

Race is not genetic

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The 29-year-old website entrepreneur Juliana Luna was among dozens of Brazilians chosen for a recent documentary project that used DNA samples to trace ancestral connections to Africa. Luna traced her roots to Nigeria, where she was taken by the project to visit a slave port near Lagos. Photo from AP/Felipe Dana

The concept of race is the elephant in America's living room: a major topic that is thought about but rarely discussed.

Race affects how we think about virtually every aspect of our society and culture. And yet we struggle to talk about or even say what "race" means.

Numerous studies show that members of different races in the United States have very different views on everyday life. For example, a recent survey showed that 80 percent of white individuals hold positive views of the police. Yet only 52 percent of African-American individuals and 51 percent of Mexican-American individuals share that view.

In addition, when asked the question of whether the police use deadly force only when necessary, 59 percent of European Americans said yes. On the other hand, only 16 percent of African-Americans and 23 percent of Mexican-Americans said yes.

Definitions Of Race Often Differ

However, when we try to describe race itself, our descriptions and definitions are different. To speak meaningfully about race, we need to truly understand how different people perceive and define it and how these definitions fit together. This includes understanding socially defined race, biological race, human variation and ancestry. Unfortunately, many do not, and the result is that racist beliefs are passed along as scientific fact.

The majority of Americans still assume that there are legitimate biological races within the human species. The belief is that because races look different, they must be fundamentally different in their biology, or at the level of their DNA. This is actually not true, and to prove that it's wrong, it is important to understand two definitions of race that get confused.

Biological Race

Biological race has been defined by combinations of physical features, where your ancestors have lived, and the appearance of certain genes. Each person is born with a set of genes that are inherited from their parents. Together, these genes determine what the person looks like physically, for example what eye color they have. Some species of animals do have biological races—that is, they are the same animal species, but they are fundamentally different in biology.

Social Race

Another definition of race is social race, which people often try to define by looking at arbitrary traits—a mix of their physical appearance, language, religion and a variety of other cultural features. Yet the social definition of race differs depending on the situation. It tends to operate on the idea that because one social group has power, then it must somehow be better.

Scientists who study evolution tend to agree on an overarching principle about humans. In our human species, our genes are basically the same no matter the population. There are not enough actual genetic differences between people to prove that there are major biological differences between races.

This is because we are a relatively young species. People tend to gather in major population clusters, like in regions and cities, and regularly swap genes with people who are different.

Descendants Of East Africa

All modern humans living today are descended from people who once lived in East Africa. Some of the first recorded civilizations were located in Ethiopia, prior to 3000 B.C., and then moved to modern-day Egypt.

Humans did not begin to inhabit the rest of the world until about 60,000 years ago. Many of humans' biological traits are relatively new — fair skin and blue eyes in humans did not appear until, at most, 6,000 years ago.

Yet, how is it possible that biological traits will change based on where people are from, and yet that variation does not help to identify a biological race? Most would agree that Norwegians have fair, light-skinned complexions while Nigerians have dark skin.

It is true that all modern human populations have genetic differences, but these differences reflect how people and their ancestors adapted to the environment in which they lived. Meanwhile, other genetic changes also resulted from simple chance events.

The Genetic Drift Factor

The concept of chance events affecting how genes appear in different populations is called genetic drift. Human groups created this drift by moving out of Africa at different times and in different directions. Members of a given group carried a particular collection of human genes with them.

In other words, single genes can be found in populations in completely different parts of the world. At the same time, populations with similar traits may have very different combinations of genes. There is no single physical trait or gene that can be used to simply assign people to racial groups.

For example, many people in Western Africa, India and the Mediterranean countries have the gene that causes the disease sickle cell anemia. This disease that is found in high frequency in regions that have malaria. However, it is not found among Kenyans, whose ancestors were from high altitudes in Africa, where malaria is not common. Therefore, the sickle cell gene can't be used to define all Africans.

Darker Skin Associated With Intensity Of The Sun

Another relevant example is skin color, which is associated with the intensity of the sun. All populations with ancestry from hot, tropical areas have darker skin than those with recent ancestry from the mild and arctic zones. People from the Solomon islands, for example, have physical traits very similar to Africans who live south of the Saharan desert. Yet these Solomon Islanders have an overall genetic makeup that is closer to Europeans than sub-Saharan Africans.

Another example of an evolutionary trait that doesn't have to do with outward appearance is the ability to drink milk. Not everyone can tolerate milk as an adult, but Europeans and some Africans can, as they both have a history of raising cattle.

It is impossible to group humans based on physical factors, and thus physical traits cannot assign people to specific racial groups—a fact scientists have known since the 1940s.

Even so, most Americans today still use physical features to judge the racial makeup of individuals.

The Genetics Of Race And Ancestry

What people think of as “races” are usually not based on genetic makeup, but on socially created characteristics. These characteristics are often open to interpretation and depend on context.

