

Essay

# The Fallacy of Equating the Hereditarian Hypothesis with Racism

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**Abstract:** There is a large amount of evidence that groups differ in average cognitive ability. The hereditarian hypothesis states that these differences are partly or substantially explained by genetics. Despite being a positive claim about the world, this hypothesis is frequently equated with racism, and scholars who defend it are frequently denounced as racists. Yet equating the hereditarian hypothesis with racism is a logical fallacy. The present article identifies ten common arguments for why the hereditarian hypothesis is racist and demonstrates that each one is fallacious. The article concludes that society will be better served if the hereditarian hypothesis is treated the same way as any other scientific claim—critically, but dispassionately.

**Keywords:** hereditarian hypothesis; racism; logical fallacy; category error; ethics

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Of all vulgar modes of escaping from the consideration of the effect of social and moral influences on the human mind, the most vulgar is that of attributing the diversities of conduct and character to inherent natural differences.

—John Stuart Mill, 1848, *Principles of Political Economy*

## 1. Introduction

There is a large amount of evidence that groups differ in average cognitive ability. This is true for comparisons across nations [1–3], as well as comparisons across races within a country [4–6]. For example, national differences in cognitive ability show up on numerous international student tests, which all load onto to a common ‘international *g*-factor’ [7], and average scores on international student tests correlate at around  $r = 0.85$ , with national IQs obtained by averaging scores from diverse samples [7–9]. Likewise, in the United States, where the phenomenon has been studied most extensively, race differences in cognitive ability show up on numerous national surveys and school assessment tests [6,10,11]. Although there is dispute over their exact size (e.g., [12]) and whether they are changing over time (e.g., [13]), few psychometricians deny the existence of group differences in cognitive ability.

There are two main competing explanations for these differences. The environmentalist hypothesis states that group differences are explained entirely (or almost entirely) by the environment, i.e., that certain groups achieve lower average scores on IQ tests due to factors such as poor schooling, bad home environment, labour-market discrimination, stereotype threat, and harmful subcultures (e.g., [13–15]). Conversely, the hereditarian hypothesis states that group differences are explained partly or substantially by genetics, i.e., that certain groups achieve lower average scores on IQ tests due to a lower frequency of genetic variants that enhance cognitive ability and a higher frequency of genetic variants that reduce cognitive ability (e.g., [5,6,16]). I refer to the ‘hereditarian hypothesis’ following Gottfredson [17], and for the sake of brevity, I refer to those who have defended the hypothesis as ‘hereditarian scholars’.

Note that several prominent hereditarian scholars have claimed that both environmental factors and genetic factors contribute to group differences. For example, Herrnstein and Murray [4] state:

‘It seems highly likely to us that both genes and the environment have something to do with racial differences. What might the mix be? We are resolutely agnostic on that issue; as far as we can determine, the evidence does not yet justify an estimate.’ Likewise, Rushton and Jensen [5] state: ‘It is essential to keep in mind precisely what the two rival positions do and do not say—about a 50% genetic–50% environmental etiology for the hereditarian view versus an effectively 0% genetic–100% environmental etiology for the culture-only theory. *‘The defining difference is whether any significant part of the mean Black–White IQ difference is genetic rather than purely cultural or environmental in origin.’* Hence, the primary divide within the scholarly community is between those who believe that only environmental factors matter, and those who believe that both genetic and environmental factors matter. Indeed, most environmentalist scholars argue that if any genetic differences do exist, they are likely to be trivial.

Despite being a positive claim about the world, the hereditarian hypothesis is frequently equated with racism, and scholars who defend it are frequently denounced as racists [18–22]. In some cases, the attribution of racism is merely insinuated, while in other cases, it is stated openly and explicitly. This tendency has arguably had two major adverse consequences on intelligence research. The first is the pervasive mischaracterisation of the field in psychology textbooks and the popular media, including widespread repetition of factual errors and logical fallacies, as well as claims that contested hypotheses are ‘pseudoscientific’ [20,23–27]. The second adverse consequence is recurring witch-hunts against intelligence researchers, including protests, petitions, threats, physical attacks and institutional sanctions [28–31]. Indeed, a number of scholars have argued that those who subscribe to the hereditarian hypothesis should be held to higher evidentiary standards than their peers or even censored entirely [32–37]. Yet others have maintained that scientists have a duty to pursue the truth wherever it may lead, and that stifling free inquiry can itself do active harm [22,38–42].

Insofar as the hereditarian hypothesis is a scientific claim and not a normative judgement or an imperative to do harm, equating it with racism is a logical fallacy—specifically, a category error ([43], Chapter 1). A category error is the fallacy of assigning a property to something which could not possibly possess that property. In this case, the property of ‘racist’ is assigned to a scientific hypothesis, something which may be true or false, but which cannot be racist under any reasonable definition of that term. Note that the category error is an informal logical fallacy, not a structural error in deductive reasoning.

