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# How science has been abused through the ages to promote racism

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**Scientific evidence shows overwhelmingly that people across the world are genetic refugees from Africa. Race in [human taxonomy](#)** – the science of classifying organisms – has a long, disgraceful history.

Individuals have used race to divide and denigrate certain people while promoting their claims of superiority. Some of these individuals were, and are, respected in their time and their fields. They include philosopher and scientist [Robert Boyle](#) and sociologists like [Hans Günther](#). Others who've been guilty include biologists like [Ernst Haeckel](#) and historians such as [Henri de Boulainvilliers](#).

What is the history of racially based classifications of humans? And does it have any scientific validity?

## Starting with Kant

The eminent philosopher [Immanuel Kant](#) was arguably the first “scientific racist”. He maintained that dark-skinned Africans were “vain and stupid”. He insisted that they were only capable of trifling feelings and were resistant to any form of education other than learning how to be enslaved.

By contrast, Kant maintained, light-skinned Caucasians were “active, acute, and adventurous”.

Renowned German anthropologist [Johann Blumenbach](#) used skull anatomy to divide humans into five races:

- Caucasians (Europe and western Asia);
- Mongoloids (eastern Asia);
- Malays (south-eastern Asia);
- Negros (sub-Saharan Africa); and
- Americans (North and South America).

But he disagreed with the common view that humans from sub-Saharan Africa were inferior. Blumenbach's “benign” racial categorisation persisted well into the 20th century.

[Samuel Morton](#) drew on refined, quantitative assessments of skull anatomy to provide further “scientific evidence”. He claimed that interracial intellectual variation is reflected by the interior volume of the skull, and that this justified the use of Blumenbach's groupings to determine relative racial superiority.

He regarded the Caucasian as:

... distinguished by the facility with which it attains the highest intellectual endowments

and Africans as

... joyous, flexible, and indolent; while the many nations which compose this race present a singular diversity of

intellectual character, of which the far extreme is the lowest grade of humanity.

“Scientific racism” was used to justify the ownership of [slaves](#), as well as colonialism. It reached its pinnacle in eugenics, a “science” espoused by the British statistician and sociologist [Francis Galton](#) at the end of the 19th century.

Eugenicists advocate the “improvement” of humanity by promoting reproduction between people with desired traits and reducing reproduction between people with less-desired traits. Eugenics featured in race-related legislation like Nazi Germany’s [Nuremberg Laws](#) and [apartheid-era](#) South Africa’s edicts.

## Genetic evidence

Genetic studies have examined “racial” variation from a molecular perspective. My early mentor [Richard Lewontin](#), an evolutionary biologist from the University of Chicago, was a pioneer in this. His research suggested that 90% of modern human genetic diversity is found between individuals within populations. The tiny balance is due to variation between populations.

This view was confirmed by subsequent studies based on DNA by, among others, [Lynn B. Jorde and Stephen P. Wooding](#). The DNA among all human populations is 99.5% similar. Populations of the geographically much more restricted chimpanzee exhibit more than four times the [genetic variation](#) that’s found between human populations. Chimpanzees are humans’ nearest living evolutionary “relative”.

Their research shows that when humans are studied from genetic or anatomical perspectives, the pattern that’s discovered is not diagnosable geographically discrete clusters. The norm is gradual, geographically uncorrelated variation in traits and genes. This is even true within peoples who are traditionally thought to be racially homogeneous. There is no evidence of evolutionarily significant racial variation in either genes or anatomy.

The exception is skin colour. Around 10% of the variance in skin colour occurs [within groups](#) and about 90% between groups. People living near the equator have darker, more melanin-rich skin than those who live at higher latitudes. Darker skin is strongly selected for because it is a natural sunscreen that limits harmful effects of high ultraviolet rays.

[Recent genetic studies](#) indicate that skin colour may change radically within 100 generations because of natural selection.

## Genetic racism revived

This overwhelming scientific evidence has not prevented recent studies based on [DNA allele frequencies](#) from claiming that there are as many as [eight races of humans](#).

British scientific journalist [Nicholas Wade](#) used these studies to claim that natural selection between “races” produced differences in IQ, the efficacy of political institutions and countries’ levels of economic development.

These genetic studies are fundamentally flawed for three reasons:

- Taxonomic studies aimed at determining the validity of races should be based on characters. These are features that are invariant within populations. They should not be based on traits like eye colour and gene alleles, which vary within populations.
- Samples used in the DNA-based studies mentioned above were “cherry picked” geographically to maximise differentiation between human populations, and
- The DNA-based evolutionary racial “trees” were generated by a statistical technique that is designed to produce tree-like patterns which reflect average, not absolute, differences between sampled items. This technique formed the basis of an approach to the construction of evolutionary trees called “phenetics”. It has been decisively discredited and generally abandoned.

## Evolutionary origins

DNA and anatomy-based findings support the [“Out of Africa” theory](#) . This holds that modern humans originated in Africa. Archaic African Homo erectus immigrated into Eurasia between 1.4 million to 1.6 million years ago.

About 90,000 to 92,000 years ago, a second form of humanity, modern H. sapiens, also emigrated out of Africa. This species replaced populations of Homo erectus already in the north.

Attempts to justify the scientific reality of human races warrant no further discussion. They cannot be used to assess racial “superiority”. “White” and other non-African people are in fact evolutionary refugees from Africa. After settling in Eurasia, it took only an evolutionary heartbeat for them to lose much of their epidermal melanin.

Dark-skinned humans outside of Africa are descended from migrants who “regained” their “blackness” in equatorial regions elsewhere.

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