

The Race and Intelligence Debate: An Epistemic Crisis in Method and Substance

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Across a myriad of standardized cognitive tests, racial and ethnic groups differ (Jencks and Phillips, 1998; Thernstrom and Thernstrom, 2003). The mission of ‘participants’ in the *race and intelligence debate* is to explain why such gaps exist—so that they may be closed if at all possible. The Debate seems, however, mired in the persistent use of scientifically invalid, misleading, and antiquated constructs, and methodology—I.e., the belief in the existence of human races, IQ heritability, and the nature versus nurture paradigm (Block, 2002; Fish, 2002; Graves, 2004; Horn, 2002). The driving undercurrent appears to be conservative and liberal ideological approaches to what race is and what it means for human mental capabilities. An ideology is a system of beliefs, attitudes, and assumptions which guide individual and group behavior (Marger 2002: 379). An ideology may rationalize a culture’s structures of power and privilege. It is ‘faith’ based, and usually unrelated and/or unresponsive to empirical facts.

The “race” component of the Debate entails a non-existent entity: there are no substantive human races (Fish, 2002: 114; Graves, Jr. 2004: 2; Venter 2000:www.genome.gov). The heritability of human traits, like intelligence or IQ, are not fixed (Lewontin 1995). That is to say that there is no intrinsic heritability value for IQ, or any other human characteristic. And perhaps most importantly, the correct way of conceptualizing the intricate nexus between organisms’ phenotypes, genotypes, constituent environments is not ‘nature versus nurture,’ but a phenomenon called the *norm of reaction* (Lewontin, p. 21).

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The most widespread conceptual framework used in the Debate is that of nature versus nature. Thus scholars wonder to what extent racial IQ differences can be traced to racial biology, or genetic differences, and how much is due to environmental differences between or among racial groups. The fact of the matter is that biology,

physical appearance, behavior, and environment complexly intertwine.

Lewontin characterizes this interconnectedness as a *norm of reaction*, such that there is a specific phenotype for an organism, per genotype, per environment (p. 21). If an “IQ gene” existed, for instance, we could expect

different mean IQ scores among persons with this gene, across a range of environments which influence IQ scores. We might chart the mean scores of said individuals in several contexts and then record the average score which arises. This chart of IQ averages across environments for people with ‘the’ IQ gene, constitutes the norm of reaction for that gene. No IQ gene has been identified. Intelligence or performance on IQ exams results from many genes, many environmental factors, and motivational or volitional states as well.

Race: Where ar’t thou?

Human genomic research has discovered that our species is not divisible into races; and yet articles on racial differences, particularly in IQ or intelligence, abundantly persist. Biologists define races as subspecies or geographical variant within a species whose members tend to resemble each other more than they resemble members of other races or subspecies (Birdsell 1975: 567). All races within a species can interbreed. The completion of the Human Genome Project in 2000, identified all 21,000 genes in our species, and put to rest the notion that humanity is divisible into human races (<https://www.genome.gov/10001356/june-2000-white-house-event/>).

Biologist Craig Venter announced this point in his 2000 presidential—“Rose Garden”—acknowledgement that the entire human genome had been sequenced or identified. No racial genes or combination of genes with racial importance were discovered among our identified genes. Molecular biologist Graves Jr. (2004) pointed out that the validity of human races failed another “test” which population geneticists use to decide if any species of plant or animal harbors racial diversity or subspecies (Graves, p. 11).