The next section of this paper identifies ten common arguments for why the hereditarian hypothesis is racist and demonstrates that each one is fallacious. (Quotations illustrating each of these arguments are provided in the Supporting Information, see the Supplementary File.) Of course, some readers will already accept that equating the hereditarian hypothesis with racism is a logical fallacy. Indeed, many will consider the proposition obvious or trivial. However, a sufficiently large number of scholars evidently do not that it is worth taking the time to refute the various arguments that have been put forward in the literature. Rather than a pedantic or antagonistic activity, this should be considered a constructive one: Explaining why such arguments are fallacious serves to increase overall understanding and may go some way to remedying the two adverse consequences mentioned above. The overall aim of this paper is *not* to argue that the hereditarian hypothesis is correct, but simply to show that it is not racist.

## 2. Arguments for Why the Hereditarian Hypothesis is Racist

### 2.1. *The Hereditarian Hypothesis is Racist Because There Is No Such Thing as Intelligence*

The first three arguments (2.1, 2.2 and 2.3) all take the same form. Each one is roughly equivalent to the following: ‘Some aspect of the hereditarian hypothesis is pseudoscientific. Pseudoscientific claims about low-scoring groups are tantamount to racial slurs. Therefore, the hereditarian hypothesis is racist.’ When evaluating these three arguments, one might be inclined to object that even a pseudoscientific claim cannot be racist. Rather than being racist, such a claim would simply be wrong (either contradictory, unfalsifiable or patently erroneous). However, it is easy to see how a sufficiently

hyperbolic pseudoscientific claim could be construed as a racial slur. For example, consider the following pseudoscientific claim: ‘Blacks score 10 standard deviations below whites on every test of cognitive ability, meaning that there is virtually no overlap between the two distributions.’ It could be argued that, since this claim is so manifestly absurd, the only reasonable way of interpreting it is as a racial slur.

Nevertheless, contrary to argument 2.1, intelligence is *not* pseudoscientific. Hence, claims about group differences in cognitive ability made on the basis of differential IQ-test performance are not pseudoscientific either. Intelligence is typically operationalised as the standardised score derived from a battery of mental tests. This operationalisation is based on *g*-factor theory, which posits that a general factor of intelligence influences individuals’ performance across diverse mental tests [44,45] *g*-factor theory is powerful because it accounts for the central fact about intelligence testing, namely that scores on all tests of mental ability (reaction time, vocabulary, mental rotation, etc.) are positively correlated with one another, meaning that individuals who score above average on one test (e.g., reaction time) also tend to score above average on other sub-tests (e.g., vocabulary). It can be contrasted with Gardner’s [46] theory of multiple intelligences, which denies that a single *g*-factor influences performance across diverse tests. However, Gardner’s theory is no longer given much credence within the psychometrics community. As Deary [47] notes:

Among psychologists working in this field there is no longer any substantial debate about the structure of human mental ability differences [ . . . ] A general factor emerges that accounts for about half of the individual differences among the scores for a group of people, and there are group factors that are narrower abilities, and then very specific factors below that.

IQ has a number of important psychometric properties, in virtue of which it has been described as ‘psychology’s greatest single achievement’ [23], and as one of the ‘of the most reliable and valid instruments in all of psychological science’ [48]. (In addition to the properties listed, IQ research has higher statistical power than much of the rest of social and medical science [49]):

1. *High reliability across test batteries:* When several different batteries of tests are administered to a sample of individuals and separate *g*-factors are extracted from those batteries, they correlate with one another at around  $r = 0.95$  [50,51].
2. *High stability over the life-course:* IQ measured at age 11 is correlated at  $r > 0.70$  with IQ measured at age 77, meaning that between-individual differences in cognitive ability within cohort are largely preserved from childhood to old age [52].
3. *High heritability:* Evidence from twin studies, adoption studies and molecular–genetic studies indicates that variance in IQ has a large genetic component [53–56]. According to a recent literature review, the heritability of IQ in adulthood (for Western populations) is approximately 60% [57].
4. *Good construct validity:* IQ is correlated with numerous measures of brain structure and function, including white matter volume, cortical thickness and neural efficiency [58]. The correlation between IQ and overall brain size is  $r = 0.31–0.40$  [59].
5. *Good criterion validity:* IQ is correlated with numerous life outcomes, including educational attainment, income, mortality, criminality and job performance [4,60,61]. In some domains, IQ even has incremental validity within the top 1% of scores [62].
6. *Universality:* When batteries of tests are administered to samples from non-Western countries, a *g*-factor typically emerges that accounts for approximately half the variance [63]. *g*-factors have even been extracted from test batteries administered to primates and other nonhuman animals [64–66].

