



1

How we think

- The universe is a very big place. Our brains are not
- One shortcut we use to understand our world is to categorize the things we see
- For example, we recognize that all of these fit in the category "chair"



- Humans are masters at making up categories

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How we think

- Categories have defining traits
- For example, a chair is
 - Something you sit on



3

How we think

- Categories have defining traits
- For example, a chair is
 - Something you sit on
 - Something only one person sits on



4

How we think

- Categories have defining traits
- For example, a chair is
 - Something you sit on
 - Something only one person sits on
 - Something one person sits on that supports their back



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How we think

- These defining traits of the category help us recognize which objects fit the category
- Not a perfect shortcut; some objects defy easy categorization



Chairs?

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What is race?

- The simplest categories are “us” and “them”
 - Our brains assign defining traits to “them”
 - Our brains think those traits are real
- **Race**: idea that human variation can be classified
 - **Biological concept of race**: those classifications are based on our biology and are therefore immutable
 - **Social concept of race**: classifications are based on our social identities and can include more than our biology

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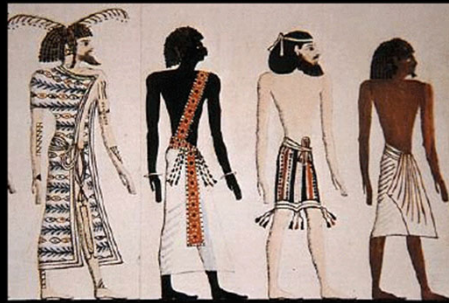
What is racism?

- **Racism**: using race as a basis for thinking one group is superior (or inferior) to another
 - Inequality based on race
 - Can be based on either biological or social concept
 - Prejudice against members of one’s own social group is well documented in almost every human society, but creating a racist system of categorization of all human diversity on the globe is a phenomenon unique to the last few hundred years, starting in Europe.

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History of human variation

- Ancient Egyptians had extensive contact
- Recognized physical differences
- Did not think of these as races



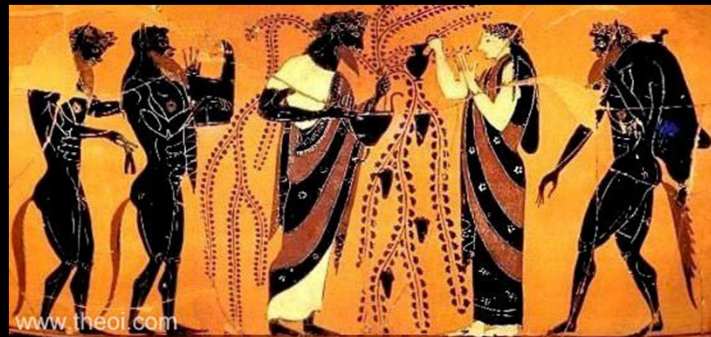
Tomb of Seti I (13th c BC)



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History of human variation

- Ancient Greeks saw wide range of human variation – attributed to the environment
- “Ethiopians” is Greek for “scorched ones”
- Little was made of biological differences



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History of human variation

- European Dark Ages: not much influence from people outside one's community
- Discrimination and prejudice against Jewish and Muslim people
- Stories of far-away people became fantastic: werewolves, headless horsemen, etc.



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Race is a new concept

Renaissance:

- Empiricism in European science
- Europeans traveled far
- By boat meant no gradual changes seen
- Met people who were different from them
- **Start of biological concept of race**



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Were other races the same kind of people?

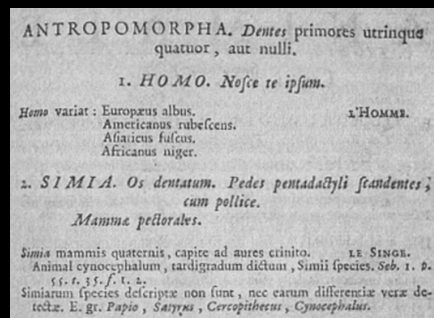
- Newly encountered people who were very different from what Europeans were used to
- Pope Paul III: all people, of all races, were product of a single creation (**monogenism**)



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Linnaeus, Carolus (1707-1778)

- Systematic classification including humans, split into **subspecies** (the scientific term for a biological race)
 - *H. sapiens afer*
 - *H. sapiens asiaticus*
 - *H. sapiens americanus*
 - *H. sapiens europaeus*



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Linnaeus' human groups

- Linnaeus defined varieties based on their:
 - Geographic locale
 - Skin color
 - Hair texture
 - Facial features
 - Body form
 - Personality
 - Clothes & customs (culture)
- By placing a person in a particular group, it was thought that this meant the person had every trait associated with that race (including the offensive cultural traits)*

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Creationism and race

- **Monogenism** meant that God created humans, and since creation we had changed into different races
- Change was result of **environment**: scorched skin (but note this wasn't evolution, this was religion-based)
- Implied form God created was perfect, and others have degraded