The method used by population geneticists involves determining the statistical genetic parameters of a formula which divides mean genetic distances between populations within a

species, by average genetic variation within the populations of that species (p. 11): ‘subspeciality’ = GD/GV . Genetic distance (or “GD”) refers to inter-population differences in the frequencies of particular genes. Imagine, for the sake of argument, that 10 percentage points separates the frequency of blood type “A” between persons in Charlotte, and New York City (e.g., 40% vs. 50%). The observed percentage point differences in the frequency of blood type “A” *between* NYC and Charlotte is called genetic distance. Genetic variation within populations, or “GV,” makes up the denominator in this equation; and refers to the average number of distinct alleles for a trait *within* any selected population of a species. Suppose that only blood type “A” exists among Texans, but Californians possess blood types A, B, O, and AB, and the sickle cell blood type. We would say that there is much greater genetic blood type variation within the California gene pool than within the Texas gene pool. Races or subspecies are indicated in a species if the product of the formula exceeds “1.” The human product in this formulation equals .4, or two percent divided by five percent (p. 11). Since the result of this evaluation for humankind is significantly below one, the *race* component has been effectively removed from the “race and intelligence debate.” Psychologist Jefferson M. Fish (2002) characterized the ‘situation’ in the following way:

If race in the biological sense happens to be a nonexistent entity, like phlogiston, then we have to do some rethinking about who we are, how we have been understanding ourselves, and how we have been viewing others and relating to them. (p. 114)

A great deal of the research on intelligence or IQ, in chief, is on estimating its genetic underpinnings, most often with an eye toward explaining so-called racial differences. This orientation, if you will, seems ideological rather than scientifically empirical—or should one say that it no longer seems to be an empirically driven enterprise.

The American cultural disposition to use ‘tools’ like IQ scores against racial minorities, especially African Americans, dates back, at least, to one of our primary Founding Fathers, Thomas Jefferson. In *Notes on Virginia* he opined about the relative mental abilities of Negroes and Whites: “in memory they are equal to whites, in reason much inferior (Jefferson 1787, cited in Omi and Winant, 1994: 63).” He further claimed that Negro imagination was dull, tasteless, and anomalous. Jefferson ultimately concluded that Blacks were inferior to Whites and should not be accorded equal political or social rights.

The “great emancipator,” Abraham Lincoln, also believed that Negroes should be denied equal social and political rights because of their “obvious physical” inferiority to whites. He even thought that Negroes should be denied citizenship (Woods 2012, p. 179). Thus, the importation of the idea of the measurability of intelligence from France, and Alfred Binet, created a “scientific” framework for justifying the denial of racial equality to not only Negroes but to European and Asian immigrants flocking to our shores in the early part of the twentieth century.

Just as social scientists have widely concluded that race is a social construction which varies from culture to culture and from one historical age to another, IQ and/or intelligence appears socially constructed as well. Scholars can’t agree on whether IQ is a unitary measurable mental faculty called “g” or whether there are multiple intelligences. Is IQ normally distributed? Does IQ stop growing in a person’s mid teenage years, or does it increase throughout a lifetime? Should we use relative measures of “mental” vs chronological age? Is it primarily under genetic control or environmental control? Can it be measured? Do IQ tests really measure intelligence? How important is intelligence to social success? Is IQ rising or degenerating in our society?

One pioneer in ‘intelligence theory’ and definition, James R. Flynn (2009) offered the following critique of another, Arthur Jensen:

Jensen ... (1972, p. 76) wrote one passage in which he said that “intelligence, by definition, is what intelligence tests measure” ... if intelligence is what current IQ tests measure, we could not invent a better IQ test because the new test, by definition, would be a departure from what measures intelligence. (Flynn, p. 49)

The great Arthur Jensen abandoned his endeavor to define intelligence, in 1998, vowing to avoid using the term (p. 50). Flynn decided to offer a “pre-theory concept of intelligence (pp. 53-54),” rather than define it. He proposed that intelligence consisted of 6 basic components: (1) mental acuity; (2) habits of mind; (3) attitudes; (4) knowledge and information; (5) speed of information processing; and (6) memory, whereby one accesses knowledge and information (pp. 53-54). He argued that most persons who think about intelligence have all of the above traits in mind (p. 54)). The point here is not to detail the vagaries of Flynn’s, Jensen’s or anyone’s particular definition or conceptualization of intelligence, but rather to highlight that the nature of intelligence and/or IQ is highly contested; yet the typical layperson, and scholar, treat the subject as settled.