One important difference is the one between ancestry and race. Whereas race is usually attributed based on the context in which a person grows and develops, ancestry is what a person strictly inherited.

Biological or genetic ancestry is what genetic material people have inherited from their ancestors. The exact combination of genes can vary depending on what part of the world a person's ancestors lived in.

Social or cultural ancestry refers to the origin of the attitudes, beliefs and behaviors displayed by an individual.

The study of genetics has proven that human beings are far more alike than they are different. If more people understood that, it would be easier to debunk the myth that people of a certain race are “naturally” one way or another. It would also be easier to teach tolerance.

How Did We Get Here?

How is it that our common understanding of race is so flawed and incomplete?

One factor that contributes to the confusion is that discussions about race often misinterpret evolutionary science. The theory of evolution was developed by Charles Darwin in the mid-1800s, to explain how genes are transferred in every living species. Each individual has a core genetic makeup that is common to the rest of its species; however, it always also has slight variations that set it apart. As individuals reproduce, their genes combine in their offspring, leading to more slight variations. Slight genetic variations are therefore a natural part of every human being, and not enough to classify people as distinct races.

Another factor that limits understanding is a refusal to address the importance of racial bias. This disrupts serious and factual discussions concerning the history of racial injustice in the United States.

Implicit Racial Bias Toward Another Person

Implicit racial bias is a less visible form of prejudice that characterizes the thoughts, feelings and behaviors of one racial group toward another. Implicit bias is separate from overtly aggressive, hateful racism. It shows up in several ways, like when European Americans show prejudice toward African-Americans, viewing them as aggressive, impulsive and lazy.

These prejudices have real consequences for racial minorities, who get treated unfairly. For example, when a young person is charged with a crime, a judge has the choice of calling the offender an adult or a juvenile. Adults are subject to longer sentences, since they are seen as more responsible for their actions, while children are seen as less responsible for their actions and get lesser sentences.

African-American children are far more likely to be treated as adults in criminal justice proceedings. As a result, African-American children are 18 times more likely than European-American children to be sentenced as adults, and 58 percent of children sentenced to adult jails are African-American. European-American police officers are also far more likely to mistake the age of African-American teens and young adults. This type of prejudice was largely believed to be a factor in the shootings of Tamir Rice, Michael Brown and Trayvon Martin, who were African-American.

A dialogue that confronts racism cannot happen as long as people falsely use a person's skin tone to judge their biological makeup, and dignity, as humans.

Quiz

1 All four of the following selections from the article help make the claim that racial bias hurts racial minority groups in the United States and needs to be addressed urgently.

Which of the following selections is the STRONGEST piece of evidence to support this claim?

- (A) For example, a recent survey showed that 80 percent of white individuals hold positive views of the police. Yet only 52 percent of African-American individuals and 51 percent of Mexican-American individuals share that view.
- (B) In addition, when asked the question of whether the police use deadly force only when necessary, 59 percent of European-Americans said yes. On the other hand, only 16 percent of African-Americans and 23 percent of Mexican-Americans said yes.
- (C) African-American children are far more likely to be treated as adults in criminal justice proceedings. As a result, African-American children are 18 times more likely than European-American children to be sentenced as adults, and 58 percent of children sentenced to adult jails are African-American.
- (D) European-American police officers are also far more likely to mistake the age of African-American teens and young adults. This type of prejudice was largely believed to be a factor in the shootings of Tamir Rice, Michael Brown and Trayvon Martin, who were African-American.

2 Read the paragraph from the section "The Genetics Of Race And Ancestry."

The study of genetics has proven that human beings are far more alike than they are different. If more people understood that, it would be easier to debunk the myth that people of a certain race are "naturally" one way or another. It would also be easier to teach tolerance.

Which of the following can be inferred from this paragraph?

- (A) Becoming familiar with genetics may help people understand their racial makeup better.
- (B) Scientists who study genetics must be tolerant and free from racial bias.
- (C) The study of genetics may reveal surprising information about what determines race.
- (D) The work of genetic scientists could be used to help reduce racial bias and prejudice.

- 3 How are the first and final paragraphs of the article connected to one another?
- (A) Both refer to the need for a conversation about race in the United States.
 - (B) Both suggest that race is an extremely sensitive topic in the United States.
 - (C) Both reference the ongoing issues of bias and racism in the United States.
 - (D) Both suggest that race needs to be better understood in the United States, but not discussed.

- 4 Read the sentences from the section "The Genetics Of Race And Ancestry."

Biological or genetic ancestry is what genetic material people have inherited from their ancestors.

Social or cultural ancestry refers to the origin of the attitudes, beliefs and behaviors displayed by an individual.

How does the relationship between these two sentences help develop the central idea of the article?

- (A) Both sentences state ways that people unconsciously develop racial biases.
- (B) Both sentences state factors that often influence how people perceive race.
- (C) Both sentences present anecdotal observations about the evolution of race.
- (D) Both sentences describe common misconceptions about how race is determined.