## 2.2. The Hereditarian Hypothesis is Racist Because There Is no Such Thing as Race

Just as IQ is not pseudoscientific, neither is the concept of race as a partly social, *partly* biological construct. Before proceeding, it is worth explaining why race is indeed a partly social construct [67].

One important reason is that systems of racial classification have varied over time and from one society to another [68,69]. For example, the United States has historically adhered to the so-called 'one-drop rule', according to which an individual who has any amount of African ancestry is considered black (say, even someone who had only 1 African great-grandparent out of 8). By contrast, societies such as South Africa and Brazil have long distinguished between 'black', 'white' and one or more intermediary categories, comprising individuals of mixed ancestry (e.g., 'coloured', 'mullato'). In addition, some early anthropologists used 'race' to refer to major continental groups (e.g., 'Caucasoid', 'mongoloid'), whereas others used it refer to finer-grained regional groups (e.g. 'Nordic', 'Celtic').

Another important reason why race should be seen as a partly social construct is that, in contemporary societies where people are largely free to choose their own racial identity, two individuals with the same mixed ancestry may nonetheless have different racial identities. For example, consider two individuals, each with 1 African great-grandparent and 7 European great-grandparents. One might choose to identify as 'black', while the other might choose to identify as 'mixed race'. And each of them would be perfectly entitled to do so. Some scholars have even gone as far as to argue that it is legitimate for individuals with totally European ancestry to identify as 'black', in the same way that it is legitimate for individuals who were born as members of one sex to identify as members of the other sex [70]. However, this point of view remains a matter of considerable controversy [71].

Of course, just because the meaning of 'race' has varied over time and across societies, this does not mean that it is a wholly social construct. Indeed, there is a strong case to be made for treating race as a *partly biological* construct too [72–81]. It is important to note that treating race as a partly biological construct does not imply endorsement of the *essentialist* concept of race, which posits that human beings can be divided into a small number of races in such a way that *all* members of each race share certain traits with one other that they do not share with *any* members of other races (see [75]). This concept implies that each race has its own 'essence', something which is obviously false, and perhaps not even verifiable. As Sesardic [75] notes, Theodor Dobzhansky pointed out more than 40 years ago that if human populations really were entirely non-overlapping, then 'we would not have races, we would have distinct species.' (In other words, the essentialist concept of race is really a straw man.) In fact, the essentialist concept of race is demonstrably false, given that different populations show a relatively large degree of overlap on most traits, the majority of human genetic variation is distributed along a gradient and many humans are of mixed ancestry [82]. Today, scientists often eschew the term 'race' due to its essentialist connotations, instead employing terms such as 'ancestral population' or 'biogeographic ancestry group' [78,79,83,84]. Note that in any case, nothing about the veracity of research into group differences hinges on whether 'race' is valid scientific label. If one objects to claims about 'race differences', then one could just as well talk about 'differences between biogeographic ancestry groups'.

In contrast to the long-debunked essentialism of the past, a more realistic concept of biological race is one that postulates partially discontinuous genetic variation both within and between ancestral populations. (The existence of population structure *within* continental populations is evident from findings such as the one made by Novembre et al. [85].) This more realistic concept recognises that the discontinuities between ancestral populations correspond to natural geographic barriers, such as oceans (e.g., the Atlantic), deserts (e.g., the Sahara) and mountain ranges (e.g., the Himalayas), which impeded gene flow for substantial periods of time during human evolutionary history [86]. As Xing et al. [87] note:

Patterns of human genetic variation are influenced by mating patterns, and the latter are in turn influenced by geographic and cultural factors (e.g., mountain ranges, language, religious practices). Consequently, it is not surprising that human genetic variation, while correlated with geographic location, is not perfectly clinal.

The more realistic concept of race also recognises that, insofar as human population structure can be observed at multiple levels (continental, subcontinental, national, subnational, etc.), there is nothing 'special' or 'natural' about the continental and subcontinental levels—those which correspond

to the concept of race as it has been traditionally understood [88]. In some scientific contexts, variation between races will matter most, while in other scientific contexts, variation at some other level will matter most. The evidence for this concept of biological race is strong:

1. *Evidence from comparing genetic clusters to racial identities:* By genotyping a diverse sample of individuals at a sufficiently large number of genetic loci, and then subjecting the data to cluster analysis, it is possible to classify individuals by race with >95% accuracy [89–92]. As Edwards [93] pointed out, due to the correlation structure among loci, correctly classifying individuals by race is possible even though 85–90% of genetic variation is within races.
2. *Evidence from comparisons within and between clusters:* When genetic clusters correspond to five major ancestral populations (Africans, Eurasians, East Asians, Amerindians and Australians), subpopulations separated by a given geographic distance are found to be more genetically similar if they are from the same cluster than if they are from different clusters [94].
3. *Evidence from comparisons across species:* The amount of genetic variation between ancestral human populations is comparable to the amount of genetic variation between subspecies in some nonhuman animals for which there are recognised subspecies [74,78]. And in fact, overall human mitochondrial variation is about average within the animal kingdom [90].
4. *Evidence from anatomy and physiology:* Ancestral human populations show differences in numerous anatomical and physiological traits [79,81,95,96]. Moreover, because the differences in such traits are correlated, it is often possible to classify skeletal remains by race with >90% accuracy, so long as a sufficiently large number of traits are measured [73,97–99].