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Race in Enlightenment Immanuel Kant (1724-1804)

- Central figure of modern philosophy, but spent most of his career teaching anthropology!
- Anthropology as a way of explaining differences
- **Racial essentialism** – race is natural, biological
- 1775 essay “*On different races of man*”
 - Based on skin color & hair type, reveal relationship with the four universal qualities (hot, cold, dry, damp)
 - Stem species – white skin & dark hair
 - Descendants: White, Hunnish, Negro and Hinduish races

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Creationism and race

- As more diversity discovered, popularity of monogenism fell
- **Polygenism**: separate creation events for each race
- Influential in U.S. and in early biological anthropology



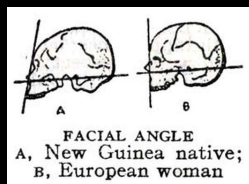
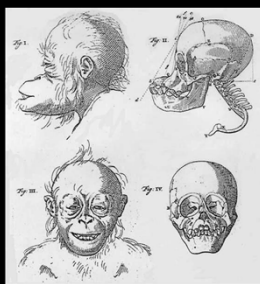
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Creationism and race

- BOTH monogenism & polygenism allowed for racism:
 - **Monogenism**: races fell from perfection, some more than others
 - **Polygenism**: multiple origins meant races were different species that should not mix
- Both were based on **religious beliefs** – debate changed with Darwin

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Racializing morphology with measurement

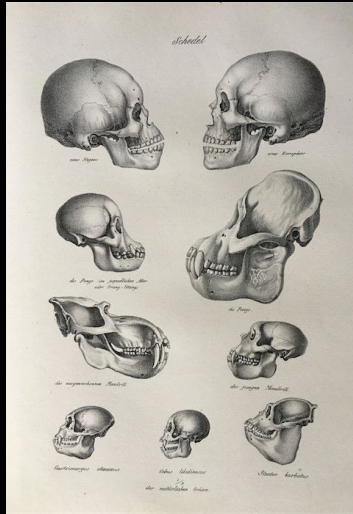


Facial angle:

- developed by Dutch anatomist Petrus Camper in 1770s
- measure of projection of jaw relative to forehead,
- first systematic craniological measurement, used to differentiate humans from apes and different human racial groups from each other

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Elements of craniology: comparative anatomy

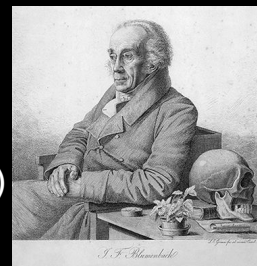


- Method developed by zoologists to create taxonomies of living world, increasingly applied by anthropologists through late 18th and early 19th century to study racial difference
- seen as a more reliable tool to understand and precisely define racial differences

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Blumenbach, Johann Friedrich (1752-1840)

- *"On the natural variety of mankind"*
- Embellished Linnaeus' classification, developed nomenclature still common today
 - Denies hierarchy, notes that the differences between varieties grade into each other
- Blumenbach's races: Caucasian, Mongolian, Malayan, Ethiopian, American
- Emphasized gradients in traits (cline)



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Craniology also used to argue for racial equality...

Friedrich Tiedemann (1781-1861)

- German anatomist, argued for racial equity and abolition by measuring hundreds of skulls (1836)
- Emphasized the overlap in cranial capacity across groups
- Advocated monogenism

XXIII. *On the Brain of the Negro, compared with that of the European and the Orang-Outang.* By Dr. FRIEDRICH TIEDEMANN, Professor of Anatomy and Physiology in the University of Heidelberg, and Foreign Member of the Royal Society.

Received and Read June 9, 1836.

I TAKE the liberty of presenting to the Royal Society a paper on a subject which appears to me to be of great importance in the natural history, anatomy, and physiology of Man; interesting also in a political and legislative point of view. Celebrated

The principal result of my researches on the brain of the Negro, is, that neither anatomy nor physiology can justify our placing them beneath the Europeans in a moral or intellectual point of view. How is it possible, then, to deny that the Ethiopian race is capable of civilization? This is just as false as it would have been in the time of JULIUS CÆSAR to have considered the Germans, Britons, Helvetians, and Batavians incapable of civilization. The slave trade was the proximate and remote

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But mostly a powerful tool of scientific racism

Samuel George Morton
(1799-1851)

- Philadelphia physician
- Measured hundreds of skulls, emphasized differences in mean values for brain size across groups (that we know today are correlated with body size and climate)
- Advocated for polygenism
- *Crania Americana* (1839), *Crania Aegyptiaca* (1844)



RACES.	No. of skulls.	Mean internal capacity in cubic inches.	Largest in the series.	Smallest in the series.
Caucasian.	52	87.	109.	75.
Mongolian.	10	83.	93.	69.
Malay.	18	81.	89.	64.
American.	147	80.	100.	60.
Ethiopian.	29	78.	94.	65.

