

Reflections on “race” in science and society in the United States

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This commentary on the discourses, use, and salience of “race” in the United States has two linked purposes. First, I would like to provide readers with a glimpse of the “state of race” in science in America, focusing on both the current relationship among studies of race, racism, and human variation and the relationship of these studies to “race” in society. I will reflect on how race is discussed, the underlying ideology of race, and how the word *race* is intended and used in science and society. Second, the editors would like to initiate a thoughtful forum on the current state of race, racism, and human biological variation. The hope is to provide an opportunity to compare current discussions and debates that center on race, human biological variation, and racism in science, law, and other intersecting domains, such as in popular culture (race in media and public forums, for example) in different countries within and beyond Europe.

This essay is the first in the forum. I begin by summarizing the state of race in the United States, the country in which I live, was trained, and work. Subsequently, others will contribute their own analyses of the state of race in the country or countries they are most familiar with. Among the guiding questions are the following.

- How is *race* - both the concept and the word itself - used in science today? Although science is international in scope, have there been notable changes in how race is conceptualized and used in your country or in the language of your country?
- Is there a decline in the salience of the term “race” as a proxy for human genetic variation, and if so, in what ways is it evident?

For example, have genomics and the promise of personalized medicine had any impact on the use of race in medicine (Bonham *et al.*, 2016)?

- How is *race* used in legal documents and legal proceedings? Have there been any debates about changing the definition or use of the word *race* and related terminology, especially as they might reference information about human genetic variation?
- What are the current political and cultural points of tension, or “hot spots,” with regard to race and racism? Do they intersect in any way with the scientific and legal status of race?
- Has progress been made in improving the study and understanding of human variation? What progress might be made to use a full range of humanistic and scientific expertise to eliminate (instead of perpetuate) racism?

Race in the United States

I must start with a blunt disclaimer. In a brief commentary, it is impossible to systematically summarize the diverse ways in which race is discussed - and the multiple ways in which the word *race* is used - in the United States. Mine is a hugely complicated nation. It would be difficult to summarize the state of race on my college campus, more challenging to summarize the state of race in my town, and almost unimaginable to summarize race in a single discipline such as linguistics. It is impossible to systemically summarize “race”

in any larger social or institutional group because racial discourses and how *race* is used move in many directions at once.

With that caveat, some general trends are clear. First, the inability to summarize the state of race is itself meaningful: it is the result of, in part, the size and heterogeneity of the United States. More important, though, is the fluidity of its meaning. The word *race* is a chameleon. While it harks back to old tropes of difference and hierarchy, it is also a constantly changing concept, and it veers from institution to institution, person to person, and from one moment to the next. Race, as an actor, does not sit still.

In the United States, as it was throughout Europe, race was once accepted as a fixed, unchanging, natural way to characterize individuals and groups. This idea of race supported Euro-American empire building, taking of lands, and slavery. It naturalized differences and the status quo of a racial hierarchy.

The science of the seventeenth century to the twentieth added insult to injury by elevating the folk idea to objective and natural truth. In Linné's first classification of humans into subspecies or races, in 1755, race was used to explain unchallenged biological differences such as skin color, as well as temperament, mode of governance, and, by extension, socioeconomic conditions and accomplishments. That view of race as the explanation for biological and social differences lives on in the United States.

A few, starting as far back as the middle of the nineteenth century, challenged this view, most notably the antislavery activist Frederick Douglass (1858), who argued that environment shapes human biology and that the idea of racial types is flawed. In the last half century, evidence has mounted at an exponential rate that race simply does not explain or account for human genetic variation (Lewontin, 1972; Yu *et al.*, 2002). With increasing data on genomic diversity since the 1990s, the usefulness of race as a biogenetic construct seems to be slowly losing acceptance among scientists in the United States (Yudell *et al.*, 2016). Moreover, research is beginning to demonstrate that persistent racial differences in health

are in fact *due to* subtle and overt forms of racism (Goodman, 2000; Olshansky *et al.*, 2012).

The "revolution" in how we think about race as distinct from human biological and genetic variation is still in its early stages. Whereas social epidemiology is showing the deep and multiple pathways by which racism affects health (Krieger, 2003), many doctors and medical researchers still believe that racial differences in health are innate and natural (Satel, 2002), and many scientists still use *race* as a convenient shorthand for human variation (Wade, 2014). Race is used without much notice in medicine as a biological grouping (Goodman, 2000). And *race* also appears in legal documents, again without much questioning of its meaning (Haney López, 1997).

