**What Is at Stake in the Claim that Race Is Only a Social Construction – and What Happens if We Soften that Claim?**

Jennifer Hochschild

Harvard University

April 19, 2013

Paper prepared for workshop on “Reconsidering Race: Cross-Disciplinary and Interdisciplinary Approaches.” May 3-4, 2013, Texas A&M University, College Station, TX

DRAFT: please do not quote or cite without permission. Comments appreciated; please send them to Hochschild@gov.harvard.edu

Many thanks to Maya Sen, my co-Principal Investigator on the Robert Wood Johnson Foundation Health Policy Investigator Award that funded the GKAP survey and the corresponding research program. Deep thanks also to Alex Crabill for excellent research assistance. I am grateful to Patrick Moynihan for substantial advice on designing GKAP, and to the staff at Knowledge Networks for their professionalism in implementing it.

Americans have debated for centuries whether the concept of “race” and distinctions among presumed racial groups are based in biological differences, human inventiveness, or some combination. They similarly debate whether behaviors, values, or physical characteristics can usefully be associated with “racial” categories, or whether such associations are misleading at best and pernicious at worst. Most American social scientists and legal scholars now concur that the concept of race, distinctions among groups, and purported racial characteristics are socially constructed, with minimal or no biological basis. But many members of the American public do not concur, and many life scientists and medical professionals are ambivalent.

The debate over biological or social foundations of race is not, of course, only a dispute over taxonomy, epistemology, scientific explanation, or even policy or medical prescription. It has strong normative components. Most social constructionists see themselves as progressives and express strong commitments to human rights and racial equality. They fear that any association of race with biology will bring back the evils of nineteenth century racial science or reinforce contemporary group hierarchies. They are supported in that fear by the fact that scholars who invoke biology when discussing race sometimes do seek to show that one race is innately superior to another along some dimension. Thus Charles Murray, to choose only the best-known example, who describes himself and his co-author, Richard Herrnstein, as being “on the right” and “moderately conservative” respectively ([Herrnstein and Murray 1996](#_ENREF_6)): 555), concludes that “American blacks and whites continue to have different mean scores on mental tests . . . usually about . . . fifteen IQ points . . . . A legitimate scientific debate on the topic [“the relationship of genes to race differences in intelligence”] is underway; it is scientifically prudent at this point to assume that both environment and genes are involved, in unknown proportions” (ibid., pp. 562-563). Ann Morning notes that one can hold “essentialist” views of race without being racist, but she spends much of her recent book asking “is a nonracist essentialism possible?” – without probing or even noticing the logically symmetrical possibility of a racist constructivism ([Morning 2011](#_ENREF_11)).

Many social constructionists especially fear that the new science of genomics will have the effect if not the intention of essentializing race and reifying racial categories. In research, “DNA molecules . . . are increasingly made to carry the self-reported US racial descriptor of their donor as they leave his or her body and enter the laboratory. The DNA is then analyzed with the racial label attached for the duration of its life in the lab and beyond” ([Fullwiley 2007](#_ENREF_5)): xxx). In recreational uses, DNA ancestry testing “reinforces three central myths about race: that there are pure races, that each race contains people who are fundamentally the same and fundamentally different from people in other races, and that races can be biologically demarcated . . . . Defining identity in genetic terms creates a biological essentialism that is antithetical to the shared political values that should form the basis for unity” ([Roberts 2011](#_ENREF_13)): xxx). In medicine,

The confluence of . . . diverse factors is driving the re-emergence of race as a biological construct. This is certainly problematic, given our nation’s long history of racial injustice and oppression, but it also has implications both for the responsible conduct of scientific research and for the allocation of scarce resources to deal with the very real problem of persistent health disparities in this country ([Kahn 2013](#_ENREF_10)): 4).

Not all social constructionists are wary of genomic science – but linking genomic science and group categories not difficult to do. And from that link, it seems all too short a step to the next link, between genetically-based group categories and genetically-based group hierarchy. History is not encouraging on that point.

As one might expect, those who link race to biology offer responses to these concerns. Sally Satel is the most dramatic:

In practicing medicine, I am not colorblind. I always take note of my patient's race. So do many of my colleagues. We do it because certain diseases and treatment responses cluster by ethnicity. Recognizing these patterns can help us diagnose disease more efficiently and prescribe medications more effectively. When it comes to practicing medicine, stereotyping often works ([Satel 2002](#_ENREF_14)): 56).

Satel continues the article by pointing to a study in the *New England Journal of Medicine* that found that a standard treatment for chronic heart failure to benefit blacks less than whites. “Researchers found that significantly more black patients treated with enalapril ended up hospitalized” (ibid: 56). Jay Cohn puts the point in more scholarly language: “the debate . . . should not be over the existence of population differences, but how to describe those differences with more precision . . . . Railing against what some claim are misguided efforts to use racial, ethnic, or geographic distinctions does not make the differences disappear” ([Cohn 2006](#_ENREF_2)): 553).

