

# An Easy Stereotype Called "Race"

by Boyce Rensberger

You're not a racist. You know that deep down inside, all people are pretty much the same, no matter what color their skin or what shape their eyelids.

But you are curious about differences among these groups that we call races. Everybody is.

Why do most people from Europe have pale skin? Why do most Africans and most Europeans--and their descendants in this country--have eyes that shaped alike but are so different from an Asian's eyes? Or maybe you wonder why people come in so many colors and facial forms in the first place. And many people wonder whether the differences are more than skin deep.

These are honest, scientifically worthy questions. In fact, scientists have tried for centuries to answer them. After discarding many mistakes in their interpretations, today's researchers generally agree on three discoveries:

\*\*\*There are many more differences among people than the obvious ones such as skin color and facial form. Dozens of other variations have been found that are more than skin deep.

\*\*\*These differences have been good for the human species. If we were not so diverse, we would not be such an evolutionary success. For example, without protection of dark skin, our ancestors in Africa could not have survived the strong tropical sun. And when some of those ancestors migrated to the climate of northern Europe, where there is less sunlight, they could not have survived unless they lost most of their skin color.

\*\*\*The third conclusion is probably the hardest to understand--races don't really exist, at least not outside our imaginations. We all use the word "race" as if it meant something specific and clear-cut. We talk and act as if blacks, whites and others belong to different groups that developed naturally long ago. But, according to most anthropologists today, that isn't true. They say races are mostly arbitrary categories invented by people to fit a misunderstanding about how beings evolved.

A few centuries ago, European scientists claimed that races were natural divisions of the human species. Some even argued that races represented a series of evolutionary stages, some "more advanced" than others. The old-time researchers knew of very few differences among various peoples and did not fully understand how evolution works. In fact, the concept of race was developed long before 1859, when Charles Darwin, the English naturalist, published his discoveries about evolution.

In 1735, Carl von Linne, the Swedish naturalist better known as Linnaeus, said there were four races. Over the years dozens of other classifications have been proposed, some arguing that

there are as many as 31 or even 37 races.

Today, anthropologists are aware of many differences that were never noticed before and that don't correspond to racial categories. More important, the further that researchers study people worldwide, the more they realize that if they take into account all the hidden differences, they get a very different picture of what is similar or dissimilar among groups. If you consider each feature by itself, you see that a person of one race can be more like a person of another race than he or she is like someone of their own race.

Take blood for example. African blacks may be any of the four major blood types: A, B, O and AB. The same is true of European whites and of Asiatic peoples. If you're a type O, your blood is more closely related to that of any other type O person--regardless of race--than it is to a type B or type A of your own race.

If you need a blood transfusion, you shouldn't care whether the donor's skin color is like yours. The same is true of organ transplants. Your closest genetic match for a donated kidney, for example, could easily be somebody of another "race."

The same race-blind relationships are true of many physical factors, from the critical to the trivial. Take ear wax, which comes in two kinds. One is wet and sticky; the other is dry and crumbly. The vast majority of Africans and Europeans have the same kind--wet and sticky--while the vast majority of Asians have the dry kind.

We can also look at racial differences from another angle. Lots of people think skin color is a major factor in pigeonholing people in racial groups. Yes, it is true that most Africans and their descendants have skin that is darker than that of most Europeans and their descendants. But millions of people in India, classified by some anthropologists as members of the "Caucasoid," or "white," race, have darker skin than most Americans who call themselves black. Does their black skin mean they should be grouped with black Africans? Or does their straight hair mean they should be grouped with Europeans?

Also, many "Negroid" people living in sub-Saharan Africa today (such as the !Kung San or Bushmen) have skin no darker than that of many Mediterranean people such as the Spaniards, Italians and Greeks. And there are people in New Guinea who are as black and woolly haired as any African but have no ancestral links to Africa.

And here's another angle to think about. If you want to classify all black Africans in one group, how do you deal with the fact that within Africa live several kinds of people with much more dramatic differences than skin color?

There are the world's smallest people the Mbuti pygmies of Zaire, who average 4 foot 7 inches and whose size is very similar to that of a group in the Philippines called the Negritos. And there are the world's tallest, the Tutsi of Rwanda, who average 6-foot-1--close to the average for the very pale-skinned Scandinavian peoples.