Despite a national obsession with race, my sense is that most individuals in the United States are confused about how biology, genetics, and race interrelate; how the categories of race, ethnicity, color, religion, and so on were formed; and how they intersect today (Goodman, 1997). Although some clearly see race as a socially constructed category with biological consequences, most still consider it a natural division of humans, just as Linné did in 1755. Most European-Americans are confused about what race is and is not. And they are also confused about the underlying causes of racial differences in wealth and health. That confusion, I believe, is problematic: It inhibits acting on racial differences in access to resources and on racism itself.

What is true today in the United States is that one hears a cacophony of opinions about race. President Obama has tried to promote a national dialogue on the subject, but we have not gotten very far in our understanding of what race is and what it is not. As many have commented with regard to discussions about race and racism, there is more talk than understanding, more smoke than fire.

In short, although evidence suggests that the concept of race-as-genetics is losing credibility, change in this hegemonic worldview is painfully slow (Mills, 1997). We in the United States are obsessed with race but we do little to address racism. We collect information on racial inequalities

but then do not alleviate them. Race is the cornerstone of an unwritten social contract in which whites of European ancestry have greatest access to power and resources and everyone else has the least access (Mills, 1997). Why has the race-as-genetic worldview changed so slowly with fifty years of data to show it to be obsolete?

I would say that the racial worldview has remained largely intact because the political-economic stakes are so high (Goodman, 1997; Goodman *et al.*, 2012).

What follows are further observations and some examples of the state of race in the United States. My comments are divided into three overlapping domains: sociopolitical and public discourse, law and institutional race, and race in science and among scientists. I end with a brief call to action by scholars, educators, and scientists to challenge out-of-date legal doctrines, sociopolitical discourses, and uses of the word - and the concept of - *race*.

Race in socio-politics, popular culture, and discourses

Of all the domains in which race resides, it is most fluid and varied in the domains with the least structure: popular culture, everyday discourses, and socio-politics. As always in the United States, citizens of color see more than whites the salience of race and the realities of racism. Reactions to the 2015 Academy Awards (the Oscars) nominations for acting illustrates this point. For the second consecutive year, all of the nominees were white. Most whites saw little wrong with that; it sort of just happened. On the other hand, individuals of color saw the nominations as a visible tip of the iceberg of systems of racial thinking in which acting roles are tailored for white actors (and white audiences).

Some political analysts point to Obama's election as a sign of the declining salience of race in political life. Yet the answers to a question posed to voters after the 2008 presidential election showed that race played a role for many in their decision to vote against Barak Obama, our first African

American president (https://www.ted.com/talks/nate_silver_on_race_and_politics). Among some groups, such as southern Republications, the race of a candidate is shockingly relevant.

On the positive side, one can point to a younger generation that seems to hold less firmly some of the divisive racial stereotypes. This change, however, does not seem to be very deep. I recently gave a talk on race to a group of two hundred young teenagers at a school in my university town. Even in this educated community, kids tend to eat lunch with individuals they see as within their own race or ethnicity. I asked them how they see or explain race. For most, race is real and biologically based.

The reported rate of racial intermarriage is on the rise in the US, but this might be related, at least in part, to the implementation of a multiracial category on the 2000 and 2010 censuses. Note that as recently as 1967 it was illegal to marry outside one's race in the state of Virginia. Indeed, at one time or another, thirty-three of the then forty-eight states in the United States had laws that prohibited miscegenation - that is, marrying someone of a different race - for fear of degeneration and to protect the so-called white race.

I want to be optimistic, but change is glacially slow and the glass seems still to be more empty than full. In the last few years, a frighteningly high number of acts of police brutality have come to public attention. This is probably nothing new; rather, it may be simply a result of the increased access to video footage. But the important point is that the victims are almost always black men.

In almost every form of statistical evidence, one finds persistent inequalities among races. For example, in the United States, the chance of being incarcerated is three times greater if you are HISPANIC than if you are white and six times greater if you are black (Pettit & Western, 2004). The average wealth of white families is about twelve times that of black and HISPANIC families and the difference seems to be rising (Shapiro *et al.*, 2013).