Treating race (or ‘biogeographic ancestry group’) as a partly biological construct boils down to the claim that human genetic variation is not perfectly clinal, i.e., that it is at least somewhat discontinuous. However, even if human genetic variation were found to be perfectly clinal, this would not render the hereditarian hypothesis pseudoscientific. On average, there would still be genetic variation between nations and self-identified races, and that variation could in principle covary with their average cognitive abilities. It does not matter for the hereditarian hypothesis whether the genetic variation between groups corresponds to partially discontinuous clusters or arbitrary sections of a continuum.

### 2.3. The Hereditarian Hypothesis Is Racist Because It Is Not Scientifically Plausible

Some critics of the hereditarian hypothesis concede that IQ is a valid psychological construct, and that human populations can to some extent be demarcated genetically. But they insist that the hereditarian hypothesis is racist (i.e., tantamount to a racial slur) on the grounds that it is not scientifically plausible. There are several versions of this argument, and they need to be dealt with in turn. Note that the aim of this section is not to argue that the hereditarian hypothesis is correct, but just that it *is* scientifically plausible.

#### 2.3.1. It Is Patently False that All White People are Genetically Smarter than All Black People

The claim that ‘all white people are genetically smarter than all black people’ is of course false. As far as the author is aware, no serious hereditarian scholar has ever advanced such a claim. As noted above, the hereditarian hypothesis states that ‘certain groups achieve lower average scores on IQ tests due to a lower frequency of genetic variants that enhance cognitive ability and a higher frequency of genetic variants that reduce cognitive ability.’ It does not state that ‘every member of each high-scoring group possesses certain genes for IQ, and no member of any low-scoring group possesses those genes.’ Since the hereditarian hypothesis purports to explain differences in group-averages, it is perfectly consistent with the observation that some members of low-scoring groups will possess more genetic variants that enhance cognitive ability than nearly all members of high-scoring groups. In other words, it recognises that there will be overlap between the distributions of genetic variants affecting cognitive ability in different populations.

### 2.3.2. There has not been Enough Time for Differences between Populations to Evolve

After migrating out of Africa, humans reached South Asia and Australia by around 65,000 years ago and Europe by around 45,000 years ago [100,101]. There is no good reason to believe that differences between populations could not have evolved during the succeeding millennia, as evidenced by the rather obvious fact that populations have diverged in skin colour, hair texture, bone structure, etc. Indeed, evidence suggests that human evolution actually accelerated during the past 40,000 years, due to the fact that humans dispersed across a much greater range of environments than we had previously inhabited and hence came under new selective pressures [102,103]. Note that among the most important of these new selective pressures was human culture itself [73,104]. Moreover, there are numerous traits for which evidence of genetic contributions to population differences has already been reported [73,79,105].

### 2.3.3. IQ is Polygenic, and It Takes Longer for Natural Selection to Work on Polygenic Traits

Some traits that vary across populations (such as lactose tolerance, or adaptation to high altitude) appear to be controlled by one or just a few genes (e.g., [103]). By contrast, there may be hundreds or even thousands of genetic variants affecting cognitive ability [56,57]. However, just because cognitive ability is a polygenic trait, there is no good reason to believe that natural selection could not have altered mean trait values in different populations since they began diverging [73], [106]. As Cochran [106] notes, 'In the standard formulation for estimating the effects of selection, the number of genes influencing the trait drops out of the equation entirely. It just doesn't matter.' Just like IQ, height is polygenic [107], and there is already rather strong evidence that population differences in height are partly or substantially explained by genetics [108–110]. What is more, a recent study reported that a polygenic score for educational attainment has been decreasing at a rate of 0.01 standard units per decade in Iceland, which, according to the authors' simulations, equates to a decline in mean IQ of 0.3 points per decade [111]. The authors noted that 'this would be a very substantial effect if the trend persists for centuries.'

### 2.3.4. Average IQ Increased over the Course of the 20th Century, so Group Differences in IQ Must Be Explained by the Environment

It is indeed true that average IQ increased in many countries over the course of the 20th century, a phenomenon known as the 'Flynn effect' [112]. However, there are good reasons to believe that the causes of the Flynn effect and the causes of the black/white IQ gap are different [113–115], meaning that the mere existence of the Flynn effect does not undermine the hereditarian hypothesis. In addition, it is perfectly possible for a polygenic trait to increase over time within two populations for environmental reasons, even while the difference in mean trait value between those two populations persists for genetic reasons. For example, even though average male height increased by more than 12 cm in both Germany and Japan during the 20th century, Japanese men today are still almost 9 cm shorter than their German counterparts [116]. And this is in spite of the fact that they live around two years longer, on average [117]. Similarly, despite the fact that Asian Americans have higher life expectancy and higher median income than white Americans, they are about 6 cm shorter on average [118–120]. This rather strongly suggests that genes contribute to race differences in a polygenic trait within the contemporary United States.

