

Books & Ideas

# Don't Trouble Yourself

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*A Troublesome Inheritance: Genes, Race and Human History*

By Nicholas Wade

[The Penguin Press, \\$27.95 \(cloth\)](#)

In his latest book, Nicholas Wade, a longtime science journalist, argues that evolution by natural selection created human races with different genetic predispositions for social behavior. As races evolved following divergent migrations out of Africa, their social behavior diverged and became written in their genes. This divergence fueled the development of disparate societal institutions, leading to contemporary inequalities between rich and poor countries according to their adaptability to modern economic imperatives. In Wade's telling, the Caucasian and East Asian races comprise the richest and most powerful nations in the world because they are genetically better adapted to success in modern capitalist systems than

are Africans and the other racial groups, who remain steeped in tribalism, the “default” human condition.

We might know all this already, Wade claims, if it were not for politically correct gatekeepers who are afraid to discuss the realities of genetic forces underlying racial differences. Of course, Wade says, no one wants to reignite the racism that gave us social Darwinism, eugenics, and the Holocaust, but enough with taboos. It is time to move on to a scientific examination of how genes explain racial differences.

The book has nothing to do with racial superiority, Wade assures us. Unless you consider economic, political, and cultural success—thanks to your genes—an indicator of superiority. It is a hard assurance to accept from a needlessly defensive book riddled with scientific errors, deaf to better-supported theories, and willfully blind to its own implications.

### **Telling Mistakes**

It is not my goal to debunk every scientific flaw in *A Troublesome Inheritance*, but a couple examples should be sufficient to demonstrate that Wade is not only an unreliable guide through contemporary genomic research, but that science does not support his case. It is essential to Wade’s story that readers reject the widely held belief that humans ceased evolving before the dawn of recorded history. The truth is that “human evolution has been recent, copious and regional.”

Wade plants his flag with the first cited fact in the book, with unfortunate (for him) results: “No less than 14% of the human genome, according to one estimate, has changed under this recent evolutionary pressure.” He repeats this number twice. But what does it mean? Studies of the human genome have identified traces of selection pressure in patterns of genetic variation. Their results vary, but “if one takes just the regions marked by any two of the scans, then 722 regions, containing some 2,465 genes, have been under pressure of natural selection.” That “amounts to 14% of the genome.”

His source is a [2009 review article](#) by the geneticist Joshua Akey, but Wade reads it wrong. It is not 14 percent of the genome that is under selection in two studies. Rather, because there are a lot of false positives, 14 percent of regions identified as under selection in any study were also identified in a second study. The number Wade wants—the portion of the genome found in at least two studies to have been under pressure of natural selection—is 8 percent. The error suggests a glib reader cherry-picking statistics without really grasping the science. Wade’s assertion about recent human evolution is important because he thinks genes determine social behaviors that we know are relatively new. Despite occasional caveats about the relative importance of culture, he repeatedly returns to the idea of “genes governing social behavior,” and “social behavior . . . under genetic control.”

To establish that genes determine social behavior, Wade looks to ancient history, when humans first settled in agricultural communities. “Most likely a shift in social behavior was required,” he writes, “a genetic change that reduced the level of aggressivity common in hunter-gatherer groups.” Of course, many elements were involved—climate change and geography, population pressure, the presence of various plants and animals, advances in tools and weapons, and human biological evolution—but there is no evidence that a behavioral genetic change was required.

Wade cites no scholarship on this point. However, he declares that reduced aggression may be deduced from the thinning of human bones. As people became more social, they fought less, so having strong bones conferred less of a survival advantage. He speculates that in the centuries leading up to settled societies “the most bellicose members of the society were perhaps killed or ostracized.”

I failed to find Wade’s missing citation on a link between reduced aggression and weak bones. More likely, the declining “[habitual load](#)” on human limbs resulting from lifestyle and technology changes is the precursor to thinning bones, and this can happen within a person’s lifetime rather than through genetic adaptation over generations. [Other researchers](#) favor genetic adaptation to climate change as an explanation for early human bone evolution. Wade anchors his story in a behavioral genetic change because he needs to build a case that social behavior is selected genetically, to justify his racial theory. “The individuals whose social behavior is better attuned to social institutions will prosper and leave more children, and genetic variations that underlie such a behavior will become more common.” Despite the confident tone, this is only speculation.

