensic anthropologists we may frame them in original ways here. Our thoughts on this issue are influenced by the scholarship of eminent anthropologists on narratives of race, racism, and structural violence beginning historically with W. Montague Cobb and Ashley Montagu; and including contemporary scholarship by George Armelagos, Whitney Battle-Baptiste, Michael Blakey, Rachel Caspari, Paul Farmer, Agustín Fuentes, Alan Goodman, Clarence Gravlee, Faye Harrison, Antoinette Jackson, Leith Mullings, Lesley Rankin-Hill, Audrey Smedley, Kim TallBear, and Rachel Watkins; as well as many others. We raise this point because it is important to acknowledge that we have developed our position out of an intellectual tradition that is grounded in established theory, interrogates the status quo, and frames long-standing issues in unique ways by drawing from diverse literatures.

3 | MONUMENTS TO MISMEMORY: MORPHOSCOPIC TRAITS

“[A]nthropology...is the disciplinary progenitor of racial science.”

(Beliso-De Jesús & Pierre, 2019, p. 66).

Physical anthropology was created specifically to study human racial differences; the primary focus was on human physical form, especially that of the skull given its function of housing the brain (the seat of personality and intelligence) to classify humans into groups (Rankin-Hill & Blakey, 1994; Watkins, 2007). These classifications were often hierarchical in nature, with men of European descent

placed in the foremost position. While the days of anthropologists and anatomists using physical traits to create racialized hierarchies are over, late 19th and early 20th century physical anthropology did such a good job of teaching the public that racial hierarchies existed that these ideas still persist in the public consciousness (Blakey, 1996). Further, such ideas, while debunked by science, are part of what has created the ideology of the race state as we know it today (Blakey, 1996).

Forensic anthropology was born out of this context, and in fact, Aleš Hrdlička, one of its practitioners before it was a named discipline and the founder of this journal, actively studied skeletons with the express purpose of establishing and maintaining racial hierarchies (Blakey, 1987, 1996; Caspari, 2009). Expertise in human osteology led Hrdlička and a handful of other physical anthropologists in the early 20th century to consult for law enforcement on occasion, when human skeletal remains were discovered in questionable contexts (Krogman, 1939, 1962; Ubelaker, 1999). Shortly after the middle of the century, such efforts along with those to identify U.S. war casualties had become commonplace enough that professionalization of the discipline was commenced with the dual establishment of the American Board of Forensic Anthropology, the major certifying body for the discipline in the United States, as well as the Physical Anthropology section¹ in the American Academy of Forensic Sciences (Bethard, 2017; Coleman, 2008). Today, while many forensic anthropologists in the United States remain university professors who consult part time for law enforcement, an increasing number exclusively work in medicolegal systems or for governmental or non-governmental agencies, especially abroad.

The analytical toolkit employed by forensic anthropologists traditionally includes the “Big Four”: (1) age-at-death, (2) sex, (3) ancestry, and (4) stature. These parameters result in the biological profile, or the description, analysis, and interpretation of skeletal features that may assist with presumptive or positive identification of an unknown person. Today, our laboratory analyses also include documentation of skeletal pathologies and taphonomic alterations, along with descriptions of skeletal trauma that may assist coroners or medical examiners with determining cause and manner of death (Komar & Buikstra, 2008; Sincerbox & DiGangi, 2018). Increasingly, forensic anthropologists also employ isotopic methods for estimating a decedent's region of origin and/or their approximate year of birth and death (Ammer et al., 2020; Castellanos Gutiérrez et al., 2020; Eck et al., 2019; Johnstone-Belford & Blau, 2020).

Forensic anthropologists routinely use craniometric distances, dental morphology, and morphoscopic traits to produce ancestry estimates as part of the biological profile. Both craniometric distances and dental morphological traits have been studied in light of questions about their heritability and the patterning of human ecogeographic variation, largely *outside* of forensic contexts (Carson, 2006; Cui & Leclercq, 2017; Irish et al., 2020; Menéndez, 2018; Pan et al., 2014). For instance, since research has demonstrated their heritability (Carson, 2006), biological anthropologists routinely utilize craniometric distances as proxies for genetic data to answer questions about population structure on both global and regional scales

(Relethford, 2001; Steadman, 2001; von Cramon-Taubadel & Pinhasi, 2011). Forensic anthropologists in the United States apply craniometric distances from an unknown person to known reference databases to assign an ancestry probability. In these instances, we operate under the assumption that global human variation, reflected by craniometric data, corresponds with socially recognized racial or ethnic categories (i.e., Black or African American, white or European American, Hispanic, Asian, Native American, etc.) utilized by the medicolegal community and familiar to people writ large in the United States.