The more open and visible signs of police brutality against black men have shed more light on systemic inequalities in the criminal justice system, including the rates of crime, convictions, and sentencing. Repeated acts of violence against

black men have led to the sustained Black Lives Matter (BLM) movement. There is an important aspect to BLM: the focus specifically on African Americans. Indeed, most statistics show that African Americans are the most impoverished and oppressed group in the United States. A case can be made for concentrating affirmative action and reparations on African Americans.

The old untruths of racial disparities in intelligence and violence are now less frequently articulated in open, public discourse. A few neo-Nazi websites and commentators such as David Duke, of the Ku Klux Klan, continue to spew talk of white supremacy and to denigrate Jews and individuals of color. Anti-Muslim rhetoric post-9/11 is still on the rise. Donald Trump, at the moment the presumptive presidential candidate of the Republican Party, ran on a rant against Mexicans and Muslims and the promise to build a wall between the US and Mexico and to ban Muslims from entering the United States.

This openness of xenophobia and bigotry is a new turn, as it is generally seen in the United States as uncivil to comment publicly on racial differences in a way that recalls the outmoded race-as-genetic destiny. For example, when sports commentators refer to the “natural athletic ability” of African Americans and the “brilliance” of white athletes, their unconscious biases are exposed - and people notice. That might sound positive, and in a way it is, but Trump and his popularity suggest that the ideology of race-as-deep-and-natural has not disappeared; rather, it had simply gone underground.

Slavery was abolished more than one hundred fifty years ago and a range of civil rights laws and statutes have passed. The ideologies of biologically based racial hierarchies and racism, however, are more difficult to change. In the United States, neighborhoods, schools, and workplaces are increasingly diverse. We are an increasingly diverse nation, yet, as is evident in the middle school I recently visited, it is common for blacks, Latinos, Asians, and whites to gravitate to those who look like them and thus to self-segregate. And, in fact, white public space is rarely safe space for all. Enacting laws does not change hegemonic worldviews.

The proof of enduring ideological and institutional racism is in the data. In the United States, racial variations are huge in all matters of wealth, education, and law enforcement. I am particularly interested in how the stress of racism is embodied, or “gets under the skin.” Living in a racist society (the US) has led to persistent racial differences in almost every measure of morbidity and mortality (Kochanek *et al.*, 2013). Recent evidence suggests that the gap in life expectancy between blacks and whites has narrowed, from an average of eight years less for blacks in 1950 to “only” a little more than four years less in 2009. Some of this difference is explainable by socioeconomic status, but what are the other reasons that blacks live shorter lives?

Perhaps the one certainty is that one can find whatever one is looking for: either signs of a blurring of racial lines and a decline in racism or signs that racism is alive and well. The glass of racism is both half full and half empty.

Legal and institutionalized race

The US Constitution. Throughout the history of the United States, race and color (race and color terms are employed somewhat interchangeably) have been used in legal documents. The Fifteenth Amendment to the US Constitution famously “prohibits each government in the United States from denying a citizen the right to vote based on that citizen’s race, color, or previous condition of servitude.” Both race and color are singled out in this voting-rights act, so one must assume that the authors differentiated between the two terms. In law, a definition or elaboration of the meaning of *race* and/or *color* has never been successfully upheld (Haney López, 1997).

There is a famous aphorism attributed to Supreme Court Justice Potter Stewart (served 1958-81) in reference to what constitutes pornography. Pornography is hard to define, he said, “[b]ut I know it when I see it.” The same notion has been made for race. Such a casual definition is problematic for pornography, however, and it is even more problematic for race. Race does not stand still. We should not base laws on something

that is changing as we write, speak, read, and sleep. Moreover, without a clear and defensible definition of *race* (as well as of *color*, *ethnicity*, and related terms), the door is wide open to falling back on its outdated interpretation as a genetic grouping. The lack of a sound definition is bad science and bad politics and, inevitably, does harm.

The Census and the Office of Management and Budget Directive 15 (OMB 15).

Slavery was the sin on which the wealth of the United States was founded. And even with the abolition of slavery, most Americans know that we are a country with ideological and institutional racism at our core. We pledge equality but know it is a lie.

