

Human Diversity & Race

the concept of "race" as it is applied to humans: how the biological and social categories of race are largely unrelated

Race: Discredited in Biology

A race is a geographically isolated subdivision of a species that can reproduce with individuals from other subspecies of the same species, but does not because of its geographic isolation.

Ethnicity and race are not synonymous, although American culture does not discriminate between the two terms.

Races Are Not Biologically Distinct

- Racial categories (particularly early on) are based on phenotypes.
- Phenotypes are the product of genetic, developmental, and environmental factors.
- The so-called three great races (white, black, and yellow) are more a reflection of European colonialist politics than an accurate representation of human biological diversity.

Fundamental Problems with Race

- Populations grouped into one race based upon phenotypic similarity may be genetically distinct.
- Genetic traits occur together due to the selective forces of the environments
 - do not constitute an internally coherent "type."
- "Race," is a social, rather than biological category.

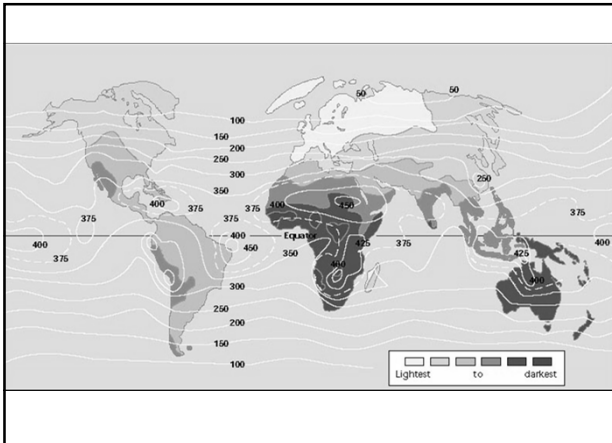


Explaining Skin Color

- Natural selection:
 - "is the process by which nature selects the forms most fit to survive and reproduce in a given environment."
- Skin color is determined by melanin
 - genetically determined.
- Prior to the sixteenth century
 - darker skinned populations were closest to the equator
 - lighter skinned populations were closer to the poles.

Explaining Skin Color

- Light skin in the tropics is selected against because it burns more easily.
- Light skin is more susceptible to skin cancer.
- The effect of sunlight on vitamin D formation indicates how dark skin might have been selected for in tropical environments. It further indicates how light skin might have been selected for in low-sunlight environments, and against in the tropics.



Hypodescent: Race in the US

- In the United States, race is most commonly ascribed to people without reference to genotype.
- Offspring of "genetically mixed" unions are usually ascribed to the *lower* status race of one parent, an example of the process called *hypodescent*.
- The arbitrary lumping of bisexuals with homosexuals and the controversy surrounding the casting of Eurasian roles in the play, *Miss Saigon*, are examples of *hypodescent*.

Ethnic Groups in the US, 1990

Claimed Identity	Millions of People
Whites: German Ancestry	57.9
Whites: Irish Ancestry	38.7
Whites: English Ancestry	32.6
Blacks	30.0
Asians & Pacific Islanders	7.3
Native Americans, Eskimos, and Aleuts	1.9
Hispanics	22.3
All Others	58.0
Totals	248.7

Race and Identity

*How Social Functions
Trump Biological Functions*

Race as a Concept

- Goes back to the ancient world
- Often confused with social identity
 - National identity
 - Tribal identity
 - Religious identity
- Predates understanding of biology and inheritance



Social Uses

- Why are very visible traits used to define race?

Example: Skin Color

- In the modern western world this is the key determinant of racial identity
- But really only related to distant physical adaptations
- Skin color derives from...
- Melanin
- Carotene
- Solar radiation

Example: Eye Color

- Eye color derives from multiple factors
 - Melanin
 - Adds browns to reds to iris
 - Includes layers on the posterior (inner) iris
 - Prevents reflection within eye, like a camera lining
 - Differential smoothness of iris
 - Breaks in iris forms crypts, in which water pools
 - These reflect and refract light just like the sky
 - Blue eyes LACK the inner layer of melanin on the iris
 - Thus they reflect and refract light like the sky – i.e. blue

Eye Color – Adaptive Significance?

- Difficult to determine
 - Light eyes tend to come from northern and western Europe
 - Adaptive significance?
 - Increased vision in light-poor climates?
- Not the case in other species
- Only definite visible difference in light & dark eyes is ability to see dilation of pupil

Adaptive Differences Related to Culture

- Nearsightedness (Myopia)
 - Extremely rare in Native American, African, and Australian populations
 - More common in European and central & western Asian populations
- Natural selection acts against nearsightedness among hunters

Color-blindness

- Occurs most commonly in males
- Occurs most commonly in Europeans and Northwestern Indian populations
 - Up to 8% of a population
 - Again, selected against among hunters and gatherers
 - Most stridently impacts males
 - Presumably because males venture further from safety while hunting & foraging
- Color recognition perhaps more essential in hunting rather than gathering

What is Race... Really?

Could be defined as...

- A population that differs in genetic composition from other similarly-defined populations
- This reflects gene pool
- Is a product of breeding history
- No such thing as a pure race

All populations have gene flow somewhere in their past or present

Are There Races Then?

You can define races any way you want, thus making the term meaningless

BUT...genetically, we can identify about 1000 population stems/lines that some argue to be as close to race as we will ever get

The Uses Of "Race" – or Racism 101

- Most uses of race have strong social agendas, even if these are implicit and not at the forefront of all user's thoughts
- They are related to world history and culture contact
- Define "us" versus "them" sorts of encounters
- Often used to justify perceived technological dominance of a group

Blumenbach's Scheme

- 1776 but still going strong today
- Races tied to colors and geography
 - Most people just took the colors
 - White - European
 - Yellow – East Asian
 - Brown – South and Southeast Asian
 - Red – Native Americas
 - Black – Africa and Australia