Can we explain dramatic social change without behavioral genetic evolution? Of course; we do it all the time. Consider, for example, the historically recent population explosions of religious sects such as Mormons and Orthodox Jews. The mechanisms for this kind of change are well established by modern social science. By contrast, the genetic mechanisms for social change, Wade admits, “have yet to be identified.”

## **Race and Evolution**

Some people confuse the concept of “social construction” with the idea that race doesn’t exist. We need to dispel that confusion for two reasons.

First, at the risk of stating the obvious, things that are socially constructed do exist; they are just outcomes of social, as opposed to biological, forces. The vast, persistent, life-and-death consequences of race certainly are real. But the social nature of race can be hard to grasp because physical characteristics are in play. It is critical to appreciate that while [racially salient characteristics](#)—skin color, eye shape, hair texture, etc.—are products of biological difference, they are invested with meanings that don’t arise from biology: people identified by different

physical characteristics are *presumed* to be inherently different—and hierarchically ranked—and these assumptions produce racial inequality, which reproduces socially. Game-theory [simulations](#) by sociologist Quincy Thomas Stewart show that the influence of a small number of racists can perpetuate racial inequality indefinitely through learning and memory even without ongoing racial animus.

Second, we need to dispel the idea that races don't exist, because there is a real genetics to human variation around the world. Probably most of the variation that emerged over thousands of years of separation was a result of random coding errors that stuck for no good reason. However, some, such as skin color, were the results of moving between climate zones; some, such as lactose tolerance, allowed people to stomach different diets; and some, such as unusually high susceptibility to sickle cell disease among those who developed one kind of resistance to malaria, were coincidental byproducts of helpful adaptations. We don't have to use the word "race" to describe genetically diverse groups, but genetic diversity is worth understanding.

The notion of underlying racial groups may be better encompassed by the idea of identity categories. Such categories do relate to genetic clustering; the sociologist Guang Guo and his colleagues have published [new research](#) confirming this. Americans' continental genetic ancestries, Guo finds, mostly match their self-identified racial classification. But this doesn't tell us that race is in our genes. Consider that when survey respondents were forced to identify with only one race, those of mixed African and European ancestry usually identified as black, following the "one-drop" rule, a political, not a biological, creation.

African Americans—the descendants of African slaves and Americans of European origin—are a recently formed group with ancestors from several places. This is no different from other ancestry groups created over the millennia, some of whom mixed freely, some under duress, some as migrants, some as conquerors. This creating of new, overlapping blends of humanity, as much as the definition and labeling of categories, is also a source of the social construction of race.

## **Descent into Racism**

According to Wade, it is reasonable to assume that

if traits like skin color have evolved in a population, the same may be true of its social behavior, and hence the very different kinds of society seen in the various races and in the world's great civilizations differ not just because of their received culture . . . but also because of variations in the social behavior of their members, carried down in their genes.

Here Wade departs from the great majority of the scientific community and joins the grand tradition of scientific racism. As Guo wrote in an email to me, “There are some genetic markers that can separate groups of people that lived separately for a long time, but there is hardly any evidence for genetic differences in behavior across races.”

Wade occasionally acknowledges that the dividing lines between races are arbitrary and the number of categories is a matter of judgment. However, the disparities he is trying to explain—the differences between the civilizations of Caucasians (the standard to which others are held), East Asians (smart but lacking creativity), and Africans (locked in tribalism)—require a clear racial demarcation. He thus insists on discussing these three “major” races, while acknowledging five “continental” races—those three, plus Pacific Islanders and Native Americans, which he rarely mentions.

To get his racial categories, Wade relies on [a 2008 study](#) that examined the DNA of 938 people from fifty-one populations around the world, identifying seven statistical clusters of genetic variation. However, only six of the fifty-one populations were from sub-Saharan Africa, a weakness the authors, but not Wade, acknowledge. This is the beginning of Wade’s mistreatment of Africa.

