

## Charles Murray is once again peddling junk science about race and IQ

Podcaster and author Sam Harris is the latest to fall for it.

By Eric Turkheimer, Kathryn Paige Harden, and Richard E. Nisbett | May 18, 2017, 9:50am EDT



Middlebury College students turn their backs to author Charles Murray during a lecture in March. The talk had to be moved, and a professor hosting Murray was injured in a scuffle. | Lisa Rathke / AP

### THE **BIG IDEA**

Outside contributors' opinions and analysis of the most important issues in politics, science, and culture.

Charles Murray, the conservative scholar who co-authored *The Bell Curve* with the late Richard Herrnstein, was recently denied a platform at Middlebury College. Students shouted him down, and one of his hosts was hurt in a scuffle. But Murray recently gained a much larger audience: **an extensive interview** with best-selling author Sam Harris on his popular *Waking Up* podcast. That is hardly a niche forum: *Waking Up* is the fifth-most-downloaded podcast in iTunes's Science and Medicine category.

In an episode that runs nearly two and a half hours, Harris, who is best known as the author of *The End of Faith*, presents Murray as a victim of "a politically correct moral panic" — and goes so far as to say that Murray has no intellectually honest academic critics. Murray's work on *The Bell Curve*, Harris insists, merely summarizes the consensus of experts on the subject of intelligence.

The consensus, he says, is that IQ exists; that it is extraordinarily important to life outcomes of all sorts; that it is largely heritable; and that we don't know of any interventions that can improve the part that is not heritable. The consensus also includes the observation that the IQs of black Americans are lower, on average, than that of whites, and — most contentiously — that this and other differences among racial groups is based at least in part in genetics.

Harris is not a neutral presence in the interview. “For better or worse, these are all facts,” he tells his listeners. “In fact, there is almost nothing in psychological science for which there is more evidence than for these claims.” Harris belies his self-presentation as a tough-minded skeptic by failing to ask Murray a single challenging question. Instead, during their lengthy conversation, he passively follows Murray to the dangerous and unwarranted conclusion that black and Hispanic people in the US are almost certainly genetically disposed to have lower IQ scores on average than whites or Asians — and that the IQ difference also explains differences in life outcomes between different ethnic and racial groups.

In Harris’s view, all of this is simply beyond dispute. Murray’s claims about race and intelligence, however, do not stand up to serious critical or empirical examination. But the main point of this brief piece is not merely to rebut Murray’s conclusions per se — although we will do some of that — but rather to consider the faulty path by which he casually proceeds from a few basic premises to the inflammatory conclusion that IQ differences between groups are likely to be at least partly based on inborn genetic differences. These conclusions, Harris and Murray insist, are disputed only by head-in-the-sand elitists afraid of the policy implications.

(In the interview, Murray says he has modified none of his views since the publication of the book, in 1994; if anything, he says, the evidence for his claims has grown stronger. In fact, the field of intelligence has moved far beyond what Murray has been saying for the past 23 years.)

### **The flawed logic of the Murray argument about race and IQ**

Murray’s premises, which proceed in declining order of actual broad acceptance by the scientific community, go like this:

- 1) Intelligence, as measured by IQ tests, is a meaningful construct that describes differences in cognitive ability among humans.
- 2) Individual differences in intelligence are moderately heritable.
- 3) Racial groups differ in their mean scores on IQ tests.
- 4) Discoveries about genetic ancestry have validated commonly used racial groupings.
- 5) On the basis of points 1 through 4, it is natural to assume that the reasons for racial differences in IQ scores are themselves at least partly genetic.

Until you get to 5, none of the premises is completely incorrect. However, for each of them Murray’s characterization of the evidence is slanted in a direction that leads first to the social policies he endorses, and ultimately to his conclusions about race and IQ. We, and many other scientific psychologists, believe the evidence supports a different view of intelligence, heritability, and race.

We believe there is a fairly wide consensus among behavioral scientists in favor of our views, but there is undeniably a range of opinions in the scientific community. Some well-informed scientists hold views closer to Murray’s than to ours. And there are others who challenge views that we accept about the utility of the

general concepts of intelligence and heritability. What we attempt to do here is shed light on the status of Murray's claims and logic in a way that Harris failed to do in the interview.

Let's take Murray's principles one at a time.

**Intelligence is meaningful.** This principle comes closest to being universally accepted by scientific psychologists. Every clinical psychology program in the country trains students in IQ testing, tens of thousands of IQ tests are given in schools every year, and papers in mainstream scientific journals routinely include information about intelligence, even when IQ is not the main object of study. On a more basic level, who doesn't notice that some people have larger vocabularies than others, can solve harder math problems or organize more complex projects? IQ tests reliably assess these individual differences. Moreover, people who do well on one kind of ability test also tend to do well on others, a phenomenon that is referred to as *g*, as in general intelligence.