Some geneticists go even further than Satel, if less vociferously, by reversing the social constructionists’ normative assertion about the best way to promote racial justice. [[1]](#footnote-1) Bliss points out that to many scientists committed to “a larger social justice struggle for minority health,” the idea of a “race-free genomics is the same as the colorblind rhetoric that contributed to racism in the South” ([Bliss 2012](#_ENREF_1)): 107). In this view, the facts that human differences are clinal rather than categorical, and that all humans are 99.9 percent the same genetically, are irrelevant to many important questions. What matters is not the simple amount of genetic difference, but the phenotypical expression of any given genetic difference. After all, according to the Smithsonian National Museum of Natural History, the human genome differs from that of the chimpanzee between 1.2 and 5 percent, depending on how one counts. “No matter how the calculation is done, the big point still holds: humans, chimpanzees, and bonobos are more closely related to one another than either is to gorillas or any other primate. From the perspective of this powerful test of biological kinship, humans are not only related to the great apes – we are one” ([National Museum of Natural History n.d ( c. 2013)](#_ENREF_12)). Thus tiny differences between individual genomes can imply large differences in the likelihood of getting a particular disease, having a particular body structure – or possibly having traits that one can plausibly call “racial.” As Esteban Burchard puts it, “Race is a complex construct. It includes social factors; it includes self-identity factors; it includes third-party factors of how you view me. But it also includes biological factors” (Bliss 2012: 107).

Passions can rise high, despite or perhaps because, both sides are deeply committed to promoting racial justice. In the Acknowledgments to his book about the first (and so far only) drug licensed for use by self-identified blacks, Jonathan Kahn thanks Dorothy Roberts for being his “comrade in arms who was with me . . . when we were accused at one meeting of ‘killing people’ with our critiques of BiDil” (Kahn 2013: IX).[[2]](#footnote-2) Two people involved in BiDil’s development and sales do in fact describe Kohn’s book as a “diatribe, . . . [that] disregards the facts:”

By railing against the idea that blacks were singled out for this study, which was designed based on compelling biological and preliminary clinical trial data, Mr. Kahn has contributed to a backlash that has impeded clinical use of the drug. It is unfortunate that we do not have a better criterion for selecting individuals whose biology makes them responsive to BiDil, but it is tragic that thousands of patients are dying because their doctors are not prescribing the drug despite the ease of their identification ([Worcel and Cohn 2012](#_ENREF_20)).

That is not quite an accusation of “killing people” – but it is not far off.

In this paper I cannot resolve the question of how to balance pure social constructionism against the view that race has a meaningful and important biological component. Instead I offer what I believe to be unique evidence from a new survey in order to see how non-expert Americans of various races and ethnicities understand the links between race and biology.

Public opinion does not, of course, provide any answers to the question of whether race should be understood as having biological components. But public opinion does provide an intriguing window into how the politics of social constructivism might play out if, as most of us would predict, biology becomes increasingly salient in the public arena over the next few decades. As many have pointed out, the life sciences are likely to play the role in the twenty-first century that the physical sciences played in the twentieth century; debates about everything from abortion rights to severity of punishment in the criminal justice system, collective responsibility for individual disease, the right to immigrate, and meritocracy in higher education or employment (among other things) are developing a biological inflection. What Americans think about the links between biology, choice, identity, and environment is analytically fascinating and arguably of great political importance. What role public opinion should play in policy choices and normative judgments about those links remains an open question.

**Evidence and Research Questions**

Through Knowledge Networks, Maya Sen and I fielded a survey in May 2011 of 4,291 United States adults. The Genomics Knowledge, Attitudes, and Policies survey (GKAP) was stratified by race or ethnicity. (See the relevant tables below for subsample sizes by race or ethnicity, and other respondent characteristics.) Latinos could take the survey in Spanish (n = 578) or in English (n = 518). The survey included over 100 questions about genetics and genomics, and we received Knowledge Network’s demographic information on these respondents as well as self-reports on use of technology, religiosity, many aspects of personal and family health status, and several forms of political activism. The survey included knowledge items, levels of support for various uses of genetics or genomics, views on government regulation and funding, links between genetics and morality or religion, trust in various actors, the role of genomics in racial differences, and other questions. (The questionnaire is available from the author upon request.)

Most relevantly for this paper, GKAP included two batteries of questions about the relative importance of genetic inheritance versus environment or lifestyle in determining various diseases or traits, and about the relative importance of race or ethnicity versus environment or life style in determining the same diseases or traits. Thus we can compare different groups’ views of the importance of genetics, broadly defined, and different groups’ views of the importance of race and ethnicity in particular, in shaping human opportunities and actions. In addition, GKAP included a knowledge item to determine respondents’ understanding of how much of the genome is shared between blacks and whites.[[3]](#footnote-3)

I do not offer formal hypotheses in this paper, and the statistical analysis is limited to showing patterns among respondents with various characteristics. My purpose here is exploratory. To my knowledge, no research has examined public opinion on the relative merits of social constructionism and the view that race includes a biological component, and little research has examined the public’s views on how much individual or group differences are in fact genetically determined. (Thus, rather than a formal literature review, I refer to relevant scholarship intermittently through the paper.) In short, exploration seems more in order at present than does rigorous hypothesis testing.