Why is all of sub-Saharan Africa considered one racial group? The answer is social, not biological. Africa, as the source of modern humans, has the greatest genetic variation of any region. But to see the breadth of that diversity, you have to look for it. Wade cites [a 2009 global DNA analysis](#) by Sarah Tishkoff and colleagues, which included samples from 121 different populations in Africa as well as 60 from around the world. On a global scale, there were fourteen clusters of genetic variation, nine of which were African. That is, nine different groups within Africa were delineated with specificity comparable to that seen separating Europe, Asia, and the Americas.

The vast diversity within Africa should warn Wade away from lumping Africans into one racial category, but he does so without reservation in most of the book and has continued to in [a defense of his work](#).

With Africa reduced to a single racial category, Wade commences explaining why genes cause its problems. Africans did not “develop the ingrained behaviors of trust, nonviolence and thrift that a productive economy requires.” To advance, they need “the transformation of a population’s traits from the violent, short-term, impulsive behavior typical of many hunter-gatherer and tribal societies into the more disciplined, future-oriented behavior seen in East Asian societies” and in the West.

The failure of “Africa” to evolve the necessary traits for success in our modern world is not for lack of resources, since “the West has spent some \$2.3 trillion in aid over the last fifty years

without managing to improve African living standards.” Rather, after colonialism, Wade writes, Africa “reverted to the kind of social system to which Africans had become adapted during the previous centuries.” By “adapted,” he means “genetically adapted,” a point made explicit at the beginning of the book.

“Though it was justifiable at first to blame the evils of colonialism,” he sighs, “two generations or more have now passed since most foreign powers withdrew from Africa and the Middle East, and the strength of this explanation has to some extent faded. Tribal behavior is more deeply ingrained than mere cultural prescriptions. Its longevity and stability point strongly to a genetic basis.”

Obviously, Wade offers no evidence to support his genetic story of Africa’s poverty because none exists. In the absence of evidence, Wade resorts to homicide statistics. Most countries in sub-Saharan Africa have higher homicide rates than the rich countries, which he calls “a difference that does not prove but surely allows room for a genetic contribution to greater violence in the less developed world.” This contradicts the basic logic of science. As the biologist H. Allen Orr points out in his [devastating review](#), the existence of a difference is not evidence for any one cause of that difference.

## **Violent Genes**

Wade devotes considerable attention to MAO-A, the gene that encodes the enzyme monoamine oxidase A, which is related to aggression. He singles out studies showing that a rare version of the gene is associated with violence in U.S. male adolescents. Out of 1,200 young men surveyed in the National Longitudinal Study of Adolescent Health, eleven particularly violent young men [carried the 2R version](#) of MAO-A, subsequently known as the “warrior gene.” Nine of those eleven were African American, comprising 5 percent of the black male adolescents in the study.

Now Wade is off and running. He has a gene variant that is more common (though still rare) among black men and is associated with elevated rates of violence. Wade summarizes, “The wider point illustrated by the case of the MAO-A gene is that important aspects of human social behavior are shaped by the genes and that these behavior traits are likely to vary from one race to another, sometimes significantly so.” Later he calls it “one behavioral gene that . . . is known to vary between races and ethnic groups, and many more will doubtless come to light.”

This may be true. But it certainly overstates the strength of the case. Consider that, in the Adolescent Health data, black male adolescents were more than [twice as likely](#) as whites to report having committed an act of violence. If you found any gene that happened to be

correlated with violence, chances are good it would also be correlated with race. Confirmation with more powerful genetic testing methods may strengthen this case in the future, but Wade's inflated interpretation is not justified by the existing evidence.