But observing that some people have greater cognitive ability than others is one thing; assuming that this is because of some biologically based, essential inner quality called *g* that *causes* them to be smarter, as Murray claims, is another. There is a vibrant ongoing debate about the biological reality of *g*, but intelligence tests can be meaningful and useful **even if an essential inner *g* doesn't exist at all**. Good thinkers do well at lots of things, so a test that measures quality of thinking is a good predictor of life outcomes, including how well a person does in school, how well she performs in her job, even how long she lives.



US Army recruits taking an intelligence test at Fort Lee, in Virginia, 1917. | Time Life Pictures / Getty

**Intelligence is heritable.** To say that intelligence is heritable means that, in general, people who are more similar genetically are also more similar in their IQ. Identical twins, who share all their DNA, have more similar IQs than fraternal twins or siblings, who only share half. Half-siblings' IQs are even less similar than that; cousins, still less.

Heritability is not unique to IQ; in fact, **virtually all differences among individual human beings are somewhat heritable**. Pairs of identical twins are more likely to be similar not only in height and weight and skin color compared with fraternal twins, but also in their marital status, their political views, and TV-watching habits.

Murray takes the heritability of intelligence as evidence that it is an essential inborn quality, passed in the genes from parents to children with little modification by environmental factors. This interpretation is much too strong — a gross oversimplification. Heritability is not a special property of certain traits that have turned out to be genetic; it is a description of the human condition, according to which we are born with certain biological realities that play out in complex ways in concert with environmental factors, and are affected by chance events throughout our lives.

Today we can also study genes and behavior more directly by analyzing people's DNA. These methods have given scientists a new way to compute heritability: Studies that measure DNA sequence variation directly have shown that pairs of people who are not relatives, but who are slightly more similar genetically, also have more similar IQs than other pairs of people who happen to be more different genetically. These "DNA-based" heritability studies don't tell you much more than the classical twin studies did, but they put to bed many of the lingering suspicions that twin studies were fundamentally flawed in some way. Like the validity of intelligence testing, the heritability of intelligence is no longer scientifically contentious.

The new DNA-based science has also led to an ironic discovery: Virtually none of the complex human qualities that have been shown to be heritable are **associated with a single determinative gene**! There are no "genes for" IQ in any but the very weakest sense. Murray's assertion in the podcast that we are only a few years away from a thorough understanding of IQ at the level of individual genes is scientifically unserious. Modern DNA science has found hundreds of genetic variants that each have a very, very tiny association with intelligence, but even if you add them all together they predict only a small fraction of someone's IQ score. The ability to add together genetic variants to predict an IQ score is a useful tool in the social sciences, but it has not produced a purely biological understanding of why some people have more cognitive ability than others.



Sam Harris, the podcaster and author, recently put his stamp of approval on Murray's work on race and IQ. | Charles Ommannney / Getty

Most crucially, heritability, whether low or high, implies nothing about modifiability. The classic example is height, which is strongly heritable (80 to 90 percent), yet the average height of 11-year-old boys in Japan has increased by more than 5 inches in the past 50 years. A similar historical change is occurring for intelligence: Average IQ scores are increasing across birth cohorts, such that Americans experienced an 18-point gain in average IQ from 1948 to 2002. And the most decisive and permanent environmental intervention that an individual can experience, adoption from a poor family into a better-off one, **is associated with IQ gains** of 12 to 18 points.

These observations do not undermine the conclusion that intelligence is heritable, but rather the naive assumption that heritable traits cannot be changed via environmental mechanisms. (Murray flatly tells Harris that this is the case.)

**Race differences in average IQ score.** People who identify as black or Hispanic in the US and elsewhere on average obtain lower IQ scores than people who identify as white or Asian. That is simply a fact, and stating it plainly offers no support in itself for a biological interpretation of the difference. To what extent is the observed difference in cognitive function a reflection of the myriad ways black people in the US experience historical, social, and economic disadvantage — earning less money, suffering more from chronic disease, dying younger, living in more dangerous and chaotic neighborhoods, attending inferior schools? Or, following Murray, is IQ an essential inborn characteristic of a group's genetic background, a biologically inherent deficit in cognitive ability that in part *causes* their other disadvantages?

**Race and genetic ancestry.** First, a too-brief interlude about the biological status of race and genetic ancestry. The topic of whether race is a social or biological construct has been as hotly debated as any topic in the human sciences. The answer, by our lights, isn't that hard: Human evolutionary history is real; the more recent sorting of people into nations and social groups with some degree of ethnic similarity is real; individual and familial ancestry is real. All of these things are correlated with genetics, but they are also all continuous and dynamic, both geographically and historically.