**Evidence from GKAP**

*Knowledge about Intergroup Genetic Similarity:* I begin with the simplest question; what does the American public know about humans’ very strong genomic similarity? Table 1 shows the results for the respondents as a whole and each racial or ethnic group:

**Table 1: How much of the human genome is common to both blacks and whites? GKAP 2011**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *More than half* | *About half* | *Less than half* | *DK/NA* | *N* |
| *All* | 44% | 9% | 8% | 40% | 4291 |
| *Whites* | 50 | 7 | 6 | 37 | 1143 |
| *Blacks* | 25 | 15 | 12 | 48 | 1031 |
| *Asians* | 44 | 10 | 15 | 31 | 337 |
| *Multiracials* | 56 | 7 | 6 | 31 | 635 |
| *Hispanics* | 28 | 11 | 13 | 49 | 1096 |

“Based on what you know, would you say that more than half, about half, or less than half of a white person’s genes are identical to those of a black person?”

Unless otherwise noted, data in this and all other tables, are weighted to be representative of the US population as a whole, or of each group respectively. The survey included 49 Hawaiian or Pacific Islanders, who are included in “all” but not in the group-level analyses.

Note first the large share of respondents who venture no response (almost all clicked on “don’t know enough to say” rather than not responding at all). Among those who do answer, a majority do so correctly (Among all respondents, 72 percent of those with substantive answers are correct.) It may not be surprising that multiracials are the most likely to see genetic similarity across purportedly separate races, but it *is* surprising that a much higher proportion of whites than of Hispanics and African Americans do. (Among those with a substantive response, 79 percent of whites are correct, compared with 48 percent of blacks and 54 percent of Latinos). Some of that difference is probably due to educational differences, but surely not all – and Asians, who overall have higher levels of education than whites do, are also relatively more likely to be mistaken (64 percent of those with substantive answers are correct). Nor are whites more politically liberal than blacks and Hispanics, so the agreement with “more than half” is probably not an ideological statement of interracial solidarity.[[4]](#footnote-4)

So the first political puzzle is why the racial group with the strongest historical commitment to and investment in distinctions among races would be one of the two groups most likely to see genetic similarities between blacks and whites. Conversely, why are the two groups with deep and widely-recognized histories of racial mixture the least likely to perceive genomic similarity across races and ethnicities?

*Perceptions of Genetic Inheritance and of Racial or Ethnic Genetic Inheritance:*  I set the first puzzle aside until we have more information on how Americans perceive the link between biology and race or ethnicity. Let us therefore turn now to the issue of how and how much Americans explain various diseases or traits through genetic inheritance in general, and racial or ethnic genetic inheritance in particular. Table 2 provides the initial evidence:

**Table 2: Importance of genetic inheritance, and of racial or ethnic genetic inheritance, among all respondents, GKAP 2011**

(in order from most to least “having to do with genes”)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *1.All or most to do with genes* | *2.All or most to do with environment or lifestyle* |  | *3.All or most to do with race or ethnicity* | *4.All or most to do with environment or lifestyle* |
| *eye color* | 88% | 3% | 77% | 4% |
| *sickle cell anemia* | 75 | 5 | 66 | 6 |
| *cystic fibrosis* | 63 | 6 | 44 | 13 |
| *gay or lesbian* | 24 | 39 | 11 | 52 |
| *heart disease* | 22 | 6 | 15 | 14 |
| *intelligence* | 21 | 11 | 12 | 29 |
| *aggressive or violent* | 8 | 28 | 8 | 28 |
| *the flu* | 3 | 72 | 2 | 75 |

For columns 1 and 2: “Some things about a person are caused all or mostly by their genes, which they inherit from their parents. Others may be due to their environment or the way they live. As far as you know, how much does each of the following have to do with a person’s genes compared with the person’s environment or lifestyle?”

For columns 3 and 4: “Some things about a person may be genetically connected to their race or ethnicity. Other things may be due to their environment or the way they live. As far as you know, how much does each of the following have to do with a person’s race or ethnicity compared with the person’s environment or lifestyle?”[[5]](#footnote-5)

Note that the middle category – “mixture of genes [race/ethnicity] and environment or lifestyle” – is excluded for ease of interpretation

Table 2 reveals several things. First, as column 1 shows, Americans overall have coherent and sensible views about the impact of genetics as compared with the environment or lifestyle choices. Collectively they create three categories: phenotype and diseases widely known as heritable (eye color, sickle cell anemia, cystic fibrosis); traits that are plausibly understood to have multiple causes (heart disease, intelligence); and diseases or traits widely understood to be contagious (flu) or situational (violence). The only item not mentioned thus far -- homosexuality -- is ideologically complex since people who are generally likely to be social constructionists (e.g. liberals) tend to see homosexuality as biological. So the relatively high proportion of respondents who describe it as environmental may have different beliefs and assumptions from those who describe other traits or behaviors as environmental ([Sheldon 2007](#_ENREF_15)) and citations therein).

Second, GKAP respondents use almost exactly the same set of considerations in deciding what diseases or traits are inherited through race and ethnicity,[[6]](#footnote-6) rather than inherited *tout court*. (The order of descent in column 3 is almost identical to that of column 1.) However, comparing columns 1 and 2 shows that for all items except aggression and flu, which essentially bottom out, Americans are less inclined to see genetic inheritance through race or ethnicity than in general. That pattern holds even when a phenotypic trait seems innocuous (eye color) or when a disease is especially likely to be inherited by people with a particular ancestry (sickle cell anemia among blacks and cystic fibrosis among whites).[[7]](#footnote-7) Furthermore, Americans are disproportionately unwilling to agree that there is racially inflected genetic inheritance for two traits that are especially fraught -- homosexuality and intelligence (compare columns 2 and 4, but note no difference for violence). They are, in short, partly but not wholly social constructivists.