What generally goes for race is, as previously mentioned, socially constructed, that is to say that what laypersons, and perhaps most scientists, have in mind when they think, write, or speak about race is a cultural or “folk” idea about race (ibid Fish). Each person believes that her belief is ontologically valid. Socially constructed races, or what Fish and cultural anthropologists call racial “folk taxonomies,” vary across cultures and over time in the same nation (p. 117).

Americans once envisioned several sub-Black races for example. People of African descent were divided into Mulattoes, Quadroons, and

Octoroons (Davis, 1991). Mulattoes were considered half White and half Black. Quadroons and octoroons were of 1/4th and 1/8th African descent respectively; these terms have French origins. This system of racial designation was inherited from “French and Spanish Catholic culture (Davis, p. 36).” Some Catholic thinkers conceptualized human bodies, if you will, in terms of what was known as the Great Chain of Being (Beltran 2007, p. 254).

Near the top of the chain, close to the angels, were Europeans. At the bottom, just above the apes, were the Africans. Some Catholic intellectuals—many of them racially mixed—challenged this old and rigid hierarchy of beings, bodies, and spirits by granting that human mixtures could possess many admirable traits. Furthermore, the traits of the various “mixed” races could be the result of geography and climate or could be altered by geography and climate (p. 254). A number of labeled *mestizaje/castas* (e.g., mixed ancestry, p. 253) emerged in Spanish, French, and British colonial America. The 1803 acquisition of the Louisiana Purchase Territory from France, greatly impacted early 19th century racial discourse, laws, and customs in Louisiana, Georgia, South Carolina, and Virginia. Though mixed children were usually treated as Blacks, they were able to occupy, for a time, an in-between status. They could do business as free people with both Whites and Blacks, for a while, or until the 1850s. Virginia law considered individuals who were one fourth or less African descent as legally White (Davis, p. 48). Increasing tensions over the continuance and spread of slavery led to greater and greater hostility toward mulattoes and other mixed-race categories. Fears over the possibility of slave insurrections and abolition led to laws clearly placing mixed people in the Negro category. The default position in America became the view that any African ancestry meant that one was Black--hence the one-drop-rule, or the one African ancestor rule.

Whatever the rules governing racial identity were, they aimed to control African Americans as

property during slavery, and as socio-political subordinates, and exploited labor under the Jim Crow system. We are now in the last grasp of the centuries old system of promoting or maintaining White superiority over Black, Native American, and Latinos Americans. It is hard to see how the ‘debate’ will last amid the inexorable expansion of scientific conclusion that race is a myth and the failure to reach a consensus on what IQ or intelligence is.

There exists an ironic conceptual/logical ‘twist,’ if you will, to the one-drop-rule. Appreciating this irony should at least contribute to eliminating the rule from jurisprudence, if not from cultural tradition at large. The flip side of this rule implies that members of all other races have no “African” blood or DNA. Clearly this is impossible, since humanity (*Homo sapiens*) evolved in Africa over 200,000 years ago (Marean 2016, p. 37). Hence, the logical interpretation of the rule is that all people are “Black,” or that persons with no African ancestry, are not people—could they be extraterrestrials? Appreciating this irony should at least contribute to eliminating the rule from jurisprudence, if not from cultural tradition.

“G” that’s smart!

The meaning of intelligence and whether IQ tests are actually or ‘effectively’ measuring intelligence is unclear—as stated earlier. Indeed, there are many competing definitions of intelligence, any of which are difficult to scientifically operationalize (ibid., Fish). But whatever IQ is measuring, and whatever intelligence is, the popular conceptualization of them is that intelligence and/or IQ are most likely genetically determined, or “genetic” in nature and most likely governed by a unitary or single factor called “g” (Fish, p. xi). This g or general intelligence factor is widely considered 40% to 80% inherited by the scientific community (ibid., p. xi). A prevailing view is that a largely genetic basis for intelligence means that the racial differences in intelligence scores are essentially genetic and

cannot be materially changed (p. xii). We are therefore wasting public money on social programs and governmental policies aimed at doing so.