Our lay concept of race is a social construct that has been laid on top of these vastly more complex biological realities. That is not to say that socially defined race is meaningless or useless. (Modern genomics can do a good job of determining where in Central Europe or Western Africa your ancestors resided.) However, a willingness to speak casually about modern racial groupings as simplifications of the ancient and turbulent history of human ancestry should not deceive us into conjuring back into existence 19th-century notions of race — Caucasoid, Negroid, Mongoloid, and all that.

Murray talks about advances in population genetics as if they have validated modern racial groups. In reality, the racial groups used in the US — white, black, Hispanic, Asian — are such a poor proxy for underlying genetic ancestry that no self-respecting statistical geneticist would undertake a study based only on self-identified racial category as a proxy for genetic ancestry measured from DNA.

**Genetic group differences in IQ.** On the basis of the above premises, Murray casually concludes that group differences in IQ are genetically based. But what of the actual evidence on the question? Murray makes a rhetorical move that is commonly deployed by people supporting his point of view: They stake out the claim that *at least some* of the difference between racial groups is genetic, and challenge us to defend the claim that none, absolutely zero, of it is. They know that science is not designed for proving absolute negatives, but we will go this far: There is currently no reason at all to think that any significant portion of the IQ differences among socially defined racial groups is genetic in origin.

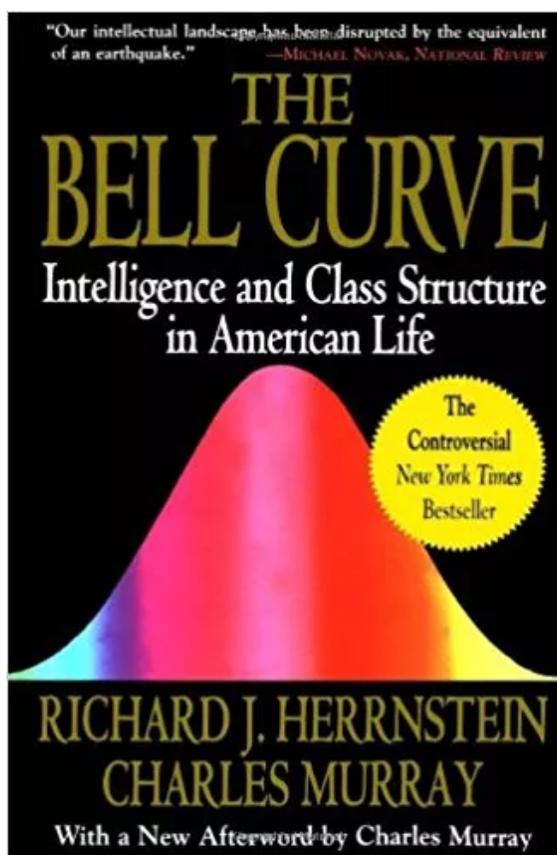
Here, too briefly, are some facts to ponder — facts that were insufficiently addressed in the podcast (or omitted entirely):

- The black-white IQ gap is decreasing, and is now closer to 10 points than the widely cited one standard deviation (15 points), which is the erroneous value Murray cites in the interview. Academic achievement of blacks has also improved by about one-third standard deviation in recent decades.
- The Flynn effect, named for the political scientist and IQ researcher James Flynn, is the term many scholars use to describe the remarkable rise in IQ found in many countries over time. There has been **an 18-point gain in average IQ** in the US from 1948 to 2002. One way to put that into perspective is to note that the IQ gap between black and white people today is only about half the gap between America as a whole now and America as a whole in 1948. When asked about the Flynn effect by Harris, Murray responds with some hand-waving about *g*, a response that does not make the extraordinary fact of the Flynn effect go away.
- Murray's assertion that it is hard to raise the IQs of disadvantaged children leaves out the most important data point. Adoption from a poor family into a better-off one is associated with IQ gains of 12 to 18 points.
- It is true (and unsurprising) that poor children exposed to special educational programs such as Head Start tend to regress once the program ends and environmental disadvantages reassert themselves. But the gain in social and intellectual capital from the best available early childhood education can result in an increase of one-third in the likelihood of graduating from high school, can triple the rate of college attendance, can produce a two-year advantage in reading ability of young adults, and can result in a two-thirds increase in the likelihood that they will be either gainfully employed or enrolled in higher education. The best available K-12 programs also result in substantial gains in intellectual and social capital.
- The heritability of intelligence, although never zero, is **markedly lower among American children raised in poverty**. Several interpretations of this fact are possible. The one we find most persuasive is that children raised in those circumstances are unable to take full advantage of their genetic potential because they do not have access to the high-quality environments that could support it.