Despite the lack of a definition of *race*, my nation is obsessed with it. The US census has contained a question about color or race since its inception, in 1790. The categories BLACK and WHITE have been retained from census to census, although the social definitions of *black* and *white* have changed. In addition, race/color options have been added or eliminated almost every decade. For example, the 1880 census contained the categories CHINESE, MULATTO, and INDIAN (as in Native American) and ten years later there were three more options: QUADROON (one-fourth black), OCTOROON (one-eighth black), and JAPANESE (Nobles, 2000).

Since 1977, the collection of information on race and ethnicity has been codified by the Office of Management and Budget's (OMB) Directive 15: "This Directive provides standard classifications for record keeping, collection, and presentation of data on race and ethnicity in Federal program administrative reporting and statistical activities." And: "[These classifications] have been developed in response to needs expressed by both the executive branch and the Congress to provide for the collection and use of compatible, non-duplicated, exchangeable racial and ethnic data by Federal agencies". (Visit https://www.whitehouse.gov/omb/fedreg_directive_15.) Indeed, federal collection of data by race has proved useful in tracking racial inequalities in health, education, employment, incarceration, and other aspects of

life. Unfortunately, little work seems to be done to eliminate these inequalities and little attention is paid toward rectifying the social, political, and ideological conditions that have led to inequalities.

Although the collection of data on "race" is necessary to track inequalities, the data suffer from shifts in how they are collected (for example, by census taker or head of household), social definitions of *race*, and changes in the categories themselves. A study of race and infant death gives a frightening glimpse of the lack of repeatability of race categories. Hahn and his colleagues (1992) compared the birth and death certificates of infants who had died during their first year of life (infant deaths). They found that almost 44 percent of infants who were Native American on their birth certificate were another race, usually white, on their death certificate. The authors suggest that most of these cases of a legal change in race came about because a newborn baby's race is matched with that of its mother and a dying infant's race is filled in by the attending physician.

The underlying problem is that race does not have a clear meaning, and, by extension, there is no guide to providing useful and repeatable racial categories. In fact, a disclaimer is hidden in the text of OMB 15: "These classifications should not be interpreted as being scientific or anthropological in nature". In short, by 1977 the federal government had given up any hope of providing a logical basis for racial classification.

As we approach our next decennial census, in 2020, Race and Ethnicity categories are again undergoing scrutiny. Currently, the category HISPANIC is an ethnicity. Thus, one can be a black HISPANIC or a white HISPANIC. A 2016 court ruling, however, has determined that "Hispanic" has the legal status of a race - whatever that is!

Given this and other confusions about what is race and what is ethnicity, there is some discussion within the Census Bureau about keeping the categories (WHITE, BLACK, HISPANIC, and so on) but *not* calling them anything: not race, color, religion, language group, or ethnicity (<http://www.pewresearch.org/fact-tank/2015/06/18/census-considers-new-approach-to-asking-about-race-by-not-using-the-term-at-all/>). Doing so is important

because the categories, though imperfect, are useful for tracking inequalities. Interestingly, this is close to a point suggested by the American Anthropological Association almost two decades ago (<http://www.understandingrace.org/about/response.html>).

Race, anthropology, and science

The publication and responses to Nicholas Wade's *A Troublesome Inheritance* (2014) is a useful barometer as to salience of use as a race as a genetic grouping variation. The UK-born and Eton-educated Wade was for decades a science writer for the *New York Times*; he stepped down after his book was published. As a reporter, he covered many developments in human evolution and genetics, and clearly favored genetic and racial explanations. Wade was an important gatekeeper for his own views: he highlighted for *New York Times* readers what were in fact sketchy findings about the power of genes and the links between race and genetics and ignored evidence that suggested that race is not in the genes.

His biases are for all to see in *A Troublesome Inheritance*. In the first half of the book, he tries to establish the validity of race as a category for studying recent human evolution. He attempts to discredit as politically motivated any scholarly research that argues that race is not a valid and useful biological category. In the second half of the book, he makes a number of speculative efforts to explain personality, culture, and economic achievements as the result of bio-racial differences.

In my view, the book is astonishing in the weakness of its scholarship and the unembellished scientific racism. It is more akin to racial tracts published a century ago and the original formulation of Linné than to more recent (and more subtle) race-science screeds such as *The Bell Curve* (Herrnstein & Murray, 1994). Here is an increasingly rare public figure, this time a science journalist, writing what I can best describe as unvarnished scientific racism. It is startling that the book was published in summer 2014. What would be the reactions?