Similar to craniometric variables, the polygenic nature and heritability of dental morphological traits have been studied for decades by biological anthropologists (Delgado et al., 2019; Hughes & Townsend, 2013; Irish et al., 2020). Like craniometrics, researchers have utilized dental morphology to investigate questions about population structure and microevolutionary processes such as environmental selection (Hlusko et al., 2018; Rathmann et al., 2017). Recognizing that dental morphology has been shown to reflect global human population structure, forensic anthropologists have recently started to apply analyses of these data to unknown individuals from forensic contexts (George & Pilloud, 2019; Scott et al., 2018). Similar to applications of craniometric data, we make an assumption that patterns of global human variation reflected by dental morphological traits correspond with socially recognized racial categories.

However, morphoscopic traits have never been explicitly studied with respect to ecogeographic variation or heritability. In fact, biological anthropologists *have not even attempted* to discover how microevolutionary processes influence trait expression. While troublesome, the assumptions forensic anthropologists make with the application of craniometric variables and dental morphological traits to ancestry estimation at least have some demonstrated association between traits and population groups²; however, assertions that morphoscopic traits can be used to identify social race or ancestry are tenuous at best, given the fundamental lack of understanding about them. This is problematic in part because forensic anthropologists cannot claim to use rigorous scientific methodologies when those have not been grounded in contemporary evolutionary theory. In our editorial (Bethard & DiGangi, 2020), we called attention to this lack of inquiry related to morphoscopic traits. We observed that virtually no research has examined their heritability or investigated them through a framework of ecogeographic variation; we indicated that this was alarming, and our position remains unchanged.

Of the 17 morphoscopic traits that comprise the forensic anthropological toolkit (Hefner & Linde, 2018), only five have a craniometric analog for which the heritability information is known (i.e., interorbital breadth, nasal aperture shape, nasal aperture width, orbital shape, and palate shape) (Table 1). What then explains why the remaining 12 should be used during the process of human identification? Four of these are linked to suture morphology (i.e., nasofrontal suture, supranasal suture, transverse palatine suture, and zygomaticomaxillary suture). How suture morphology reflects ecogeographic variation is unknown, and by extension, their correspondence with socially recognized racial categories is nebulous. These observations extend to the

TABLE 1 Macromorphoscopic traits, their related craniometric distances, and corresponding published craniometric heritability estimates. Macromorphoscopic trait names follow Hefner and Linde (2018), craniometric distances follow Langley et al. (2016), and heritability parameters are for craniometric distances extracted from Carson (2006).

Macromorphoscopic trait	Craniometric distance	Published heritability estimate
Anterior nasal spine	—	No
Inferior nasal aperture	—	No
Interorbital breadth	Interorbital breadth	Yes
Malar tubercle	—	No
Nasal aperture shape	Nasal height and breadth	Yes
Nasal aperture width	Nasal breadth	Yes
Nasal bone contour	—	No
Nasal bone shape	—	No
Nasal overgrowth	—	No
Nasofrontal suture	—	No
Orbital shape	Orbital breadth and height	Yes
Palate shape	Maxillo-alveolar breadth	Yes
Postbregmatic depression	—	No
Posterior zygomatic tubercle	—	No
Supranasal suture	—	No
Transverse palatine suture	—	No
Zygomaticomaxillary suture	—	No

remaining eight morphoscopic traits (anterior nasal spine, inferior nasal aperture, malar tubercle, nasal bone contour, nasal bone shape, nasal overgrowth, postbregmatic depression, and posterior zygomatic tubercle). How can we therefore scientifically justify their use when we have a fundamental lack of understanding about such processes that may have facilitated trait classificatory ability?

These unanswered questions make us wary not only as practitioners, but as educators charged with the responsibility of providing a comprehensive explanation to students. When teaching, our goal is to holistically explain *why* we rely on our chosen methods. For example, in our lectures about craniometrics and dental morphology, it is at least possible to incorporate associated scholarship from related areas of biological anthropology; however, this type of published work does not exist for morphoscopic traits likely in part because their origins are unquestionably typological. The inception of standardized morphoscopic trait data collection protocols, initially known as the “Harvard List” due to its roots in Earnest Hooton’s laboratory (Birkby et al., 2008), dates to a time when physical anthropologists used morphology to sort human skulls into fixed groups with the express purpose of establishing the superiority of white male biology (Watkins, 2007). Twentieth-century forensic anthropologists took this information and ran with it, to include publishing a well-known

volume titled *Skeletal Attribution of Race* (Gill & Rhine, 1990), which serves as the foundation for morphoscopic trait research today. No statistical framework can escape this blatant typological history.

We note that craniometric distances as well as dental morphological traits share a typological historical background similar to that of morphoscopic traits (see Gill & Rhine, 1990). However, their contemporary use *outside* of forensic anthropological application to answer broader questions about human history grounded in evolutionary theory distinguishes them from morphoscopic traits, whose typological, essentialist racist history continues to be perpetuated. We further emphasize that there is a substantial difference between research into the patterning of global human variation to pose questions about the apportionment of genotypic and phenotypic diversity, or understanding the ways in which cultural, environmental, and evolutionary forces shape population structure, and the use of such research to typologically force people into constructed social race groups for forensic identification purposes. The former are anthropological in terms of discovering more about what it means to be human; the latter is nothing more than race science.