**It is never a good thing to make poorly justified scientific claims. When it comes to race and IQ, doing so is toxic.**

That brings us to the most difficult part of this essay, in which we consider the moral content of Murray's racial arguments, and the motivation for Harris's astonishing willingness to showcase them so uncritically. Murray presents himself as coolly rational and scientific as he proceeds to his conclusion of genetically based racial differences: People differ in behavior, groups of people differ in behavior, people differ genetically, groups differ genetically. One way or another, genes are associated with behavior, so of course some group differences in behavior occur because of genes. No big deal. "This is what a dispassionate look at decades of research suggests," Harris blithely says.

It *is* a big deal. The conviction that groups of people differ along important behavioral dimensions because of racial differences in their genetic endowment is an idea with a horrific recent history. Murray and Harris pepper their remarks with anodyne commitments to treating people as individuals, even people who happen to come from genetically benighted groups. But the burden of proof is surely on them to explain how the modern program of race science differs from the ones that have justified policies that inflicted great harm. Is it simply that we now have better psychological tests, or more sophisticated genomics?



We're still debating this book, 23 years after its publication.

Asserting that the relatively poorer intellectual performance of racial groups is based on their genes is mistaken theoretically and unfounded empirically; and given the consequences of promulgating the policies that follow from such assertions, it is egregiously wrong morally.

Finally, let us consider Sam Harris and his willingness to endorse Murray's claims — his decision to suspend the skepticism and tough-mindedness we have come to expect from him. There is a fairly widespread intellectual movement among center-right social theorists and pundits to argue that strong adherence to

the scientific method commits us to following human science wherever it goes — and they mean something very specific in this context. They say we must move from hard-nosed science of intelligence and genetics all the way — only if that's the direction data and logical, unbiased interpretation lead, naturally — to genetically based differences in behavior among races.

**A common fallacy: Murray is disliked by liberals (and especially college students); therefore he must be right on the facts**

Moreover, a reflexive defense of free academic inquiry has prompted some to think it a mark of scientific objectivity to look at cognitive differences in the eye without blinking. To deny the possibility of a biological basis of group differences, they suggest, is to allow “moral panic,” as Harris puts it, to block objective scientific judgment. But passively allowing oneself to be led into unfounded genetic conclusions about race and IQ is hardly a mark of rational tough-mindedness. The fact is, there is no evidence for any such genetic hypothesis — about complex human behavior of any kind. Anyone who speaks as if there were is spouting junk science.

Yes, Charles Murray has been treated badly on some college campuses. Harris calls Murray “one of the canaries in the coal mine” — his treatment a sign of liberal intolerance. But Harris's inclination to turn Murray into a martyr may be what leads him to pay insufficient attention to the leaps Murray makes from reasonable scientific findings to poorly founded contentions about genetics, race, and social policy.

We hope we have made it clear that a realistic acceptance of the facts about intelligence and genetics, tempered with an appreciation of the complexities and gaps in evidence and interpretation, does not commit the thoughtful scholar to Murrayism in either its right-leaning mainstream version or its more toxically racist forms. We are absolute supporters of free speech in general and an open marketplace of ideas on campus in particular, but poorly informed scientific speculation should nevertheless be called out for what it is. Protest, when founded on genuine scientific understanding, is appropriate; silencing people is not.

The left has another lesson to learn as well. If people with progressive political values, who reject claims of genetic determinism and pseudoscientific racist speculation, abdicate their responsibility to engage with the science of human abilities and the genetics of human behavior, the field will come to be dominated by those who do not share those values. Liberals need not deny that intelligence is a real thing or that IQ tests measure something real about intelligence, that individuals and groups differ in measured IQ, or that individual differences are heritable in complex ways.

Our bottom line is that there is a responsible, scientifically informed alternative to Murrayism: a non-essentialist view of intelligence, a non-deterministic view of behavior genetics, and a view of group differences that avoids oversimplified biology.

Liberals make a mistake when they try to prevent scholars from being heard — even those whose methods and logic are as slipshod as Murray's. That would be true even if there were not scientific views of intelligence and genetics that progressives would likely find acceptable. But given that there is such a view, it is foolish indeed to try to prevent public discussion.

**Clarification:** This article has been read to say that Harris did not ask Murray about the “Flynn effect,” the increase in IQ scores over time. That wasn’t our intent. They did discuss the phenomenon. We meant to say that Harris didn’t challenge Murray enough on its implications, and Murray’s answers on it were inadequate. The passage has been revised.

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*The authors add:* Readers who wish to know about the current state of intelligence theory and research may be especially interested in the academic article **“Intelligence: New findings and theoretical developments,”** in the Feb.-March 2012 issue of *American Psychologist*, by Nisbett, R. E., Aronson, J., Blair, C., Dickens, W., Flynn, J., Halpern, D. F., and Turkheimer, E.. Nisbett has responded at length to Murray’s empirical claims about the race gap in IQ in his book ***Intelligence and How to Get It***.

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