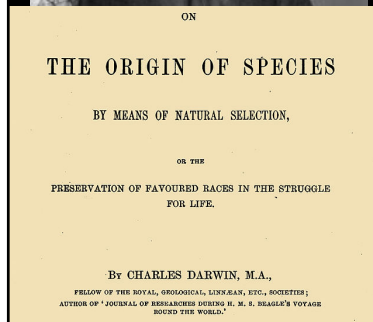
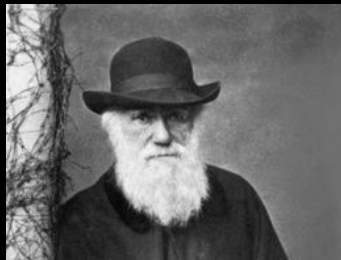
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Not all whites created equal: Morton's Germanic superiority

- Morton believed that Caucasians were superior to other races, but that Germanic peoples (a.k.a. "Teutonic," Northern Europeans including Anglo-Saxon British, Germans, Dutch, and Scandinavians) were superior to other Caucasians (including Celts, Eastern and Southern Europeans, Jews, etc.)
- These ideas were influential in discrimination against Southern and Eastern European immigrants to the United States through the 19th century, and in theories about "Nordic" or "Aryan" supremacy taken up by Nazis

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Darwin's *Origin of Species* (1859)



Only statement Darwin makes
on humans in *Origin*:

"Light will be thrown on the
origin of man and his history."

*On the Origin of Species by
Means of Natural Selection,
or, The Preservation of
Favoured Races in the
Struggle for Life*

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Darwin's *Descent of Man* (1871):

reformulation of polygenist/monogenist dispute in evolutionary terms

"The question whether mankind consists of one or several species has of late years been much discussed by anthropologists, who are divided into the two schools of monogenists and polygenists. **Those who do not admit the principle of evolution, must look at species as separate creations, or in some manner as distinct entities;** and they must decide what forms of man they will consider as species by the analogy of the method commonly pursued in ranking other organic beings as species.

...

Those naturalists, on the other hand, who admit the principle of evolution, and this is now admitted by the majority of rising men, will feel no doubt that all the races of man are descended from a single primitive stock; whether or not they may think fit to designate the races as distinct species, for the sake of expressing their amount of difference."
(Chapter VII)

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Evolution and race

- Combined evolution with religious ideas of **monogenism** and **polygenism**:
 - Humans were one species with shared ancestry (similar to **monogenism**)
 - Could view each race's evolutionary history as distinct (similar to **polygenism**)
- Evolutionary thought has historically been used for both racist and anti-racist ends. In the 19th century, evolution was mostly used to explain and justify racial discrimination, colonialism, and imperialism, and European claims of superiority.

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Scientific racism

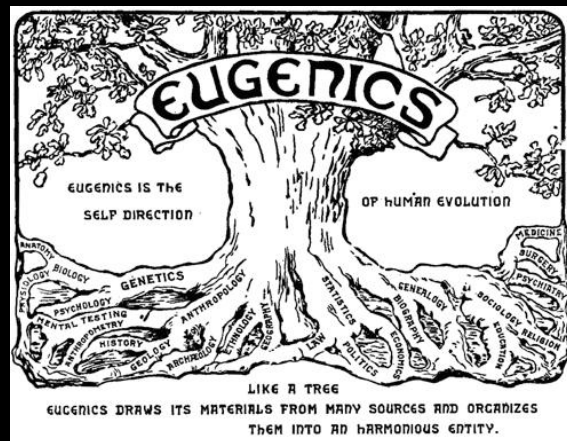
- **Scientific racism**: using science to justify racism
- Used **scientific methods** (like measuring and tracing family trees), but did not follow **the scientific method**
- Scientists out to “**prove**” their race’s superiority
- Result: **pseudo-science that sounded like real science and produced results people wanted to hear**; led to really horrible practices

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Eugenics

Francis Galton (1822-1911)

- Darwin's cousin
- Developed idea of “eugenics” (good breeding) to “direct” human evolution
- Inspired by artificial selection – humans deciding which traits they want to see “selected” in our species



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Eugenics

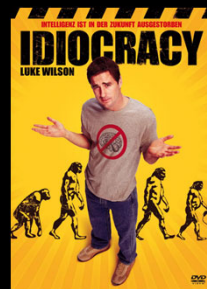
- **Eugenics**: idea that we can "improve" the human species by:
 - **Preventing** people with undesirable traits from breeding (negative eugenics), OR
 - **Encouraging** people with desirable traits to mate ("positive" eugenics)
- Popularized after evolutionary synthesis

Problem: little understanding of what traits were heritable, or the importance of variation in a species!