Except for those nine violent African American adolescents, racial variation in the United States is strangely absent from Wade's book. Why not look at people who move between societies? Beyond a nod to the success of Asian and Jewish immigrants, he says nothing about the upward mobility of those from poor countries, such as Hispanics or African Americans, whose tribal genes should, by his theory, make them fish out of water here. How can it be that Hispanic immigrants, after only a generation or two, have [birth rates in line](#) with the non-Hispanic U.S. population, or that the descendants of African slaves can now be so much richer than their cousins in Africa? A wide swath of [research shows](#) that "immigrants are largely assimilating into American society" in terms of socioeconomic status, residential distribution, language acquisition, and intermarriage. This seems like a natural test of the battle between genetic and cultural determination of social behavior, but Wade ignores it.

## **West Is Best**

Jaws dropped in ivory towers everywhere when Wade asked, "What is it that prevents poor countries from taking out a loan, copying every Scandinavian institution, and becoming as rich and peaceful as Denmark?" To solve this conundrum, he explains:

Because these [social] behaviors vary slightly from one society to the next as the result of evolutionary pressures, so too may the institutions that depend on them. This would explain why it is so hard to transfer institutions from one society to another. American institutions cannot be successfully implanted in Iraq, for instance, because Iraqis have different social behaviors, including a base in tribalism and a well-founded distrust of central government.

If Wade were truly interested in offering a theory to explain these problems, he would present the most important of the alternative explanations and hold them up to the light of his behavioral genetic theory. Instead, he is so pleased with his pronouncement on American institutions in Iraq that he merely repeats it two more times.

So how did the West turn out to be so great? The story is about England, from economist Gregory Clark's *A Farewell to Alms*. Clark reports that interest rates fell in England from 1400 to 1850, which he and Wade agree is a crucial indicator of improving national character. Unlike children, hunter-gatherers, or modern Africans, the English were "becoming less impulsive, more patient and more willing to save," hence lenders could charge less for loans, figuring more borrowers were likely to repay. This behavioral change "gradually transformed a violent and undisciplined peasant population into an efficient and productive workforce."

How could the English gene pool have improved so much in only a few centuries? Clark's analysis of a sample of wills between 1585 and 1638 shows that rich people listed more heirs than did poor people. Yet, because the size of the upper class did not increase, a sizable fraction of the rich had to breed with those below their birth status. In this way "the values of the upper middle class—nonviolence, literacy, thrift and patience—were . . . infused into lower economic classes and throughout society."

As unsupported as the theory is generally, it is easily disproved on the basis of demographic timing alone. Without stronger selection pressure, there wasn't time for this to happen, if it happened at all. Wade begs to differ, pulling out the Russian geneticist Dmitry Belyaev's [breeding of foxes for tameness](#), which produced tame foxes in thirty-five generations. But Belyaev used [extremely strong selection criteria](#), selecting only the tamest 20 percent of each generation. England had much smaller selection pressures and fertility differences among classes.

Wade points out that people with estates over £1,000 had just over four children, while those with less than £10 had just under two children. But what Wade doesn't tell you—reported in a [separate paper](#)—is that less than 5 percent of the population left estates of £1,000 or more. In fact, 71 percent had estates valued at less than £50. So how many rich kids were hanging out at the mead hall picking up the children of the poor? An [analysis](#) by Nina Boberg-Fazlic and colleagues shows the math for Clark's mechanism isn't there, partly because there was also upward mobility from the much larger lower classes. In the fight for the middle-class gene pool, the rich were way outnumbered.

### **A Better Theory of Social Change**

Wade possesses a rigidly mechanical view of genetic influence on behavior. For instance, he concludes that genes must be the source of widespread taboos against incest, and our genes tell us, "If you grew up under the same roof with this person, they are not a suitable marriage partner." But is there any basis for believing that genes really dictate rules of behavior to this level of specificity? Do genetic dictates include the word "marriage"?

Much as Wade would like to convince us otherwise, there is little reason to believe that natural selection is a major source of social change, that "the rise of the West was the direct result of the evolution of European populations as they adapted to the geographic and military conditions of their particular ecological habitat." When he talks about the tendency toward such traits as cooperation and trusting authority, he just guesses that "probably all these social behaviors, to one degree or another, have a genetic basis."