The biological metric used to support this worldview is called *heritability*. Heritability concerns the ratio of genetically caused variation of a trait in a population to all other sources of a trait's variability (Block, p. 284). The values range from zero to one. The former means that a trait's variability within a population is completely driven by environmental factors and/or environmental variability. The latter means that a trait is wholly constrained by genes. The heritability of a phenotype is situational and population specific. Change the genes, or gene frequencies in a group, or environmental variables (or their variability), and the heritability value changes too.

A belief in a relatively 'high' IQ heritability value implies that the genetic make-up of people would have to be changed in order to raise its mean intelligence score. Many scholars have proposed raising the cognitive level of segments of society via selective mating, otherwise known as *eugenics* (Welch 2002, p. 181). The term was introduced to science in the late 1800s by British naturalist and mathematician, Sir Francis Galton (p. 181). Galton defined eugenics as the study of methods to socially control the improvement or impairment of the physical or mental qualities of the races in future generations.

Galton was a cousin of famed evolutionist Charles Darwin; and he was inspired, after reading Darwin's "Origin of species" to promote the improvement of humanity through encouragement of mating of the "best" and "brightest" among us (p. 182). He believed that humankind was at a "miserably low" stage (ibid., p. 182). Henry Herbert Goddard and other American eugenicists adapted and used Alfred Binet's IQ test to 'assess' the mental quality of European immigrants arriving at Ellis Island in 1912. Goddard believed that he proved Galton's theory

that Jews, Catholics, Southern Europeans, and Central Europeans were inferior races (p. 183). Goddard went on to propose that all American children be given IQ tests; and that the "feeble-minded" be interned in state institutions where they would not be allowed to procreate. Unfortunately, several southern and midwestern states took this view to heart—even before it was championed by Goddard. In 1907 Indiana allowed the involuntary sterilization of inmates in state prisons who were insane, mentally challenged, convicted rapists, or repeat offenders (p. 188). Support for the above practice rose in the South, among health professionals, social reformers, and scientists.

Compulsory sterilization was not uncommon for Southern criminals, alcoholics, epileptics, and hospitalized or imprisoned African Americans. South Carolina imposed mandatory sterilization of African Americans in its state mental institutions, in the 1940s and 1950s. Louisiana, Georgia, Mississippi, and Virginia had compulsory sterilization programs in their mental hospital systems at least two decades earlier (ibid., p. 188). Between 1933 and 1977 North Carolina had the Eugenics Board of North Carolina (www.nytimes.com). Over 7500 persons were involuntarily sterilized by this Board. Persons deemed feeble-minded, undereducated girls who had been raped by older men, poor teens from large families, and individuals with epilepsy were among the victims. Racial minorities were overrepresented in this group because they were disproportionately represented among the poor. The state of North Carolina officially apologized to victims and surviving family members in 2002 (Binker, 2005).

Regarding the use of heritability studies in the discourse on racial differences in IQ or intelligence, it must be understood that we cannot extrapolate the heritability numbers of one group to another. Hence, knowledge of the heritability of a trait among Whites, for instance, does not allow

one to say what it is among Blacks, Asians, or any other human population; nor does it allow us to account for differences between groups, even if the values in both groups are identical. Biologist and geneticist Alan R. Templeton (2002) asserts that the concept of heritability is completely irrelevant to the question of genetic differentiation of intelligence (or any trait) among human populations because it is defined as a within-population construct (p. 49).

Perhaps what is most ignored about heritability is that a trait has no intrinsic heritability score. Lewontin proffers that: heritability is not of a trait but of a trait in a particular population in a particular set of environments (p. 71). Study after study keeps trying to pin down an intrinsic heritability value for IQ, despite geneticists pointing out that such a thing does not exist. We have, therefore, irrational and unscientific paradigmatic orientations, so to speak, amid a major “debate,” and research campaign, that keeps insisting on studying racial differences while races don’t biologically exist; and applying a methodological tool, heritability analysis, that is fundamentally irrelevant to the primary question—why are there group differences in cognitive achievement?

