RACE AND ETHNICITY
Sociohistoric Constructions

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HOW OUR SKINS GOT THEIR COLOR

Marvin Harris

The late **Marvin Harris** spent a portion of his life teaching in the anthropology department at Columbia University, where he served as department chair. He published sixteen books, including *Cannibals and Kings; Culture, People, and Nature;* and *Our Kind.*

MOST HUMAN BEINGS ARE NEITHER VERY fair nor very dark, but brown. The extremely fair skin of northern Europeans and their descendants, and the very Black skins of central Africans and their descendants, are probably special adaptations. Brown-skinned ancestors may have been shared by modern-day Blacks and Whites as recently as 10,000 years ago. Human skin owes its color to the presence of particles known as **melanin.** The primary function of melanin is to protect the upper levels of the skin from being damaged by the sun's ultraviolet rays. This radiation poses a critical problem for our kind because we lack the dense coat of hair that acts as a sunscreen for most mammals. . . . Hairlessness exposes us to two kinds of radiation hazards: ordinary sunburn, with its blisters, rashes, and risk of infection; and skin cancers, including malignant melanoma, one of the deadliest diseases known. Melanin is the body's first line of defense against these afflictions. The more melanin particles, the darker the skin, and the lower the risk of sunburn and all forms of skin cancer. This explains why the highest rates for skin cancer are found in sun-drenched lands such as Australia, where light-skinned people of European descent spend a good part of their lives outdoors wearing scanty attire. Very dark-skinned people such as heavily pigmented Africans of Zaire seldom get skin cancer,

melanin The pigment that gives the skin its color. Melanin protects the skin from the ultraviolet rays associated with various skin cancers. Populations living near the equator have darker skin to protect them from the harsh effects of the sun.

QUESTIONS TO CONSIDER

Cultural anthropologist Marvin Harris links the variations in skin color one can observe in traveling around the world to the human body's ability to adapt physically to changes in exposure to solar radiation. How do you explain his assertion that "White was beautiful because White was healthy" and "Black was beautiful because Black was healthy"?

but when they do, they get it on depigmented parts of their bodies—palms and lips.

If exposure to solar radiation had nothing but harmful effects, natural selection would have favored inky Black as the color for all human populations. But the sun's rays do not present an unmitigated threat. As it falls on the skin, sunshine converts a fatty substance in the epidermis into vitamin D. The blood carries vitamin D from the skin to the intestines (technically making it a hormone rather than a vitamin), where it plays a vital role in the absorption of calcium. In turn, calcium is vital for strong bones. Without it, people fall victim to the crippling diseases rickets and osteomalacia. In women, calcium deficiencies can result in a deformed birth canal, which makes childbirth lethal for both mother and fetus.

Vitamin D can be obtained from a few foods, primarily the oils and livers of marine fish. But inland populations must rely on the sun's rays and their own skins for the supply of this crucial substance. The particular color of a human population's skin, therefore, represents in large degree a trade-off between the hazards of too much versus too little solar radiation: acute sunburn and skin cancer on the one hand, and rickets and osteomalacia on the other. It is this trade-off that largely accounts for the preponderance of brown people in the world and for the general tendency for skin color to be darkest among **equatorial populations** and lightest among populations dwelling at higher latitudes.

At middle latitudes, the skin follows a strategy of changing colors with the seasons. Around the Mediterranean basin, for example, exposure to the summer sun brings high risk of cancer but low risk for rickets; the body produces more melanin and people grow darker (i.e., they get suntans). Winter reduces the risk of sunburn and cancer; the body produces less melanin, and the tan wears off.

The correlation between skin color and latitude is not perfect because other factors—such as the availability of foods containing vitamin D and calcium, regional cloud cover during the winter, amount of clothing worn, and cultural preferences—may work for or against the predicted relationship. Arctic-dwelling Eskimo, for example, are not as light-skinned as expected, but their habitat and economy afford them a diet that is exceptionally rich in both vitamin D and calcium.

Northern Europeans, obliged to wear heavy garments for protection against the long, cold, cloudy winters, were always at risk for rickets and osteomalacia from too little vitamin D and calcium. This risk increased sometime after 6000 B.C., when pioneer cattle herders who did not exploit marine resources began to appear in northern Europe. The risk would have been especially great for the brown-skinned Mediterranean peoples who migrated northward along with the crops and farm animals. Samples of Caucasian skin (infant penile foreskin obtained at the time of circumcision) exposed to sunlight on cloudless days in Boston (42°N) from November through February produced no vitamin D. In Edmonton (52°N) this period extended from October to March. But further south (34°N) sunlight was effective in producing vitamin D in the middle of the winter. Almost all of Europe lies north of 42°N. Fair-skinned, nontanning individuals who could utilize the weakest and briefest doses of sunlight to synthesize vitamin D were strongly

equatorial populations Populations living near the equator.

favored by **natural selection.** During the frigid winters, only a small circle of a child's face could be left to peek out at the sun through the heavy clothing, thereby favoring the survival of individuals with translucent patches of pink on their cheeks characteristic of many northern Europeans. (People who could get calcium by drinking cow's milk would also be favored by natural selection.)

If light-skinned individuals on the average had only 2 percent more children survive per generation, the changeover in their skin color could have begun 5,000 years ago and reached present levels well before the beginning of the Christian era. But natural selection need not have acted alone. **Cultural selection** may also have played a role. It seems likely that whenever people consciously or unconsciously had to decide which infants to nourish and which to neglect, the advantage would go to those with lighter skin, experience having shown that such individuals tended to grow up to be taller, stronger, and healthier than their darker siblings. White was beautiful because White was healthy.

To account for the evolution of Black skin in equatorial latitudes, one has merely to reverse the combined effects of natural and cultural selection. With the sun directly overhead most of the year, and clothing a hindrance to work and survival, vitamin D was never in short supply (and calcium was easily obtained from vegetables). Rickets and osteomalacia were rare. Skin cancer was the main problem, and what nature started, culture amplified. Darker infants were favored by parents because experience showed that they grew up to be freer of disfiguring and lethal malignancies. Black was beautiful because Black was healthy.

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natural selection In his 1859 book *The Origin of Species*, Charles Darwin describes the process by which nature "selects" the best-adapted varieties of animals for survival.

cultural selection The idea that, in ways that mirror natural selection, society "selects" those cultural traits that will enhance the survival of a particular civilization.