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Eugenics

- Thought that "feeble-mindedness" caused all social ills, and that it was genetic
- Other traits they thought were heritable (but aren't):
 - Criminality
 - Gambling
 - Drinking



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H.H. Goddard : *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness* (1912)

He dallied with a feeble-minded tavern girl

She bore him a son known as "Old Horror" who had ten children

From "Old Horror's" ten children come hundreds of the lowest types of human beings



He married a worthy Quakeress

She bore seven upright worthy children

From these seven worthy children came hundreds of the highest types of human beings

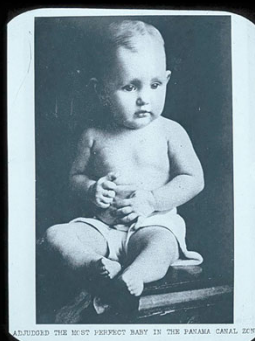
Side note: Goddard went to Haverford!

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Eugenics

Eugenics was very popular across the West in the first half of the 20th century

In the US, eugenicist arguments used against civil rights legislation in the 1950s and 1960s



ADJUDGED THE MOST PERFECT BABY IN THE PANAMA CANAL ZONE



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World War II

- Inspired by US eugenicists, Hitler had his scientists “prove” superiority of “Aryans”
 - Remember why we don’t set out to prove things?
- Mixing feelings of superiority with fake science led to the Holocaust
- US took note – maybe eugenics wasn’t such a good idea (however, many forced sterilization programs persisted well into late 20th century)

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Post-war physical anthropology

- Pre-war obsession with defining races and planning eugenics disappeared
- Refocus on Franz Boas’ work: before WW2, he rejected the biological race concept based on studying skull size & shape in immigrant families
 - Expected immigrants from different countries to have different skull sizes
 - Found parents from all European countries had smaller heads compared to their US-born children

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Post-war physical anthropology

- Some researchers rejected the use of term “race” when talking about humans. Ethnic group or population became more popular
- Physical (biological) anthropology focused on trying to understand why human variation exists

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Race in society

- Society still held on to old racial ideas, some of which **STILL** seem to imply that race is biology (despite vast research to the contrary).
- Looking at the history of how the U.S. government has **CHANGED** how they categorize people into races over time shows that **race is still used in society today** but the **categories are fluid** (not discrete, so not biological races)
 - U.S. Census example...

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Which categories the government cared about changed over time



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Which categories the government cared about changed over time



40

Political ideas of race have been based on biology-sounding ideas

- Assumption that there were once pure races based on biology
- Concerns about **hypodescent** lead to eugenics (only certain people should have children)
 - Hypodescent: individuals with mixed ancestry are identified with the racial category of lower socioeconomic status (aka “one drop rule”)
 - Idea that if a white and a Black person in the U.S. have children, their offspring will be considered Black
 - Depends on society/country; in Haiti, that same pairing would result in the offspring being considered white

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AAA petition for census (ignored)

The American Anthropological Association recommends the **elimination of the term 'race'** from OMB Directive 15 during the planning for the 2010 Census. During the past 50 years, 'race' has been scientifically proven to not be a real, natural phenomenon. More specific, **social categories such as 'ethnicity' or 'ethnic group' are more salient for scientific purposes and have fewer of the negative, racist connotations for which the concept of race was developed...**

Yet the concept of race has become thoroughly—and perniciously—woven into the cultural and political fabric of the United States. It has become an essential element of both individual identity and government policy. Because so much harm has been based on 'racial' distinctions over the years, **correctives for such harm must also acknowledge the impact of 'racial' consciousness among the U.S. populace**, regardless of the fact that **'race' has no scientific justification in human biology**. Eventually, however, **these classifications must be transcended and replaced by more non-racist and accurate ways of representing the diversity of the U.S. population.**

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Race as social reality matters

- In the US, perceived race associated with:
 - Housing discrimination
 - Income and living below poverty level
 - Education
 - Unemployment (controlling for education)
 - Incarceration rates
 - Infant mortality and numerous health-related outcomes, access to & quality of health care

Race is not biology, but race and racism affect biology!

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Is there a racial 'care gap' in medical treatment?



<http://www.pbs.org/newshour/bb/is-there-a-racial-care-gap-in-medical-treatment/>

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Where are we in this class?

- **Theory of evolution** (mutation, gene flow, genetic drift, & natural selection) is well-supported by scientific evidence.
- Humans have **adaptations** (genetic & non-genetic) to the many habitats in which they live.
- One trait that varies in humans is skin color, but this variation is **clinal, not racial**.

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Where are we in this class?

- History of **colonialism** and **racism** has had a great effect on the scientific study of humans, including the current practice of medicine.
- Anthropology once sought to identify human races; now it seeks to **challenge biological race concept** & instead understand **humans as a geographically variable species with no sub-species** (races)!

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