So the second political puzzle is why Americans are less likely to see racial or ethnic genetic inheritance than to see general genetic inheritance. That may reflect a partial commitment to social constructivism – that is, they perceive race to be a relatively inappropriate lens through which to understand genetic inheritance. Or it may reflect a general wariness about agreeing to anything that links race and genetics. The fact that respondents see less racial than general inheritance for phenomena that are uncontroversial or demonstrably more common in certain groups suggests a social desirability bias instead of (as well as?) an ideological rejection of race as a genetically meaningful concept.

This puzzle may be illuminated by comparing views on general genetic inheritance and particular racial inheritance separately for each racial and ethnic set of GKAP respondents. Table 3 provides the essential data. (I present here only the responses for “All or most to do with genes/ race or ethnicity” for ease of interpretation. A parallel table including only responses on “All or most to do with environment or lifestyle” is in appendix table A1.)

**Table 3: Importance of genetic inheritance, and of racial or ethnic genetic inheritance, by race or ethnicity. GKAP 2011**

(in same order as table 2)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *Whites* | | *Blacks* | | *Asians* | | *Multiracials* | | *Hispanics* | |
|  | *All or most to do with genes* | *All or most to do with race or ethnicity* | *Genes* | *Race or ethnicity* | *Genes* | *Race or ethnicity* | *Genes* | *Race or ethnicity* | *Genes* | *Race or ethnicity* |
| *1. eye color* | 91% | 79% | 79% | 71% | 86% | 79% | 89% | 76% | 81% | 73% |
| *2. sickle cell anemia* | 81 | 73 | 77 | 65 | 65 | 52 | 81 | 71 | 48 | 39 |
| *3.cystic fibrosis* | 69 | 48 | 54 | 38 | 53 | 35 | 65 | 41 | 46 | 35 |
| *4. gay/lesbian* | 26 | 12 | 12 | 6 | 19 | 10 | 19 | 7 | 23 | 14 |
| *5.heart disease* | 20 | 12 | 30 | 22 | 15 | 10 | 17 | 16 | 29 | 22 |
| *6. intelligence* | 19 | 10 | 20 | 13 | 19 | 13 | 15 | 6 | 30 | 22 |
| *7. aggressive*  *or violent* | 6 | 6 | 11 | 11 | 7 | 7 | 6 | 6 | 17 | 17 |
| *8. the flu* | 2 | 2 | 5 | 3 | 2 | 1 | 1 | 1 | 5 | 4 |

Table 3 reveals several patterns. Consider first agreement on general genetic inheritance (the unshaded columns). On the four items with the strongest support for genetic inheritance, whites are most likely to see it. Conversely, on the four items with the weakest support for genetic inheritance, Latinos are most likely to see it. Some differences are small, so this pattern should be taken with an appropriate grain of salt; I am not sure what, if anything, to make of it.[[8]](#footnote-8) Beyond that finding, I see no consistent variation among groups.[[9]](#footnote-9)

Second, setting aside the last two rows in which almost no respondents, except Latinos in one case, accepted a genetic explanation, in 29 of 30 within-subject comparisons, respondents were less likely to accept racially specific genetic explanations than general genetic explanations (compare the unshaded to the shaded column within each group). That resembles the overall pattern of table 2; what is new here is evidence that the phenomenon holds equally across all groups.[[10]](#footnote-10) This finding suggests that GKAP respondents of all races and ethnicities are relatively likely to be social constructionists with regard to race, compared with their views of the importance of biology per se.

The third pattern shows that each group makes the same clear distinction between diseases or eye color, on the one hand, and behavior or personality traits, on the other hand (compare rows 1-3 with rows 4-8). Again the main point here is the similarity across groups [For comparable results, see ([Singer 2007](#_ENREF_19)): 346; ([Shostak, Freese et al. 2009](#_ENREF_16)): 84-85; Singer et al. 2010: 470-72].[[11]](#footnote-11) Finally, note that members of no racial or ethnic group are full-fledged social constructionists. Rows 1-3 show that majorities or substantial minorities in all groups accept the fact of racial or ethnic genetic inheritance in three of the eight queries.

The main puzzle revealed by table 3 is a null finding; non-Hispanic whites do not evaluate the role of genetic inheritance through race and ethnicity differently from any non-Anglo group.[[12]](#footnote-12) Nor, overall, do the non-Anglo groups differ systematically from each other.[[13]](#footnote-13) However much social constructionism is or is not persuasive to the American public, its persuasiveness varies little by whether the group has benefited by or been harmed by the American history of racial science and eugenics. The question of links between biology and race simply does not have the intense ideological meaning in the mass citizenry that it has among people who accuse each other of racism or killing people.

**Associations between Respondents’ Ideology or Education, and Views on Genetic Inheritance**

Perhaps a commitment to social constructionism among some subsets of Americans is being masked by lack of commitment or rejection among other subsets. I turn now to analyses by level of education or political ideology (and by partisanship in appendix table A2).

*Knowledge about Intergroup Genetic Similarity, Take 2:* As with race and ethnicity, I start with variations in knowledge about genomic similarity among respondents with differing educational levels and ideologies. The evidence is in table 4.