Upon publication, the book shot into the top twenty of the most purchased books on Amazon.com. Prepublication copies had been sent to those who would most likely give it favorable media. Indeed, Charles Murray, coauthor of *The Bell Curve*, was one of the first reviewers. He echoed Wade in arguing that those who do not believe race is genetic are making a politically correct, rather than scientifically correct, argument and then went on to give it a solid recommendation in the *Wall Street Journal* (3 May, 2014). Before it was even published, the book was discussed in a talk show hosted by David Duke, the head of the Ku Klux Klan, and was widely applauded on neo-Nazi and anti-immigration websites.

As of March 1, 2016, the book had been rated more than three hundred times on Amazon.com. Most of the reviews are very positive: two of three reviewers give it four or five stars out of a possible five and more than half (52 percent) give it a full five-star rating (highest ranking). A minority (17 percent) award the book a single star (lowest ranking), suggesting a bifurcation of responses: most positive few in the middle and some strongly negative reviews.

The most apparent pattern is that the positive reviews stress what they call Wade's daring ability to tell the truth. Often the reviewer is unidentifiable, hidden. The single stars (negative reviews) often point to his misunderstanding of the science on which he has been reporting. These people usually self-identify as scholars and scientists and speak specifically to the studies Wade references. They demonstrate knowledge of evolutionary theory and the facts of human variation.

In addition, one hundred thirty-nine senior population geneticists state in a letter to the *New York Times*:

“As scientists dedicated to studying genetic variation, we thank David Dobbs . . . for his description of Wade's misappropriation of research from our field. . . . Wade juxtaposes an incomplete and inaccurate account of our research on human genetic differences with speculation that recent natural selection has led to worldwide differences in I.Q. test results,

political institutions and economic development. We reject Wade's implication that our findings substantiate his guesswork. They do not".

This letter suggests a possible sea change in how geneticists see race and human genetic variation. Indeed, an editorial in *Science* just called for the elimination of race in genetic research (Yudell *et al.*, 2016).

Change in scientific work and theories is often slow, and changes in public perceptions are often slower. With regard to race, the response to Wade's book suggests that there may be a growing gap between scientific understandings of human variation and public perceptions of those differences.

In summary, race in science, like race in other realms of life in the United States, is both in flux and in a confused state. Whereas it might be acceptable to be unsure of what "race" means in some domains, it is far less acceptable in legal terms and in the courts of science. After many centuries, however, that is the state of race in science.

Conclusions

If the state of race in the United States is to provide any sort of guide, I imagine readers will be seriously disappointed. The meaning of *race* - the word or the concept - as I have tried to explain, is all over the cognitive map. Its actions vary. Yet race is still a very powerful actor in public life, law, and science.

The optimist in me would like to think that we are making social and scientific progress: racial boundaries are now more permeable and less fixed. More and more scientists are starting to realize that race medicine is bad medicine and, in fact, that anywhere race is used in science makes for bad science.

But many signs indicate that change is not only slow; it is also superficial. Most Americans still think race is primordial and genetic and by extension that disparities in attainment in employment, education, and wealth are due to inherent differences. Racism is supported by a racial worldview.

What can we do? Almost two decades ago, the American Anthropological Association (AAA)

tried to engage public discussions about race by launching its largest-ever public education project, titled "Race: Are We So Different?" (understandinrace.org). The project presented to the public "race" through the lenses of science, history, and lived experience. Components of this project comprised a book (Goodman *et al.*, 2012), teaching materials, a highly trafficked website, and an award-winning museum exhibit. The original exhibit, which opened in 2007, was so well received that both a duplicate version and a smaller version were manufactured. As of 2016, the three traveling exhibits have been on display in fifty museums and viewed by millions. As indicated by the quantity and quality of the responses to it, the project is a great public-education success. But it is also a drop in the deep ideological seas of race and racism.

If what we think about race, human variation, and racism is to change, I believe it is time for us - scholars of humanity, such as social scientists, anthropologists, and geneticists - to take the lead. It is useful to talk about the structure of human variation in a classroom or a journal, but that is not sufficient. We need more public-education projects, like the AAA's, that elevate the discourse around race and bring it to open forums.