Finally, the broader debate occurs under the obsolete paradigm of *nature versus nurture*. The heredity studies are trying to pin down, once and for all, whether IQ is primarily a matter of nature or nurture—e.g., genetic or environmental, and whether racial differences, particularly in terms of racial differences in intelligence, are primarily a matter of genes (Fraser, 1995; Jacoby et al., 1995; Murray and Herrnstein, 1994; Ruston and Jensen 2010).

The lexeme “nature” refers to behaviors and/or physical features of an organism that are innate or inborn. We might ask, to what extent are racial attributes innate? Or to what degree are racial differences “genetically” determined? Liberal scholars have long insisted that racial disparities in IQ are environmentally constrained. The fact of the

matter is that organisms are the result of an intricate nexus between genes, environment, and chance or developmental noise (ibid. Lewontin). We can add cognitive volition to the human condition as well. Indeed, a newly appreciated phenomenon known as epigenetics has been added to our conceptual tool kit as well (Spector, 2012). However, the appropriate construct for understanding organisms, as described earlier is the “norm of reaction:” there is a certain phenotype for a specific genotype, per environment (p. 21). If we think about a relationship between a person’s body weight and the calories he or she regularly consumes, then we might construct a table showing what that person’s body weight tends to be across a range of caloric intake—assuming we know which gene or genes may be involved in human weight variation. This data would allow us to create a norm of reaction for a ‘weight-genotype,’ so to speak.

Chance is rarely factored into discussions about the “nature” of the dimensions organisms can manifest. The fact of the matter is that unique organisms can arise from identical environmental and genetic systems due to chance. And some of these chance factors can lead to profoundly different phenotypes. Consider testicular feminization syndrome. During the course of embryonic development a fetus is exposed to a cascade of testosterone from its mother. The chromosomally male fetus usually responds by developing male genital architecture, since all embryos are initially “female” anatomically. Due completely to stochastic processes, a small fraction of embryos fail to respond in this manner and continue developing as females. This condition is often not diagnosed until puberty. Until then, such males are raised as females (p. 40).

The rapidly developing molecular field of epigenetics, reveals how emotional, psychological, and environmental circumstances can switch genes off, or on, so that even identical twins may evidence very different phenotypes.—as chronicled in *Identically Different* (ibid., Spector). The “new”

phenotypes expressed by such ‘switching’ can be passed on to offspring, even grandchildren. Epigenetics can, thus, be thought of as a form of Lamarckian evolution, or what Spector called “soft inheritance” (p. 27).

Ultimately, we are forced by scientific discovery, to revolutionize our thinking about race, about group differences, about intelligence and/or IQ, and about human group differences in these two characteristics (e.g., IQ test results, and intelligence). Ideological biases seem to propel many scholars in the arena of race and intelligence differences to stay with antiquated, invalid, and misleading ideas to the detriment of things immensely critical to modern society—and ultimately social equality. Concerning a classic tome in the Debate, *The Bell Curve*, Horn (2002) concluded:

...in general, the major claims of *The Bell Curve* are not well based on scientific knowledge. The information the book presents is sometimes incorrect. Other times it is not well qualified. Often it is a selection from the total information, omitting information that is not supportive. Often this information is slanted in interpretation to provide the most favorable arguments in support of the book’s claims. The concluding chapters of *The Bell Curve* present arguments opposing policies of affirmative action and aid to dependent children. The book appears to have been written to justify and supply support for these arguments. It is thus in the end a political treatise, a statement about what should and should not be social policy. (p. 322)

Obviously, we must endeavor to understand the sources of social group differences in cognitive achievement, whether the disparities exist among ethnic, gender, class, religious, or immigration status groups—and of course among the intersections of the above. There is no reason,

however, why this inquiry cannot proceed on an epistemically sound basis. Our future depends on this. The prospective current, and future quality of millions of lives demand it.

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