Such differences within the usual broad racial groups have led most anthropologists to say it makes no sense to think that races are biological categories.

Sherwood Washburn, an anthropologist at the University of California at Berkeley, has long questioned the usefulness of racial classification.

"Since races are open systems which are intergrading, the number of races will depend on the purpose of the classification," he says. "I think we should require people who propose a classification of races to state in the first place why they wish to divide the human species."

The overwhelming conclusion of anthropologists, in short, is that no physical feature distinguishes any race.

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So how come people are different? Biologists say most racial differences arose as a result of a process called natural selection. This is the phenomenon that Darwin discovered in the 19th century and it explains a lot about how evolution happens.

In a nutshell, it means that if a mutation--a change in a person's genes--produces a useful feature, the person with that change is more likely to be healthier, live longer and, most important for evolution, have more children. Since the change is in the genes, the children inherit it. Because the change gives each person an advantage in survival, eventually those with it will outnumber those without it.

Skin color provides an excellent example. People whose ancestors have lived a long time in the tropics have dark skin. And the farther people lived from the equator, the lighter their skin. Even southern Europeans usually are darker than northern Europeans. In Africa, the darkest skins are near the equator, but at the north and south ends of the continent, the skins are lighter. In southern India, many people are as dark as the blackest Africans while northern Indians are about as light as southern Europeans. Whatever the skin color, it is all due to different amounts of a dark brown substance called melanin.

This north-south spectrum has evolved in response to the sun's intensity in local regions. Too much sun causes sunburn and skin cancer. Too little deprives the body of vitamin D. Without this vitamin, bones grow crooked, resulting in a disease called rickets. In the tropics, the sun is so strong that enough gets through dark skin to make all the vitamin D a person needs.

When dark-skinned people first migrated out of Africa and into northern climates, they may well have suffered rickets, which also can deform the pelvis, making childbirth dangerous or impossible. But because skin color can vary slightly even with a family, lighter-skinned children would be less affected. As a result, they would probably have more children than their darker relatives. And those children would be even more likely to have to have lighter-skinned children of their own.

After many generations, the natural effect of the combination of dark skin and low sunlight would select for people who had lost more and more of their original color. This is Darwin's natural selection at work.

Migration is a key player in the evolutionary drama. Geneticists know that if all members of a species stay in one breeding population, all will stay the same or change in the same ways. But if some members move away and become isolated from the rest of the species, the two groups evolve in different fashions.

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Sexual selection plays a role. Most visible differences among people have no practical advantage. For example, nobody knows why Asiatic people have that special form of upper eyelid or flatter facial profiles.

The thin lips of northern Europeans and many Asians have no known advantage over the full lips of many Africans and Middle Eastern peoples. Why do white men go bald so much more often than the men of other backgrounds?

One possible explanation is another evolutionary process that Darwin also discovered--sexual selection. This differs from natural selection, in which the environment chooses who will

survive. In sexual selection, the choice is up to the prospective mate. In simple terms, ugly persons will be less likely to find mates and pass on their genes than will beautiful people. And, of course, the definition of beauty varies from culture to culture.

Our differences are trivial in a biological sense. In fact, geneticists have estimated that the variations in genetic makeup that account for racial differences occupy only about 0.01 percent of our genes.

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So, were there ever pure races? Until the mid-20th century, most researchers assumed that so-called pure races once existed. Those early thinkers had great trouble figuring out who belonged in which race and decided that was simply because migrations and intermarriage had mixed up, or blended, the once-distinct traits. Today, most anthropologists hold that pure races never existed. They think that human beings have always been migrating and intermarrying, spreading new genes worldwide.

Genes useful in all parts of the world would spread quickly--those, for example, that might improve the immune system. Surely the fastest to spread were the genes that improved the brain. In fact, anthropologists who study the earliest human beings agree that a fully modern brain evolved long before any of today's races came into existence.

Genes useful only in some areas would tend not to become common when they were carried to other places. Dark skin, for example, is not an advantage in cold climates. Light skin is a serious disadvantage in tropical climates. So skin color genes could not flow far and persist, at least not until the age of milk fortified with vitamin D, large hats and long sleeves.

The bottom line, anthropologists agree, is that science does not support the idea of races as natural units, now or in the past.

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