3.1 | Identity and identification

As practitioners, our distress is amplified because it is unclear how even the most recent statistical tools for estimating ancestry from morphoscopic traits (hefneR; Macromorphoscopic Databank) adequately reflect contemporary US population structure. For example, there is no framework for interpreting how morphoscopic traits reflect people with intersectional identities, for instance, individuals such as the first author and the Vice President of the United States.³ Nor have we come close to addressing the problem of assigning an etic identity when identity is inherently emic (Geller, 2015). That is, social race designations are impacted by a complex relationship between phenotype, ethnicity, language dialect, religion, familial ties, and community expectations (Alim et al., 2016; Bucholtz & Hall, 2005; Kaseniit et al., 2020; TallBear, 2013; Van Arsdale, 2019); and what is ultimately influenced by sociocultural factors cannot be identified on skeletal remains. How any disconnects between the etic (forensic anthropological ancestry analysis) and the emic (individually-constructed identity) contribute to misclassifications is unknown.

3.2 | Does ancestry estimation really “work”?

Thomas et al. (2017) tout ancestry estimation success based on their comparison of identified cases to the corresponding forensic anthropological analyses. However, arguments such as this use circular logic because positively identified cases are *known*. The mere fact that such cases were identified provides information that at least part of the forensic anthropological analysis was correct, because that analysis likely allowed investigators to narrow down potential missing persons for DNA analysis, radiographic comparisons, or other modalities utilized to establish a positive identification.⁴ Therefore, using

comparisons of known cases to their corresponding analyses effectively eliminates all *unresolved* cases from consideration. None of us know how our *incorrect* ancestry estimates for such unresolved cases might hinder identification efforts.

Moreover, we do not know how often forensic anthropologists err on the side of caution by including an ancestry estimate of “Unknown” or multiple “Race/Ethnicity” categories that correspond with National Missing and Unidentified Persons System (NamUs) nomenclature. To date, research has not explored the relationship between positive identification and the choice of “unknown” or multiple categories for decedents whose morphology or metric analysis is ambiguous. Finally, we have not asked how the length of time to identification may be influenced by our ancestry estimate of the decedent, whether we reported it as unknown or otherwise.

To complicate matters further, research has demonstrated that slight variations in overall morphoscopic trait scores have ramifications for an unknown decedent's ancestry estimate, that is, a single difference in certain trait scores can make the distinction between a final assignment of “black” or “white”⁵ (Kenyhercz et al., 2017). Other recent work has demonstrated that secular change influences the expression of morphoscopic traits (Kilroy et al., 2020). How this degree of environmental plasticity affects an overall ancestry estimate remains unknown and further amplifies our unease.

4 | FORENSIC ANTHROPOLOGY IS CLOAKED IN WHITENESS

In addition to our scientific concerns, we assert that by bolstering the biological race concept for law enforcement, whether it is our intention to or not, we are contributing to a justice system that disproportionately harms Black, Indigenous, and People of Color (BIPOC). We are therefore doing a disservice to society in general but BIPOC specifically by continuing to uphold for law enforcement and the public that biological race is real. We can hear the protests now that this is not what we are doing—*au contraire*. When we write in our reports that we analyzed or measured a particular series of traits and applied a statistical framework to devise the ancestry estimate, we normalize, affirm, and validate that biological race is real. This endorsement is made legitimate by our status as scientists with advanced degrees and board certification in forensic anthropology, and the attendant scientific prestige thus bestows enormous social and political power upon our substantiation. Since research has shown that people rely in part on personal ideology to interpret scientific findings (Bubela et al., 2009), it therefore behooves us to acknowledge the power that scientific proclamations—even something as seemingly inconsequential as a skeleton belonging to a person of African descent—have over the public's understanding of race.

Therefore, the illogic behind claims such as “researchers...have decoupled traits from social race groups” (Stull et al., 2021) is incredible. If that were true, then why do we present trait and metric analysis in our reports for law enforcement? If we tell them that our analysis *does not* equate social race, then how are they supposed to use our

provided information to effect an identification, *when social race is what is indicated in missing persons reports?* Forensic anthropologists cannot have it both ways: namely, we cannot euphemistically use language in our reports to state that the ancestry analysis indicated probabilistic membership in a “population” or “group” while simultaneously claiming that such analysis is devoid of a scientifically racist context and evading responsibility for allowing law enforcement to make the link between our ambiguous wording and social race. We most certainly have not decoupled skeletal traits from social race just because we apply sophisticated mathematical approaches to their analysis. Further, that the statistics we use to analyze morphoscopic traits or provide a probability that a skeleton belongs to one ancestry category versus another are not designed to create, suggest, or maintain any racial hierarchical arrangement is irrelevant.