### 2.3.5. IQ is not Like Height because More IQ Is Always Better

The argument that natural selection could not have favoured a higher level of cognitive ability in some populations than in others on the grounds that 'more IQ is always better' is obviously mistaken, since it implies that all primate species should have the same average cognitive ability as humans. What the argument fails to recognise is that there are costs as well as benefits to investing extra physiological resources in larger, more-complex brains [121,122], and the difference between these costs and benefits may not be the same in all environments [123,124]. Indeed, the argument betrays an

ignorance of basic evolutionary theory, according to which, natural selection favours whatever traits enhance reproductive success within an organism's current environment, regardless of whether those traits are considered 'valuable' by modern humans [125,126]. Hence even though higher cognitive ability may be considered equally 'valuable' in all modern environments, one cannot assume that it enhanced reproductive success to an equal extent in all pre-modern environments.

### 2.3.6. There is Absolutely No Evidence that Genes Contribute to IQ Differences between Populations

It is certainly true that no conclusive evidence in favour of the hereditarian hypothesis has been presented in the literature. Yet it is also true that no conclusive evidence in favour of the environmentalist hypothesis (i.e., zero-genetic contribution to group differences) has been presented either. What is more, there *is* a certain amount of preliminary evidence supporting the hereditarian hypothesis [5,6,16,127–132], and it would be quite illogical to dismiss a theory as racist just because it had not been demonstrated conclusively. As Sesardic [83] notes, 'the hypothesis about inter-racial psychological differences is dismissed with sophisticated arguments that wouldn't be tolerated in almost any other area of scholarly debate.'

### 2.3.7. 'No Serious Scholar Believes that Genes Contribute to IQ Differences between Populations'

It is simply false to claim that 'no serious scholar believes that genes contribute to IQ differences between populations.' Three of the foremost proponents of the hereditarian hypothesis were ranked among the top 100 most eminent psychologists of the 20th century [133]: Hans Eysenck (12th), Raymond Cattell (16th) and Arthur Jensen (47th). Both discoverers of the structure of DNA, James Watson and Francis Crick, separately expressed their belief in the hereditarian hypothesis [134,135]. In a 1984 survey, Snyderman and Rothman [136] asked a large sample of American psychologists about the source of the black/white IQ gap. Fifteen percent said it was entirely due to the environment; 45% said it was a product of both genes and environment; 1% said it was entirely due to genes; 24% said the data were insufficient to justify an opinion; and 14% did not answer. Hence, among those who gave an answer, more than 50% believed that the gap was at least partly due to genes. In a more recent survey, Rindermann et al. [137] asked a smaller sample of intelligence researchers about the source of the black/white IQ gap, and 83% said it was at least partly due to genes. (However, it should be noted that the response rate to Rindermann et al.'s survey was rather low.)

### 2.3.8. IQ Differences between Populations are Obviously Explained by Factors Like Slavery and Colonialism

It seems eminently plausible that factors like slavery and colonialism might help to explain group differences in cognitive ability ([138], Chapter 1). However, this does not mean that such factors are capable of explaining group differences in their entirety. What is more, the hypothesis that slavery and colonialism are sufficient to explain group differences is, by itself, rather ad hoc. History is replete with calamities of one form or another, and there is no particular reason to believe that slavery and colonialism had a uniquely deleterious effect on average cognitive ability. In the absence of such a reason, it makes more sense to postulate that societal oppression *in general* has a deleterious effect on average cognitive ability. Yet when formulated this way, the hypothesis runs into obvious difficulties. For example, despite facing widespread stigmatisation and being forcibly incarcerated for the duration of World War II, Japanese Americans typically achieve higher average scores on cognitive tests than white Americans [5,6]. And despite being subjected to centuries of persecution followed by one of the most catastrophic genocides in all of human history, Ashkenazi Jews typically achieve higher average scores on cognitive tests than any other ethnic group [11,16]. In other words, the relationship between societal oppression and average cognitive ability is far from straightforward.