**Table 4: How much of the human genome is common to both blacks and whites, by level of education and political ideology? GKAP 2011**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *More than half* | *About half* | *Less than half* | *DK/NA* | *N* |
| *Less than high school* | 24 | 9 | 11 | 56 | 512 |
| *High school graduate* | 28 | 10 | 9 | 53 | 1090 |
| *Some college or associate degree* | 46 | 9 | 8 | 38 | 1324 |
| *BA* | 69 | 6 | 5 | 20 | 813 |
| *MA* | 73 | 10 | 3 | 14 | 398 |
| *PhD or professional degree* | 64 | 6 | 1 | 30 | 154 |
|  | | | | | |
| *Conservative* | 47 | 8 | 7 | 38 | 1388 |
| *Moderate* | 34 | 10 | 8 | 49 | 1422 |
| *Liberal* | 54 | 8 | 9 | 29 | 1331 |
| *Refused* | 10 | 14 | 1 | 75 | 150 |

Once again we see that many GKAP respondents were unwilling to provide (a.k.a. guess at) an answer, with the proportion ranging from 14 percent of those with a Master’s degree to 75 percent of those unable or unwilling to provide a political ideology. (Similarly, over two-thirds of Independents gave no substantive response, reinforcing political scientists’ generally accepted view that Independents have little connection with the political realm. See appendix table A2.) However, once again we see that among those venturing an answer, in most cases a substantial majority got it right. Here too, the exceptions are not surprising – those with less than a high school education and those with no political ideology.

In general, the higher one’s level of education, the more confident one felt in providing and answer and the more likely one was to give the correct answer. (I have no explanation for why Master’s-level GKAP respondents were more willing to answer than were Ph.D.’s or respondents with a professional degree.) Liberals were more willing to answer than were conservatives, but were no more accurate (Democrats were no more accurate than Republicans – see appendix table A2).

Thus the recognition of genomic similarity across races offers no puzzles when respondents are categorized by education or ideology similar to the puzzles revealed when they are categorized by race or ethnicity. That fact is reassuring; unlike the issues of climate change or evolution, the perception that humans are mostly alike biologically has not been politicized in the mass public.

*Perceptions of Genetic Inheritance and Racial or Ethnic Genetic Inheritance, Take 2:* Even though ideology (or partisanship) is not associated with views on human biological similarity, the sensitive issue of genetic inheritance may nonetheless be ideologically structured. Table 5 provides the evidence (data for partisanship are in Appendix table A3).

It is also important for making sense of public opinion to see whether Americans with high levels of education perceive genetic inheritance, and racial or ethnic genetic inheritance, differently from Americans with little schooling. Table 6 provides the evidence on that point.

**Table 5: Importance of genetic inheritance, and of racial or ethnic genetic inheritance, by ideology, GKAP 2011.**

% agreeing with “all or almost all to do with genes” and “all or almost all to do with a person’s race or ethnicity” (in same order as table 2)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *Political Ideology* | | | | | |
| *Conservative* | | *Moderate* | | *Liberal* | |
| *Genes* | *Race* | *Genes* | *Race* | *Genes* | *Race* |
| *Eye color* | 91% | 81 | 84% | 72 | 88% | 78 |
| *Sickle cell anemia* | 78 | 72 | 70 | 61 | 78 | 68 |
| *Cystic fibrosis* | 66 | 48 | 60 | 40 | 65 | 46 |
| *Gay or lesbian* | 16 | 8 | 22 | 10 | 36 | 16 |
| *Heart disease* | 20 | 14 | 26 | 16 | 20 | 12 |
| *Intelligence* | 21 | 12 | 21 | 13 | 19 | 11 |
| *Aggressive or violent* | 7 | 5 | 9 | 5 | 8 | 6 |
| *The flu* | 2 | 2 | 3 | 3 | 3 | 2 |

**Table 6: Importance of genetic inheritance, and of racial or ethnic genetic inheritance, by level of education, GKAP 2011.**

% agreeing with “all or almost all to do with genes” and “all or almost all to do with a person’s race or ethnicity”

(in same order as table 2)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *Less than high school* | | *High school graduate* | | *Some college or Associate degree* | | *BA* | | *MA* | | *PhD or professional degree* | |
|  | *Genes* | *Race* | *Genes* | *Race* | *Genes* | *Race* | *Genes* | *Race* | *Genes* | *Race* | *Genes* | *Race* |
| *eye color* | 76% | 65% | 86% | 75% | 89% | 78% | 94% | 84% | 93% | 83% | 90% | 81% |
| *sickle cell anemia* | 57 | 46 | 71 | 63 | 79 | 69 | 85 | 79 | 85 | 75 | 87 | 73 |
| *cystic fibrosis* | 46 | 39 | 61 | 42 | 64 | 46 | 73 | 51 | 67 | 48 | 82 | 48 |
| *gay/ lesbian* | 13 | 9 | 23 | 12 | 22 | 12 | 25 | 10 | 33 | 13 | 39 | 9 |
| *heart disease* | 27 | 22 | 30 | 20 | 22 | 14 | 11 | 6 | 8 | 6 | 16 | 3 |
| *intelligence* | 29 | 19 | 23 | 15 | 20 | 10 | 15 | 8 | 18 | 10 | 6 | 3 |
| *aggressive or violent* | 16 | 10 | 10 | 6 | 6 | 4 | 4 | 3 | 5 | 6 | 4 | 2 |
| *the flu* | 4 | 2 | 3 | 3 | 2 | 2 | 1 | 1 | 3 | 4 | 0 | 2 |

Tables 5 and 6 evince several patterns. First, looking down the unshaded columns reveals that for all levels of schooling and all political ideologies, the order of the eight items from most to least likely to be due to genetic inheritance is very similar.[[14]](#footnote-14) The sole exception is homosexuality, for which the likelihood of a genetic attribution varies considerably depending on ideology or educational attainment. We thus see a strong consensus on the relative position of most traits and diseases, along with evidence that a particular trait can be so politically volatile that it deviates sharply from the consensus.