It is irrelevant because: (a) that racial hierarchies exist is encoded in the ideology of white supremacy—in fact, their existence is its founding principle (Leonardo, 2004; Martinot, 2010); (b) it is unlikely that law enforcement or the public knows or understands the nuances of anthropology's history and the debates that led to the debunking of the biological race concept to include abolishing the idea of human race hierarchical arrangement; and (c) even if they did know and understand this, the reality of the racial world in the United States is one of visible physical difference. People see differences such as skin color which reinforces the myth of biological race, and *we corroborate these observations* when we state in our reports that we used science to examine certain skeletal features to estimate ancestry. In essence, we normalize race as biological, even if that is not our purposeful intention. While we do not say that races are organized in a hierarchy, any previous perception law enforcement may have about this is solidified because we have lent credence to the idea that biological race is real (Caspari, 2018). What other logical interpretation can we expect them to have when we provide this information?

Therefore, in addition to the discussed scientific problems, the main point is not whether or not we are consciously or purposefully perpetuating the biological race concept, or whether ancestry estimation “works,” or whether researchers have created more sophisticated ways to demonstrate that it works—the point here is that by providing an ancestry estimate grounded in traits of the skull, we are reinforcing law enforcement and the public's belief in the concept of biological race. And this contribution in and of itself is harmful. In our editorial (Bethard & DiGangi, 2020), we indicated forensic anthropology has demonstrated willful ignorance of the advances in biological anthropology (namely theory as it is or is not applied to morphoscopic traits, and here it bears emphasizing that contemporary anthropological theory includes the rejection of the biological race concept). The theme of forensic anthropology's imprudence and defiance is unfortunately reflected in a recent opinion by Stull et al. (2021) when they simultaneously state that the historical legacy of race in anthropology is problematic yet they cannot see a way forward in the discipline without the continued use of ancestry estimations. This viewpoint is emblematic of American forensic anthropology being in conformance with perpetuating the ideology of the race state. If as a discipline we were fully understanding, embracing, and applying science's rejection

of the biological race concept, then these contributions would not have been necessary.

The position that purports to understand anthropology's complex history with racist ideology but continues to perform ancestry estimations because law enforcement requests it, because we are assisting victims and families, because positive assortative mating makes it possible, and/or because we use sophisticated statistical approaches, is, to borrow a metaphor from Professor Michael Blakey (2020a), "cloaked in whiteness." And it is cloaked in whiteness because it refuses to do the hard work of true acknowledgement of our history and how that has shaped us personally as scientists as well as the science we practice; and while it may act to pay lip service to the issues, it ultimately maintains the status quo of doing things the way we have always done them. In other words, it does nothing to effect real change and redress historical and contemporary wrongs done by our discipline, our teachers, and ourselves.

Further, not only is this position one that allows pervasive racist ideology to prevent real change, ultimately it is a position of denial (Blakey, 1994). We reconfigure the concept of denial as defined by human rights scholarship (Zerubavel, 2010) as a mechanism of revictimization and dehumanization via invalidation of history or lived experience. Denial is used as a tool to uphold the dominant narrative of white privilege and superiority and its consequent racism while disavowing any responsibility for its imposed trauma or inequality (Blakey, 1994). Denying the power that we, as scientific authorities, have to shape and to contribute to the public's understanding of race fits this definition because it renders any consequences of our actions as nonexistent. Not only does it deny the consequences for reinforcing biological race, but it shirks responsibility for them by privileging science and the politics of justice for the victim over everything else. In that way, it is no different from those who would deny that the fight over slavery was the cause of the Civil War; or who would rather offer a gradient of denial of the harm caused by slavery, by falsely claiming that enslaved Africans were well fed or well treated by benevolent masters. Therefore, this avoidance of assuming responsibility for the consequences of our actions as forensic anthropologists is inherently harmful to society by delegitimizing any claims to the contrary. Further, it maintains the status quo of justice and scientific systems molded by white supremacy and racism (Reardon & TallBear, 2012). Outright or graded denial of the societal consequences to inclusion of ancestry estimates in reports is therefore an abuse of the public's trust in us as scientists, because there is an expectation in our output of diligence, rigor, and most importantly, *truth*.