#### 2.4. *The Hereditarian Hypothesis is Racist Because IQ is Different from Other Traits*

Argument 2.4 goes as follows: ‘Society attaches a great deal of importance to IQ. It is racist to claim that genes might contribute to group differences on a trait to which society attaches a great deal of importance. Therefore, the hereditarian hypothesis is racist.’ There are two major problems with this argument. First, even if IQ were the only trait to which society attached a great deal of importance, this would still not make the hereditarian hypothesis racist. After all, if it is racist to claim that genes contribute to *group* differences in IQ on the grounds that society attaches a great deal of importance to IQ, then it must be similarly offensive to claim that genes contribute to individual differences in IQ. Yet there is now overwhelming evidence that genes do contribute to individual differences in cognitive ability [53,55–57,139], and few serious scholars would assert that positing a genetic contribution to individual differences is somehow offensive. Of course, there are a small number of scholars who might insist on doing so, but the onus is on them to explain why they are not committing a category error.

Second, cognitive ability is by no means the only trait to which society attaches a great deal of importance, and there is already quite strong evidence that genes contribute to group differences on other socially valued traits. For example, various athletic abilities are highly prized by society: Elite sports stars often accrue huge fan bases and earn vast sums of money during their careers. And there is already quite strong evidence that genes contribute to group differences in athletic ability [95,140]. Similarly, height is highly prized by society, especially when it comes to males: Taller men are considered more attractive by women [141], receive more unsolicited messages on dating websites [142] and attain higher overall reproductive success [143]. And again, there is already quite strong evidence that genes contribute to group differences in height [108–110]. Hence, it is false to claim that cognitive ability is fundamentally different from other traits on which group means may differ for genetic reasons.

#### 2.5. *The Hereditarian Hypothesis is Racist Because It Could Only Be of Interest to Racists*

Argument 2.5 goes as follows: ‘Only racists could be interested in the hereditarian hypothesis. Anything that could only be of interest to racists is itself racist. Therefore, the hereditarian hypothesis is racist.’ The main problem with this argument is that there are in fact several reasons why one might be interested in the hereditarian hypothesis; the assertion that the hypothesis could only be of interest to racists is just an opinion. First, one might be interested in the hereditarian hypothesis on the grounds that, when attempting to solve major social problems, ‘a preference for ignorance over knowledge is difficult to defend’ [144]. Second, one might be interested in the hereditarian hypothesis on the grounds that it could help to dispel pernicious myths surrounding how certain groups came to be so successful [18,22,145]. Third, one might be interested in the hereditarian hypothesis on the simple grounds that truth is an end in and of itself. Indeed, numerous philosophers have argued that ‘truth’ is one of three fundamental desiderata, the others being ‘beauty’ and ‘the good’. These three ‘transcendentals’, as they are known, correspond to objects worthy of our pursuit, which are incommensurable with one another [146].

#### 2.6. *‘The Hereditarian Hypothesis Is Racist because Hereditarian Scholars Have Said Racist Things or Supported Racist Policies’*

Argument 2.6 goes as follows: ‘Some scholars who subscribe to the hereditarian hypothesis have said racist things or supported racist policies. Any hypothesis pertaining to race differences that is endorsed by such scholars is racist. Therefore, the hereditarian hypothesis is racist.’ The problem with this argument is that there is no good reason to accept the premise that hypotheses endorsed by racist scholars are, ipso facto, racist. Consider someone who wanted to show that Jews have higher average incomes than other groups because of a vast Jewish conspiracy. Such an individual might well deny the hereditarian hypothesis and affirm the environmentalist hypothesis. In that case, both the hereditarian hypothesis and its negation (the environmentalist hypothesis) would be ‘racist’, which seems like a logical absurdity. Furthermore, Charles Darwin said a number of things that it would be reasonable to

describe as 'racist' in his book *The Descent of Man*, which is partly concerned with race differences [147]. Argument 2.6 would therefore imply that the most foundational theory in evolutionary science (i.e., the theory of natural selection) is racist, insofar as Charles Darwin was one of the two scholars who first proposed it. This, again, is a patent absurdity.

### *2.7. The Hereditarian Hypothesis Is Racist because It Was Used to Justify Racist Policies in the Past*

Argument 2.7 goes as follows: 'The hereditarian hypothesis has been used in the past to justify policies of persecution and subjugation. Any hypothesis that has been used to justify such policies is racist. Therefore, the hereditarian hypothesis is racist.' The problem with this argument is that it ignores the crucial distinction between scientific theories themselves, and the uses to which they have been put. During World War II, physicists working on the Manhattan Project developed weapons that were used to kill more than 100,000 Japanese civilians. While philosophers may disagree over whether the Allies' decision to use nuclear weapons was morally justified, no serious scholar would assert that the science of nuclear physics is 'murderous', 'homicidal' or 'anti-Japanese'. After all, it is just a body of scientific knowledge.