Second, looking across the rows of table 5, we see the same pattern as with respondents’ race and ethnicity (table 3); both liberals and conservatives agree that eye color and the two diseases are genetically inherited, and that the flu, aggression, heart disease, and intelligence are not. With the exception of homosexuality, genetic inheritance has not been politicized (see also Shostak et al 2009: 85-86).[[15]](#footnote-15) Looking across the rows of table 6, we see a more complex pattern. Agreement with genetic inheritance rises with educational attainment for eye color, sickle cell, cystic fibrosis, and homosexuality. But agreement declines with educational attainment for heart disease, intelligence, and aggressiveness. This pattern suggests a different pattern of politicization; the well-educated are presumably more aware of the behavioral causes of heart disease with their implication of individual volition about exercise and food, and the racial and class dangers of attributing virtues (intelligence) or failings (aggression) to heredity.[[16]](#footnote-16)

Third, comparing the unshaded and shaded columns within each category, we again see the same pattern as with racial and ethnic groups: setting aside the bottom two rows of each table (although the result holds if they are included), respondents with all levels of education or ideology (or partisanship) are less likely to agree on racial and ethnic genetic inheritance than on general unspecified genetic inheritance. That holds equally for eye color, sickle cell anemia, and cystic fibrosis, where it is probably a mistake, as for the other five responses where it is arguably correct. So Americans, especially the best educated and the most liberal, are relative if not absolute social constructionists with regard to race -- even when they need or should not be.

**Conclusion**

More research is needed. It always is. To begin with, all of these descriptive tables need to be followed by regression analyses so that we can tell which respondent characteristics or values matter most in understanding ordinary citizens’ views on the relationship between biology and race. But the evidence in this paper provides an essential baseline from which to develop theories and test hypotheses.

Some of what we have found so far is surprising enough. Members of the dominant group (whites) are more likely to see inter-racial similarity than are members of subordinated groups with deep histories of racial mixture (blacks and Hispanics). Non-Anglo groups are no more or less likely than are whites to recognize genetic inheritance for some traits or diseases and not others, and are no more or less likely to accept racial or ethnic genetic inheritance. The reason for homosexuality is more ideologically and politically controversial than is the relationship between race and biology.

These surprises need closer investigation. Nevertheless, the overall message from this analysis should reassure those who see too much social constructivism in the arena of race and biology (a.k.a. inappropriate color blindness?) or too much reductionism or essentialism in that arena. Americans are not polarized by race or ethnicity, or by ideology and partisanship. They seem able to make sensible (if not always accurate) distinctions between phenomena that are and those that are not genetically inherited. They are more cautious about racial genetic inheritance than about genetic inheritance in general, but do not eschew it.

Perhaps the experts who accuse one another of killing people or racism should take a lesson from the relatively ignorant mass public; scientific, policy, and political linkages between people given one or another group label and their biological make-up are likely to become more and more prominent over the next few decades. In my view, we must learn how to come to grips with that fact despite the fact that we have no useable history in that arena. In principle, biology + race does not need to equal eugenics, racial science, or determinism; the practice remains to be seen.

**Appendix Table A1: Importance of environment or lifestyle, and of environment or lifestyle for explaining racial or ethnic differences, by race or ethnicity. GKAP 2011** (in same order as tables 2 and 3)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *Whites* | | *Blacks* | | *Asians* | | *Multiracials* | | *Hispanics* | |
| *1.All or most to do environ-*  *ment or lifestyle (rather than genes)* | *2.All or most to do with environment or lifestyle (rather than genetic inheritance through race or ethnicity)* | *same as 1.* | *same as 2.* | *same as 1.* | *same as 2.* | *same as 1.* | *same as 2.* | *same as 1.* | *same as 2.* |
| *Eye color* | 1 | 3 | 6 | 7 | 2 | 3 | 3 | 4 | 6 | 6 |
| *Sickle cell anemia* | 3 | 3 | 6 | 9 | 6 | 9 | 2 | 7 | 15 | 20 |
| *Cystic fibrosis* | 4 | 10 | 10 | 16 | 5 | 14 | 4 | 16 | 14 | 19 |
| *Gay or lesbian* | 37 | 51 | 54 | 63 | 32 | 44 | 39 | 60 | 38 | 49 |
| *Heart disease* | 4 | 12 | 10 | 19 | 6 | 14 | 4 | 16 | 14 | 21 |
| *Intelligence* | 10 | 28 | 17 | 37 | 12 | 22 | 11 | 42 | 15 | 26 |
| *Aggressive*  *or violent* | 27 | 27 | 36 | 36 | 28 | 28 | 26 | 26 | 29 | 29 |
| *The flu* | 75 | 77 | 69 | 75 | 67 | 72 | 78 | 82 | 66 | 71 |