5 | AND JUSTICE FOR ALL? THE CRIMINAL JUSTICE SYSTEM AND RACIAL BIAS

In our editorial (Bethard & DiGangi, 2020), we hypothesized that implicit or explicit racial bias on the part of investigators may result in longer times to identification for people of color, a hypothesis we presented based in part on evidence from the phenomenon known as

"missing white woman syndrome," where missing girls and women of color do not receive similar amounts of attention from either the media or law enforcement as missing white women and girls (Jeanis & Powers, 2017; Moody et al., 2009; Sommers, 2016). Given the extent and pervasiveness of racial bias in the United States (Greenwald et al., 2009; Greenwald et al., 2015; Howell et al., 2017; Nosek et al., 2007) and the sheer number of missing and unidentified people (www.namus.gov), we emphasize that this is not a hypothesis that can be rejected on the strength of case data from one or two laboratories alone. This is *not* solely about what individually happens in our laboratories, or in the labs of our colleagues. This is about what happens in the labs and morgues of *all* forensic anthropologists and forensic pathologists in the United States, not just at this moment in time, but collectively for the past several decades.

The trends concerning the treatment of living people of color by the various American law enforcement agencies—local, county, state, and federal—are clear with regard to the racial bias that governs the way policing is done: communities with a higher BIPOC population are patrolled more (Byfield, 2019); disproportionate amounts of Black males are arrested and they receive longer sentences than do white males for similar offenses (Beckett et al., 2006; United States Sentencing Commission, 2017); abducted children of color are recovered more slowly than are white children (van de Rijt et al., 2019); unarmed Black people are twice as likely as unarmed white people to be killed by officers (Nix et al., 2017); men of color are substantially more likely to have force used against them in encounters with the police (Cowell et al., in press; Kramer & Remster, 2018); arrested children are disproportionately Black and are disproportionately sentenced as adults as compared to child defendants who are white (Poe-Yamagata & Jones, 2007); missing Black girls and women do not receive as much attention as those who are white (Moss, 2019); police violence toward Black male children is predicted by a world view of Black people as less than human (Goff et al., 2014); principles of white supremacy are encoded during police recruit training to include frequent deployment of the metaphor that the streets are a "jungle" inhabited by *others* (i.e., people of color) who are naturally primitive and dangerous, and their (often violent) control requires an us versus them mentality (Beliso-De Jesús, 2019); the epidemic on and off reservations of homicide, sexual assault, and sex trafficking of Native American women and girls goes relatively unaddressed by law enforcement (Johnson, 2012; Petillo, 2015; Urban Indian Health Institute, 2018); substantial negligence in the provision of health care to migrants in federal detention facilities leads to preventable deaths (Tovino, 2016); and the list goes on.

Moreover, this bias is not a law enforcement phenomenon alone. The acquittal in 2013 of George Zimmerman by a jury of his peers for the murder of teenager Trayvon Martin is one poignant example (Teasley et al., 2017), illustrating the findings of Hadden et al. (2016) that attitudes that condone violence against Black people are associated with an ideology of Black inferiority. The construction of our hypothesis that investigators *may* exhibit this demonstrated racial bias which *may* lead to BIPOC decedents not being identified as quickly as white decedents is rooted in this overwhelming amount of evidence.

To ignore or dismiss these data is to blind oneself to the racist reality that is encased in the bedrock of the American law enforcement and justice system.

6 | JUSTICE, JUSTICE THOU SHALT PURSUE

We reiterate our hypothesis and urgent call for research into whether racial bias on the part of investigators affects positive identification rates and timing, and we further question the role that other factors structured by racism, such as inequity in resource allocation to jurisdictions in predominantly BIPOC communities, or the factors that dissuade families from filing a police report, may play. And in case we have not been clear—not only is racial bias real and pervasive, but its consequences range from adverse health outcomes to premature death (Ajilore & Thames, 2020; Barlow & Johnson, 2020; Bassett & Galea, 2020; Carter et al., 2019; Chae et al., 2014; Chin-Hong et al., 2020; Cunningham & Wigfall, 2020; Farmer, 2004; Geronimus, 1992; Geronimus et al., 2006; Gravlee, 2009; Kuzawa & Sweet, 2009; Raine et al., 2020; Rej et al., 2020; Ogedegbe et al., 2020; Yancy, 2020; among many others). No matter if the proximate manner of death is natural or homicide: the ultimate manner that ties them together is structural racism.

Therefore, some anthropologists' claims of weekly meetings with "stakeholders" (i.e., law enforcement) (Stull et al., 2021) are immaterial—because it is the broad, overall trend of racial bias in the American criminal justice system we are discussing, and our hypothesis to be tested is that its systemic entrenchment extends to human identification. We reemphasize that the formulation of this hypothesis stemmed from multiple lines of evidence, as outlined above. It is naïve to presume that because human identification is a noble pursuit and because some of us may engage in training law enforcement that this means investigators could not possibly allow their bias to affect the amount of effort given to securing an identification of someone labeled by one of us as anything other than white.

Moreover, we take our initial critique a step further. In general, forensic anthropological casework in the United States consists disproportionately of marginalized individuals (Bird & Maiers, 2018), many of whom in life would likely have identified as BIPOC. Unpublished forensic anthropological case data from the Wayne County, Michigan Medical Examiner's Office (which includes Detroit) support this trend (M. K. Moore, personal communication, 28 September 2020). In contrast, the vast majority (87%) of forensic anthropology practitioners in the United States are white (Tallman & Bird, in press; Winburn et al., in press), to include 100% of the Board of Directors of the American Board of Forensic Anthropology.