Throughout human history, coercive regimes have appealed to all sorts of claims about group differences to justify the persecution of those they deemed inferior or despicable. In some cases, they appealed to pernicious myths about the groups they wished to persecute. But in other cases, they appealed to the mere fact that those groups were in some way different (e.g., different appearance, different religion, different political beliefs). And oftentimes, the groups in question really were different. For example, the Protestants and Catholics who slaughtered one another during the European Wars of Religion really did have different religious beliefs, and it was typically on this basis alone that they slaughtered one another. Yet this does not mean that the factual claim, 'Catholics believe in the primacy of the Pope' is 'anti-Catholic'. Rather, it is the normative claim, 'individuals who believe in the primacy of the Pope should be slaughtered' that is 'anti-Catholic'. And precisely the same reasoning applies to the hereditarian hypothesis. As Singer [144] notes, 'no matter what the facts on race and intelligence turn out to be, they will not justify racial hatred, nor disrespect for people of a different race' (and see [18], Chapter 8).

### *2.8. The Hereditarian Hypothesis Is Racist because It Could be Used to Justify Racist Policies in the Future*

Argument 2.8 goes as follows: 'The hereditarian hypothesis could be used to justify policies of racial subjugation and exploitation in the future. Any hypothesis that could be used to justify such policies is racist. Therefore, the hereditarian hypothesis is racist.' This argument is fallacious for precisely the same reason that argument 2.7 is fallacious, namely that it conflates a particular scientific hypothesis with uses to which that scientific hypothesis could be put. For example, the claim that 'Shiites believe Muhammad's rightful successor was a direct descendent of his family' could be used to justify policies of religious persecution by Sunnis, but this does not mean that the claim itself is 'anti-Shiite'. Once again, it is the separate normative claim, 'individuals who believe Muhammad's rightful successor was a direct descendent of his family should be persecuted' that is 'anti-Shiite'. And, as noted above, precisely the same reasoning applies to the hereditarian hypothesis.

### *2.9. The Hereditarian Hypothesis Is Racist because It Implies Low-Scoring Groups Deserve to be Poor*

Argument 2.9 goes as follows: 'If genetic factors explain why certain groups achieve low average scores on IQ tests, then those groups deserve to be poor. Any hypothesis that implies low-scoring groups deserve to be poor is racist. Therefore, the hereditarian hypothesis is racist.' The problem with this argument is that there are perfectly good reasons to reject the premise that a genetic contribution to group differences implies that low-scoring groups deserve to be poor [22,42]. For example, the philosopher Ronald Dworkin [148,149] argued that material inequalities are unjust if they arise due to circumstances beyond an individual's control. Since an individual cannot control which genes they will inherit, material inequalities arising due to genetic differences are unjust and should therefore

be reduced or eliminated through social intervention (e.g., redistribution of income). According to Dworkin's theory of 'luck egalitarianism', as it is known, the case for reducing racial inequalities could actually be stronger under the hereditarian hypothesis than under some versions of the environmentalist hypothesis, e.g., those emphasising bad home environment or harmful subcultures. (Note that environmentalist scholars who emphasise factors such as harmful subcultures, which are not external to the low-scoring group in question, are sometimes denounced as racists too.)

### 2.10. *The Hereditarian Hypothesis Is Racist because It Implies Low-Scoring Groups Are Inferior to High-Scoring Groups*

Argument 2.10 goes as follows: 'If genetic factors explain group differences in IQ, then low-scoring groups are inferior to high-scoring groups. Any hypothesis that implies low-scoring groups are inferior to high-scoring groups is racist. Therefore, the hereditarian hypothesis is racist.' The problem with this argument is that there is no good reason to accept the premise that a genetic contribution to group differences implies that low-scoring groups are somehow inferior to high-scoring groups. To begin with, because there will inevitably be a certain amount of overlap between groups, some members of the putatively 'inferior' group will score higher than nearly all members of the putatively 'superior' group. And it seems rather illogical to refer to 'inferior' and 'superior' groups under such circumstances. But more importantly, there is no reason why anyone should accept that there is such a thing as 'group superiority' in the first place (except in the purely arithmetic sense of one mean being higher than another). The claim that some groups are metaphysically 'inferior' to others is at best a matter of subjective judgement and at worst simply meaningless.

## 3. Conclusions

There is a large amount of evidence that groups differ in average cognitive ability. The hereditarian hypothesis states that these differences are partly or substantially explained by genetics. Despite being a positive claim about the world, this hypothesis is frequently equated with racism, and scholars who defend it are frequently denounced as racists. Yet equating the hereditarian hypothesis with racism is a logical fallacy—specifically, a category error. This paper has identified ten common arguments for why the hereditarian hypothesis is racist and demonstrated that each one is fallacious. Before offering some suggestions for how to move forward in the debate over group differences, it is worth considering when one would be justified in describing a *particular hereditarian scholar* as racist.