**Appendix Table A2: How much of the human genome is common to both blacks and whites, by partisanship? GKAP 2011**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *More than half* | *About half* | *Less than half* | *DK/NA* |
| *Republican* | 48 | 9 | 7 | 36 |
| *Independent* | 25 | 5 | 3 | 67 |
| *Democrat* | 45 | 9 | 8 | 39 |

**Appendix Table A3: Importance of genetic inheritance, and of racial or ethnic genetic inheritance, by partisanship, GKAP 2011.**

% agreeing with “all or almost all to do with genes” and “all or almost all to do with a person’s race or ethnicity”

(in same order as table 2)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | *Party Identification* | | | | | |
| *Republican* | | *Independent* | | *Democrat* | |
| *Genes* | *Race* | *Genes* | *Race* | *Genes* | *Race* |
| *Eye color* | 90% | 80 | 72% | 58 | 86% | 76 |
| *Sickle cell anemia* | 77 | 72 | 61 | 44 | 73 | 63 |
| *Cystic fibrosis* | 65 | 47 | 52 | 28 | 61 | 45 |
| *Gay or lesbian* | 17 | 10 | 19 | 6 | 28 | 13 |
| *Heart disease* | 20 | 14 | 28 | 26 | 20 | 13 |
| *Intelligence* | 20 | 12 | 27 | 8 | 18 | 12 |
| *Aggressive or violent* | 6 | 5 | 16 | 10 | 8 | 5 |
| *The flu* | 3 | 2 | 3 | 3 | 2 | 2 |
| *N* | 1364 | | 158 | | 2008 | |

**References**

Bliss, Catherine (2012). Race Decoded: The Genomic Fight for Social Justice. Stanford CA: Stanford University Press.

Cohn, Jay (2006). "The Use of Race and Ethnicity in Medicine: Lessons from the African-American Heart Failure Trial." Journal of Law, Medicine, and Ethics xx(xx): 552-554.

Committee on Genetics, The American College of Obstetricians and Gynecologists (2011). "Update on Carrier Screening for Cystic Fibrosis." Obstetrics and Gynecology 117: 1028-1031.

Converse, Philip (1964). "The Nature of Belief Systems in a Mass Public." Ideology and Discontent. David Apter. New York: Free Press**:** XXX.

Fullwiley, Duana (2007). "The Molecularization of Race: Institutionalizing Human Difference in Pharmacogenetics Practice." Science as Culture 16(1): 1-30.

Herrnstein, Richard and Charles Murray (1996). Bell Curve: Intelligence and Class Structure in American Life. New York: Free Press.

Human Genome Project Information, Genomic Science Program (n.d.) "Genetic Disease Profile: Sickle Cell Anemia." <http://www.ornl.gov/sci/techresources/Human_Genome/posters/chromosome/sca.shtml>

Jayaratne, Toby et al. (2006). "White Americans' Genetic Lay Theories of Race Differences and Sexual Orientation." Group Processes and Intergroup Relations 9(xx): 77-94.

--- (2009). "The Perennial Debate: Nature, Nurture, or Choice? Black and White Americans' Explanations for Individual Differences." Review of General Psychology 13(1): 24-33.

Kahn, Jonathan (2013). Race in a Bottle: The Story of Bidil and Racialized Medicine in a Post-Genomic Age. New York: Columbia University Press.

Morning, Ann (2011). The Nature of Race: How Scientists Think and Teach About Human Difference. Berkeley CA: University of California Press.

National Museum of Natural History (n.d ( c. 2013)) "What Does It Mean to Be Human? Genetic Evidence, DNA." <http://humanorigins.si.edu/evidence/genetics>

Roberts, Dorothy (2011). Fatal Invention: How Science, Politics, and Big Business Re-Create Race in the Twenty-First Century. New York: New Press.

Satel, Sally (2002)."I Am a Racially Profiling Doctor." New York Times Magazine. May 5, 56, 58.

Sheldon, Jane et al. (2007). "Beliefs About the Etiology of Homosexuality and About the Ramification of Discovering Its Possible Genetic Origin." Journal of Homosexuality 52(3-4): 111-150.

Shostak, Sara, et al. (2009). "The Politics of the Gene: Social Status and Beliefs About Genetics for Individual Outcomes." Social Psychology Quarterly 72(1): 77-93.

Singer, Eleanor (2010). "The Effect of Question Framing and Response Options on the Relationship between Racial Attitudes and Beliefs About Genes as Causes of Behavior." Public Opinion Quarterly 74(3): 460-476.

Singer, Eleanor, et al. (2004). "Racial and Ethnic Variations in Knowledge and Attitudes About Genetic Testing." Genetic Testing 8(1): 31-43.

Singer, Eleanor et al. (2007). "Beliefs About Genes and Environment as Determinants of Behavioral Characteristics." International Journal of Public Opinion Research 19(3): 331-353.

Worcel, Manuel and Jay Cohn (2012). "Letter to the Editor." New York Times. December 31, xx.