This contrast between those who are analyzed and those who do the analyzing is reflective of broader American society where science, prestige, knowledge, and privilege are all associated with whiteness: part of the dominant ideology that the comprehensive enjoyment of society is only fully accessible to white, able-bodied, neurotypical, educated, middle or upper-class heterosexual cisgendered men

(Clancy & Davis, 2019; Harrison, 1995). Access, privilege, and power (social, political, and economic) are all conferred by this ideology (Beliso-De Jesús & Pierre, 2019; Harrison, 1995). While aspects of it can be made available to those not meeting all of the criteria, its complete benefits and privileges of membership are reserved for those who do.

While some anthropologists have begun to broach a discussion of the relationship of structural violence to individuals who become forensic cases (Goat, 2020; Martínez et al., 2014; Soler et al., 2020), we have yet to scrutinize the juxtaposition between forensic anthropologists' access to whiteness versus that of many of the decedents who comprise our casework. Here, we echo Watkins (2018, 2020) by stating that failing to specifically interrogate the normalization of BIPOC as forensic cases with mostly white people as the case analysts is one major reason for our myopia when it comes to the effect our ancestry estimations have on society. Therefore, we add to our challenge a call for research into how our role as elite scientists with access to most if not all of the privileges conferred by whiteness has normalized and otherized BIPOC and impoverished white people as forensic cases, and how this very act of normalization has affected our research questions (Clancy & Davis, 2019) about ancestry and their application. Part of this includes elucidating the sequelae of events that lead to someone becoming a missing persons or a forensic case, and how these are patterned by structural racism, colorism, classism, sexism, ableism, ageism, genderism, and/or heterosexism.

6.1 | Conceiving an anti-racist and decolonized forensic anthropology

One of the principles CRT seeks to deconstruct is the ordinary and ubiquitous nature of systemic racism, and the difficulty of seeing and addressing it because it has surreptitiously permeated every aspect of society (Bonilla-Silva, 2010). Twenty-five years ago, Goodman and Armelagos (1996, p. 183) warned forensic anthropologists that "by keeping alive the myth of race, we might maintain and support subtle forms of racism." We echo their sentiment in stating that we are not calling our colleagues and ourselves *intentional* racists, while emphasizing that the perpetuation of white supremacy is *not* an activity performed by explicit racists alone (Beliso-De Jesús & Pierre, 2019, DiAngelo, 2018). Further, we are more forceful in asserting that our discipline *does* maintain and support racism, and the rationalization of performing ancestry estimations despite the rejection of the biological race concept is an apt example. Whether we use the euphemism of "ancestry" to describe what we are doing or not, as Azoulay (2006, p. 353) notes, "the concept of 'race' cannot be sanitized, salvaged or made palatable."

Anthropologists have long been engaging with racialization and the structural violence of racial disparity, white supremacy, and racism; arguably beginning with Professor W. Montague Cobb (see for example his 1936 paper on the debunking of scientific racism applied to famous Black athletes⁶), and notably including extensive scholarship by Drs Faye Harrison and Michael Blakey, among several others.

Recent contributions from all four subfields approach these issues by actively questioning and demonstrating how and why changes in our theoretical approaches, methods, mentorship, recruitment, and/or retention strategies can lead to an anthropological praxis that is self-aware by diligently working to decolonize itself of white supremacist ideology⁷ (see Alim & Reyes, 2011; Antón et al., 2018; Battle-Baptiste, 2011; Beliso-De Jesús & Pierre, 2019; Benn Torres, 2020; Blakey, 2020b; Clancy & Davis, 2019; Franklin et al., 2020; Fuentes, 2020; Harrison, 2010, 2012; Heath-Stout & Hannigan, 2020; Lans, 2020; Meloche et al., 2020; Muller, 2020; Mullings, 2005; Nelson et al., 2017; Rana, 2019; Reardon & TallBear, 2012; Shankar, 2017; Tallman & Bird, in press; Watkins, 2020; Winburn et al., in press; among others).

Forensic anthropology has often been subject to critiques that it is atheoretical and populated by practitioners who have a tendency to ignore broader anthropological theory and trends. These critiques are warranted, and the obstinate refusal into the third decade of the 21st century to comprehensively and finally reject the biological race concept by eliminating ancestry estimation is one prime example as to why. Here, we take the lead in forensic anthropology by imploring our colleagues to join the rest of anthropology by doing something substantial and concrete about the fact that our discipline actively contributes to white supremacy.