### 3.1. *Describing a Particular Hereditarian Scholar as Racist*

There appears to be at least one important situation in which it would be legitimate to describe such an individual as racist, and one in which it would not be legitimate to do so. The situation in which it *would* be legitimate to describe a hereditarian scholar as racist is the obvious one, namely if they had said racist things (e.g., a racial slur), supported racist policies (e.g., denial of equal rights) or taken racist actions (e.g., a hate crime). In that case, the following argument would be valid: 'Hereditarian scholar X said a racist thing, supported a racist policy or took a racist action. Individuals who say racist things, support racist policies or take racist actions are racist. Therefore, hereditarian scholar X is racist.' Note that here, X's being a hereditarian scholar is logically irrelevant to X's being racist. Indeed, the preceding argument would be no less valid if 'hereditarian scholar X' were replaced with 'environmentalist scholar Y'.

The situation in which it would *not* be legitimate to describe a particular hereditarian scholar as racist is if he were described as such merely in virtue of having defended the hereditarian hypothesis. In other words, the following argument is decidedly not sound: 'Hereditarian scholar X defended the hereditarian hypothesis. The hereditarian hypothesis is tantamount to a racial slur. Individuals who make racial slurs are racist. Therefore, hereditarian scholar X is racist.' In particular, the following premise is false: 'The hereditarian hypothesis is tantamount to a racial slur.' As noted above, since the hereditarian hypothesis is neither a normative judgement nor an imperative to do harm, equating it

with racism is a category error. To summarise: Although there are circumstances in which it would be legitimate to describe a particular hereditarian scholar as racist, doing so *just because* they had defended the hereditarian hypothesis is not one of them.

It is also worth noting that one may object to group differences research on consequentialist grounds without assuming that hereditarian scholars are necessarily racist. For example, in their article calling for scholars to ‘voluntarily refrain from the investigation of genotypic racial differences in performance on IQ tests’, Block and Dworkin [32] state, ‘We want to make it clear that we are not accusing Herrnstein or Jensen of being racists—either conscious or unconscious’ (see footnote 69 in their article). Indeed, if one were convinced that the potential costs of carrying out group differences research massively outweighed any potential benefits, then one would presumably regard hereditarian scholars as in some way irresponsible. But that of course would be quite different from regarding them as racist. (For arguments against the claim that the costs of carrying out group differences research outweigh the benefits, see [22,40,42].)

### 3.2. *Suggestions for How to Move Forward in the Debate over Group Differences*

At the present time, we do not yet have a precise estimate of the genetic contribution to group differences in cognitive ability. It may turn out that genes make a substantial contribution to group differences. Alternatively, it may turn out that they make little or no contribution. However, as larger datasets are assembled and new methods for analysing them are developed, more and more empirical evidence will become available. Eventually, we *will* have a reasonably precise estimate of the genetic contribution to group differences. Indeed, such an estimate may be forthcoming within the next five or ten years. Note that even if Western researchers continue to eschew the topic out of a desire for self-preservation (e.g., [28–31]), researchers from other parts of the world may not feel so inhibited [42].

Between now and the time when we finally do have an answer, what approach should scholars take? Should we maintain the taboo around research on group differences in cognitive ability or should we opt for an altogether different approach? The present author believes that society will be better served if the hereditarian hypothesis is treated the same way as any other scientific claim—critically, but dispassionately. What does this mean in practice? The following suggestions seem especially pertinent:

1. *Recognise that equating the hereditarian hypothesis with racism holds our morals hostage to the facts.* As numerous scholars have noted over the years (see [22]), equating the hereditarian hypothesis with racism implies that if group differences were ever shown to be genetic, then racism would be justified. Yet this is a fallacy, and one that has the potential to cause harm.
2. *Recognise that there are no necessary implications of group differences research.* Scientific statements are logically independent from normative conclusions. This means that under some moral philosophies, confirmation of the hereditarian hypothesis would weaken the case for social intervention, but under other moral philosophies, it would strengthen the case for social intervention [22].
3. *Recognise that there are material costs to stifling debate around taboo topics.* For example, suppressing group differences research could erode the public’s trust in other areas of science [42]. In addition, some *alternative* explanations for group differences have also been used to justify policies of persecution and subjugation [18,22].
4. *Castigate researchers for their moral and political beliefs, not their scientific ones.* If a researcher draws a normative implication from group differences research that is racist or in some other way objectionable, it may be reasonable to censure him on those grounds. But there should be a presumption against castigating researchers for their scientific beliefs [41].
5. *Attempt to falsify the hereditarian hypothesis.* Although the hereditarian hypothesis should not be dismissed as racist, every attempt should be made to falsify it in the Popperian sense [150]. This means that it should be tested as rigorously as possible: Scholars should not ignore the hereditarian hypothesis on the basis that it is too controversial.

It is worth concluding with the words of philosopher and psychometrician James Flynn, who noted the following at the end of his recent article on the ethics of group differences research [41]:

Suppressing free inquiry is by its nature an expressive of contempt for truth by power. The truth can never be racist.

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