It is equally plausible, though, that adaptive traits emerge from more generic capacities of human intelligence and adaptation and are reinforced through cultural evolution and learning. For example, the ability to comprehend what others are thinking—and what they think of us—could lead to cooperative behavior as an instrumental adaptation even if there is no specific genetic driver for cooperative behavior. Similarly, clever humans in many societies could develop stone tools, or invent simple bridges, without genetic instructions for doing so.

Wade is awed by breakthroughs in genetics, but he seems uninterested in the blossoming research on brain development. This is one way that culture adapts and reproduces: children's brains adapt to their environment and experiences. For example, children in the United States today are exposed to a pink-is-for-girls culture. Even though this is a [very recent phenomenon](#), the ubiquity of girls in pink appears so universal as to seem genetic. The tendency to see such preferences as natural is reinforced if brain plasticity declines with age. By the time today's children are ten, they can't imagine a society where pink is not for girls.

The downside of children's intense learning capacity is that insults insinuate themselves deep into their cognitive apparatuses. For example, [new research](#) shows that the toxic effects of poverty on children's developing brains may cause "differences in long-term memory, learning, control of neuroendocrine functions, and modulation of emotional behavior." Such an effect could in principle be repeated over generations within poor populations without producing inherited genetic traits.

In fact, the evolution and replication of social structure through interaction has been the subject of extensive social science modeling. These studies use [complex simulations](#), which show that very different social structures can emerge from various initial conditions. For example, the evolution of trust and cooperation may be generated by [social interaction and learning](#), as people learn the benefits of cooperation and complementary norms spread through the population.

Although human societies of 10,000 years ago would seem wholly foreign to you or me, it is plausible that a human embryo from that era, grown in a modern womb and born into modern society, would adapt from birth in much the same way that infants do today and would grow to be a normal modern person. This is not surprising to those who have seen internationally adopted children adapt to their new cultures in much the same way native-born children do, despite the thorny issue of how their racial appearance affects their social interactions.

### **Can We Talk About Genetics and Race?**

Wade argues that the history of social Darwinism, eugenics, and the Holocaust have infected the modern liberal mind so fully that we not only don't want to think about the behavioral genetics of race, but we don't want anyone else to either. In [defense of the book](#), he writes: "It

takes only a few vigilantes to cow the whole campus. Academic researchers won't touch the subject of human race for fear that their careers will be ruined. Only the most courageous will publicly declare that race has a biological basis."

I am skeptical, but by all means let us see the evidence that genetic scientists are cowed by fear. More likely, there is little scientific agreement with his theories because he is wrong.

What about the campaign against Wade specifically? Is there a movement to shut him down for speaking evolutionary truth to liberal power? Outside of a [rave review](#) from Charles Murray, which is surely a mixed blessing, the mainstream criticism of *A Troublesome Inheritance* has been harsh. But much of it is from knowledgeable writers who are not committed to shutting down all discussion of race and genetic diversity. Some of the meaner critics—such as the evolutionary biologist Jerry Coyne, who [calls](#) Wade's volume "pretty awful" and "an irresponsible book that makes insupportable claims"—have nevertheless refused to condemn the goal of studying race and genetics. Similarly, evolutionary biologist [Michael Eisen](#), who thinks Wade is an "unhinged racist," nevertheless believes human genetic diversity and natural selection are important topics of ongoing research. [Writing in the New York Times](#), reviewer Arthur Allen praises Wade's description of research into genetic ancestry, but in Allen's view, Wade "starts to go off the rails" with his "unconvincing attempt to promote the science of racial difference." In *Slate* political scientist Andrew Gelman [stresses](#) that Wade's arguments are not implausible; they are merely unproven—and similar to the scientific racism of previous generations. And science writer Seth Shulman, in the *Washington Post*, [praises](#) Wade's "well-chosen evidence of advances in our increasingly sophisticated understanding of the human genome and population genetics" before criticizing the lack of evidence underlying his behavioral claims.

If *A Troublesome Inheritance* does drive Wade into scientific exile, it will be a result not of his courageous stand against an all-powerful, know-nothing ignorance lobby, but of the unsubstantiated, inflammatory, insulting, and socially harmful aspects of his work.

Image: [Forgemind Archimedia](#)