Further, we emphasize that as the scientists, we get to decide the nature of the science we produce, not policymakers or stakeholders. It is time to move past tired assertions that changes made in one discipline are not necessarily going to change the entire system (Stull et al., 2021), because the implication is that we wait for some other field to make the change, to initiate the conversation. At best, this is a position of complacency; at worst, indifference. We vehemently disagree with such positions, and instead choose to spark the change. Many of us became forensic anthropologists out of a desire to contribute to justice. Somewhere along the way, we have allowed our allegiance to our methods to eclipse our responsibility to society. And in case readers are not yet clear about this responsibility: it is to *be actively anti-racist in the science that we practice and produce*. It is not enough to state that we understand and lament forensic anthropology's racist past—we must *do* something about it (Beliso-De Jesús & Pierre, 2019). Eliminating the use of ancestry estimation from the forensic anthropological canon is our suggested way forward, and is the only solution that would adequately handle our serious concerns about the field's complicity in reinforcing biological race for law enforcement and the public. The Big Four shall now become The Big Three.

7 | PUTTING THE ANTHROPOLOGY IN FORENSIC ANTHROPOLOGY

We have presented several ideas here, all framed with a lens which has heretofore never been used to critique forensic anthropology and its praxis. We anticipate that this discussion may displease some readers and/or make them uncomfortable. The irony is that this

reluctance and discomfort are part and parcel of the insidious nature of structural racism, as discussed earlier. Our white privilege allows us to not see it unless it affects us directly and therefore we deny or downplay its existence and/or significance, even though it is hiding in plain sight; much like the Bedford obelisk and other Confederate monuments that reside in our public spaces.

As forensic anthropologists, we have chosen a career that involves the analysis of dead bodies of other people, including those in anatomical collections and individuals comprising our casework. We see this as quotidian but when the analytical gaze is flipped, we are suddenly disquieted by our reflection; so are tempted to throw a white cloak over the mirror. We encourage our colleagues to work to move past any cognitive dissonance and remind them that it is in this space of disagreement and discomfort that growth can occur. We will be delighted to meet on the other side so that productive conversations about reimagining an anti-racist and decolonized forensic anthropology can ensue.

Biological anthropology is situated on a bridge between the social and natural sciences. Therefore, we are uniquely suited to simultaneously critique and rehaul the practice of forensic anthropology to be anti-racist while investigating practical questions related to structural racism and its effects on the decedents who comprise our casework. Other problems exist that for space constraints we did not substantially discuss, such as the fluidity of racial categories that change with the interests of the state (Bonilla-Silva, 2010; Ignatiev, 1995; Painter, 2010) and the fact that the constructed named populations we often use to assign ancestry (i.e., African, Asian, European) are racist remnants of colonialism and are related to geopolitics rather than how human variation is structured (Fuentes, 2020; Tsai et al., 2020). Conversations surrounding these topics among others are equally necessary.

We acknowledge that the implementation of the new paradigm and epistemology we propose for forensic anthropology will not be without logistical complication. As one example, Walsh-Haney and Boys (2015) present a simulation of a scenario where investigators are not provided with an ancestry estimate, and the number of records to search in NamUs therefore increases. Further, some of the methods we use for the other areas of the biological profile are population specific, designed to be applied after an ancestry estimate is generated. Moreover, we do not intend to suggest with our recommendation to eliminate ancestry estimation that social race is meaningless from an experiential standpoint. Quite the contrary; understanding a decedent's ascribed living social race is critical to allow for the investigation of questions including the interrogation of structural violence and disparity contributing to how that person became a forensic case. However, as Albanese and Saunders (2006, p. 310) note, "The simple argument that 'investigators require it' is not sufficient to justify the claim for a noncritical application of anthropological methods." We do not presently have all the answers to resolving problems such as these. However, the solutions are ones that we as a community of anthropologists will work on together—but *only* if we are first willing to do the hard work of stripping our praxis bare to examine how racist ideology has infected it and how we have failed to stem that infection

in the science we produce. Once discovered, we must use scalpels to cut it out and destroy it. We must be willing to acknowledge how forensic anthropology's white privilege contributes to continued provisioning of excuses that prevent real change while also conveniently preventing any difficult self-critique.

As an example of such excuses, the recent opinion by Stull et al. (2021) takes the antithetical position to ours by asserting that despite the problematic history of race science in anthropology, the use of morphoscopic traits and ancestry estimation should be preserved because they lend value to the investigative process. As one solution for ameliorating concerns about anthropology's history with race, these authors suggest that manuscripts touting race science be rejected from scientific journals in our field; however, we would contend that approximately one-third of the articles in the bibliography they constructed to support their arguments for the maintenance and continued use of ancestry estimation are race science, as interrogated using a CRT lens. This evidence makes our point for us: namely, that forensic anthropology has not done the work to truly reject the biological race concept and we are so delinquent with this task that we do not even recognize race science when it is staring us in the face. Therefore, it is necessary to critique our current epistemology by asking how our methods have been shaped by the race state in which we live so that we understand what race science is to begin with; and subsequently use those answers to build a new epistemology and praxis.