1. It is perhaps worth reiterating, with Ann Morning (Morning 2011) that not all social scientists are social constructionists, nor do all geneticists agree that something like “race” is a useful term for helping to understand human biological differences. I am referring in this discussion either to a field or discipline, or occasionally to a dominant tendency in a given group. [↑](#footnote-ref-1)
2. Like Roberts, Kahn is a pure social constructionist: “race is not a coherent genetic concept; rather, it is best understood as a complex and dynamic social construct” (Kahn 2013: 2). [↑](#footnote-ref-2)
3. No item directly asks respondents for their view of social constructionism versus acceptance of the view that race has a biological component, because we expected that to be too abstract an issue to be meaningful to most non-experts. But the array of questions included in GKAP (and other surveys) enables us to approach the conceptual question in concrete ways. [↑](#footnote-ref-3)
4. The next version of the paper will include regression analyses. [↑](#footnote-ref-4)
5. See Singer et al. 2010 for an analysis and discussion of the implications of asking about genetic differences among individuals versus among racial groups. [↑](#footnote-ref-5)
6. Perhaps not surprising, since the questions were contiguous. A useful follow-up to GKAP would be a survey that randomly offers one but not both of these question batteries to a given respondent. The items in each battery were randomized when presented to GKAP respondents. [↑](#footnote-ref-6)
7. The carrier rate for cystic fibrosis before testing is: Ashkenazi Jewish, 1/24; non-Hispanic white, 1/25; Hispanic white, 1/58; African American, 1/61; and Asian American, 1/94 ([Committee on Genetics 2011](#_ENREF_3)).

   “Sickle cell anemia . . . is particularly common among people whose ancestors come from sub-Saharan Africa; Spanish-speaking regions (South America, Cuba, Central America); Saudi Arabia; India; and Mediterranean countries such as Turkey, Greece, and Italy. . . . The disease occurs in about 1 in every 500 African-American births and 1 in every 1000 to 1400 Hispanic-American births” ([Human Genome Project Information n.d.](#_ENREF_7)) [↑](#footnote-ref-7)
8. The next iteration of this paper will include more formal statistical tests. [↑](#footnote-ref-8)
9. For example, whites are more likely than blacks to see eye color, cystic fibrosis and homosexuality as inherited, but the two races are similar with regard to sickle cell anemia and intelligence, and blacks are more likely than whites to see heart disease or aggressiveness as inherited. [↑](#footnote-ref-9)
10. For unknown reasons, the largest fall-off in all groups is for cystic fibrosis (row 3); it may be that respondents simply do not know much about the etiology of this disease. [↑](#footnote-ref-10)
11. In a survey in 2000, Eleanor Singer and her co-authors found that three-fifths of white respondents and a third of Latinos would want prenatal testing for cystic fibrosis. In contrast over three-fourths of blacks would want prenatal testing for sickle cell anemia [respondents had been informed earlier in the survey that “sickle cell anemia is a genetic blood disease that affects primarily African-Americans;” it appears that respondents were not similarly informed about cystic fibrosis ([Singer, Antonucci et al. 2004](#_ENREF_18)): 33]. [↑](#footnote-ref-11)
12. Jayaratne and her co-authors find that whites are more likely than blacks to attribute differences among individuals and groups to genetic causes ([Jayaratne 2006](#_ENREF_8)). However, their initial response option offered only the choice of agreement or disagreement with the statement, “do you think any part of the behavior below is due to the genes [the person inherits/people inherit]?” In an arena so unfamiliar to most respondents, this seems like a flawed question.

    In a later analysis, Jayaratne and colleagues found that blacks consistently rated personal choice as more important than genes or environment in explaining seven behaviors; whites’ explanations varied greatly according to the behavior ([Jayaratne 2009](#_ENREF_9)).

    To my knowledge, no analyses address the views of groups other than blacks and whites. [↑](#footnote-ref-12)
13. The main exceptions appear in appendix table A1. Blacks and multiracials are much more likely than Asians and Hispanics to see homosexuality as environmental or a choice, and blacks and multiracials are much more likely than Asians and Hispanics to see intelligence as environmental or a choice. The former finding implies relative conservatism among blacks and multiracials; the latter finding implies relative conservatism among Hispanics and Asians. Probably what these patterns mostly show is that “liberalism” and “conservatism” are themselves elite social constructions, that do little to shape people’s attitudes on unfamiliar issues. This is an old finding ([Converse 1964](#_ENREF_4)) in a very new context. [↑](#footnote-ref-13)
14. The same holds for partisanship; see appendix table A3. [↑](#footnote-ref-14)
15. Singer et al., however, find a different type of politicization in a 2006 self-selected online sample: the higher the respondent’s score on a four-item index of racial prejudice, “the greater the likelihood that some part of the difference between racial groups will be attributed to genetic causes” ([Singer 2010](#_ENREF_17)): 470). This is, of course, just what social constructionists fear, although the authors note that “we should be cautious about inferences beyond this set of volunteer respondents” (ibid., p. 464). [↑](#footnote-ref-15)
16. Singer and her co-authors found in a 2004 GSS survey that “contrary to our expectations, Black respondents assigned significantly *lower* (more genetic) ratings to the vignettes; better educated respondents (high school graduates or more) assigned significantly higher (more environmental) ratings” ([Singer 2007](#_ENREF_19)): 342). Respondents were offered four vignettes in which the race or ethnicity, gender, and desirable or undesirable characteristics of the vignette subject were varied; they were asked to rate the relative importance of genetic inheritance and environment along a 21 point scale in explaining the characteristic.

    Shostak et al. similarly found that “those with no college rated genetic makeup as relatively more important for success in life that did respondents with some college” (2009: 85-86). [↑](#footnote-ref-16)