Another recommendation is to examine how the idea of race is used in legal documents. Although documents are not enough to change how race and racism "lives," they now speak a language that undermines science. Instead, they should provide a legal grounding that supports the facts of human variation.

Science once helped to justify a racial hierarchy by promoting the idea that races are separate and unequal. Now I believe it is our obligation to repudiate those disproven ideas and to spearhead the movement to promote scientifically accurate knowledge about human diversity - in the interest of justice.

References

- Bonham V.L., Shawneegua L., Callier J.D. & Royal C.D. 2016. Will Precision Medicine Move Us Beyond Race? *N. Engl. J. Med.*, 374: 2003–2005.

- Goodman A.H. 1997. Bred in the bone? *The Sciences*, 37: 20–25
- Goodman A. H. 2000. Why genes don't count (for racial differences in health). *Am. J. Public Health*, 90: 1699–1702.
- Goodman A.H., Moses Y. & Jones J. 2012. *Race: Are we so different?* Wiley–Blackwell, Boston.
- Hahn R.A., Mulinare J. & Teutsch S.M. 1992. Inconsistencies in coding of race and ethnicity between birth and death in US infants: a new look at infant mortality, 1983 through 1985. *Jama*, 267: 259–263.
- Haney López I.F. 1997. *White by Law: The Legal Construction of Race*. New York University Press, New York.
- Herrnstein R. & Murray C. 1994. *The Bell Curve*. Simon and Schuster, New York.
- Krieger N., Waterman P.D., Koshleva A., Chen J.T., Carney D.R., Smith K.W., Bennett G.G., Williams D.R., Freeman E., Russell B. *et al.* 2011. Exposing racial discrimination: Implicit & explicit measures: The My Body, My Story study of 1005 US-born black and white community health center members. *PLoS One*, 6: e27636.
- Lewontin R. 1972. The apportionment of human diversity. *Evol. Biol.*, 6: 381–398.
- Mill C. 1997. *The Racial Contract*. Cornell University Press.
- Murray C. 2014. *Wall Street Journal*. May 3.
- Nobles M. 2000. History counts: a comparative analysis of racial/color categorization in US and Brazilian censuses. *Am. J. Public Health*, 90: 1738–1745.
- Pettit B. & Western B. 2004. Mass imprisonment and the life course: Race and class inequality in US incarceration. *Am. Soc. Rev.*, 69: 151–169.
- Satel S.L. 2002. I am a racially profiling doctor. *New York Times*. May 5.
- Shapiro T., Meschede T. & Osoro S. 2013. The roots of the widening racial wealth gap: Explaining the black–white economic divide. *Institute on Assets and Social Policy*.
- Wade N. 2014. *A Troublesome Inheritance: Genes, Race and Human History*. Penguin, New York.
- Yu N., Chen F.–C., Ota S., Jorde L.B., Pamilo P., Parthy L., Ramsay M., Jenkins T., Shyue S.–K., Li W.–H. 2002. Greater genetic differences within Africans than between Africans and Eurasians, *Genetics* 161: 269–274.
- Yudell M., Roberts D., DeSalle R. & Tishkoff S. 2016. Taking race out of human genetics. *Science*, 351:464–565.

Addendum

My reflection on “race” in the United States was written during the summer of 2016. Now, less than a year later, it is outdated by my reference to Donald Trump as the “presumptive candidate.” I wrote that the “openness of xenophobia and bigotry” that was a hallmark of Trump’s campaign was a new turn in US public civility and discourse on race. The transition from an African American president to a bigot-in-chief is a sea change and a further sign that racist ideology is still dominant in the US.

Tweets have replaced reason. Trump and his circle have attacked data and analysis. Their anti-science stance is clearest with regards to climate science and it also spills into old-fashioned dogma about human variation and race. They draw support from white nationalists who believe in a white homeland and that Caucasians are a superior race. And worst of all, this racist ideology fuels a politics of division, specifically of White poor and working class individuals from individuals that identify with other races, ethnicities and religions.

Now, more than ever, we scientists, anthropologists, and humanists need to stand up for facts, data, and scientific analyses and we need to stand up to those who want to manufacture false division among us.

Alan Goodman, May 30, 2017