Further, we specifically invite and encourage voice-of-color research input not only into this issue but others of interest to forensic anthropology, and for those contributions to be foregrounded; as marginalization of BIPOC scholar voices is part of the normalization of science as a white-led endeavor which primarily chooses to focus on problems of interest to whites (Blakey, 2020b; Harrison, 1995, 2010; Harrison et al., 2018; Harrison & Harrison, 1999; Lans, 2020; Watkins, 2007, 2018, 2020). The benefits to inclusion and highlighting such perspectives are many (AlShebli et al., 2018; Antón et al., 2018; Bolnick et al., 2019; Fuentes, 2019, 2020; Smith & Bolnick, 2019; Wade, 2020) and one is illustrated by this contribution: the first author, as an African American woman with an intersectional social racial identity, and one of the very few Black American forensic anthropologists, contributed a unique perspective given her lived experience with racism that may have been lacking otherwise.

In summary, this is ultimately about more than whether or not we can reliably connect social race with skeletal traits, or whether traits or measurements described decades ago to support creation of racial hierarchies have been sufficiently whitewashed to enable their continued use in a human identification context—and it is even about more than whether racial bias has infiltrated law enforcement to the extent that decedents are prevented or delayed from being identified, although this remains an important area to investigate. This is about forensic anthropology's complicity in normalizing the biological race concept for law enforcement and for the public in part via our reliance on racist morphoscopic traits. It is about our complicity in reinforcing for the medicolegal community via inclusion of ancestry estimates in

reports—no matter how many workshops to the contrary we hold—that biological race is real. It is about our complicity in contributing to white supremacy and a scientifically racist paradigm, and in contributing to the misinformation the American public receives about race; while simultaneously making claims of being personally anti-racist and pro-Justice for the lost lives of those we analyze. We unequivocally state: *reinforcing the biological race concept is not compatible with Justice*. This is the point with which we must wrestle; and ultimately acknowledge, accept, and do something about. The reimagining of our profession has only just begun.

ACKNOWLEDGMENTS

We humbly acknowledge the lives of the almost uncountable missing, disappeared, and unidentified persons and their families worldwide, and it is our hope that this contribution becomes part of a conversation that leads to case resolution practices which are not mired in racist ideology. Further, we are grateful for the assistance of Ariel Gruenthal-Rankin, Sabina Perrino, Daniela Santamaria Vargas, and Tessa Somogyi. We also thank Megan Moore for conversations about her forensic anthropological casework in Detroit. Thoughtful feedback from both reviewers allowed us to substantially strengthen our presented arguments, for which we are grateful. Finally, we are obliged to Trudy Turner, Connie Mulligan, and Jennifer Raff for their invitation to lend our voices to this important and timely issue of AJPA.

CONFLICT OF INTEREST

Both authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

Elizabeth A. DiGangi: Conceptualization; formal analysis; investigation; methodology; project administration; resources; supervision; writing-original draft; writing-review and editing. **Jonathan D. Bethard:** Conceptualization; formal analysis; investigation; methodology; project administration; resources; supervision; writing-original draft; writing-review and editing.

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ENDNOTES

- ¹ A vote in 2014 to change the section name to Anthropology took effect in 2015.
- ² In this context, we define “population group” in a broad sense and do not intend to equate social races with the biological anthropological study into human population structure.
- ³ Vice President-elect as of this writing in mid-December 2020.
- ⁴ For decedents who do not have a presumptive identity, investigators can attempt to search for DNA matches in NamUs or other databases, and in such instances absent any unexplained or substantial discrepancies, the anthropological analysis can be used after the fact as further support of the identification.
- ⁵ Note that this is the terminology used by these authors (as well as others). Forensic anthropologists demonstrate substantial inconsistency

with our disjointed approach to terminology use, for example, Black versus black versus African American (Maier et al., 2021), and in primarily although not exclusively older (c. 10+ years) publications, use of anachronistic and blatantly racist taxonomic terms ending in -oid; and discordance with the simultaneous insistence that we do not consider ancestry and social race to be one and the same.

⁶ In a remarkable and extraordinary coincidence, one of the athletes highlighted by Cobb is the first author's grandfather, track and field star Eulace Peacock. <https://www.si.com/longform/peacock/index.html>.

⁷ However, Beliso-De Jesús and Pierre (2019), Blakey (2020b), and Mullings (2005) also highlight the overall reluctance of anthropology to engage directly with racism as a central force that structures modern institutions and systems. It is clear that we have more work to do.

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How to cite this article: DiGangi EA, Bethard JD. Uncloaking a Lost Cause: Decolonizing ancestry estimation in the United States. *Am J Phys Anthropol*. 2021;175:422–436. <https://doi.org/10.1002/ajpa.24212>