

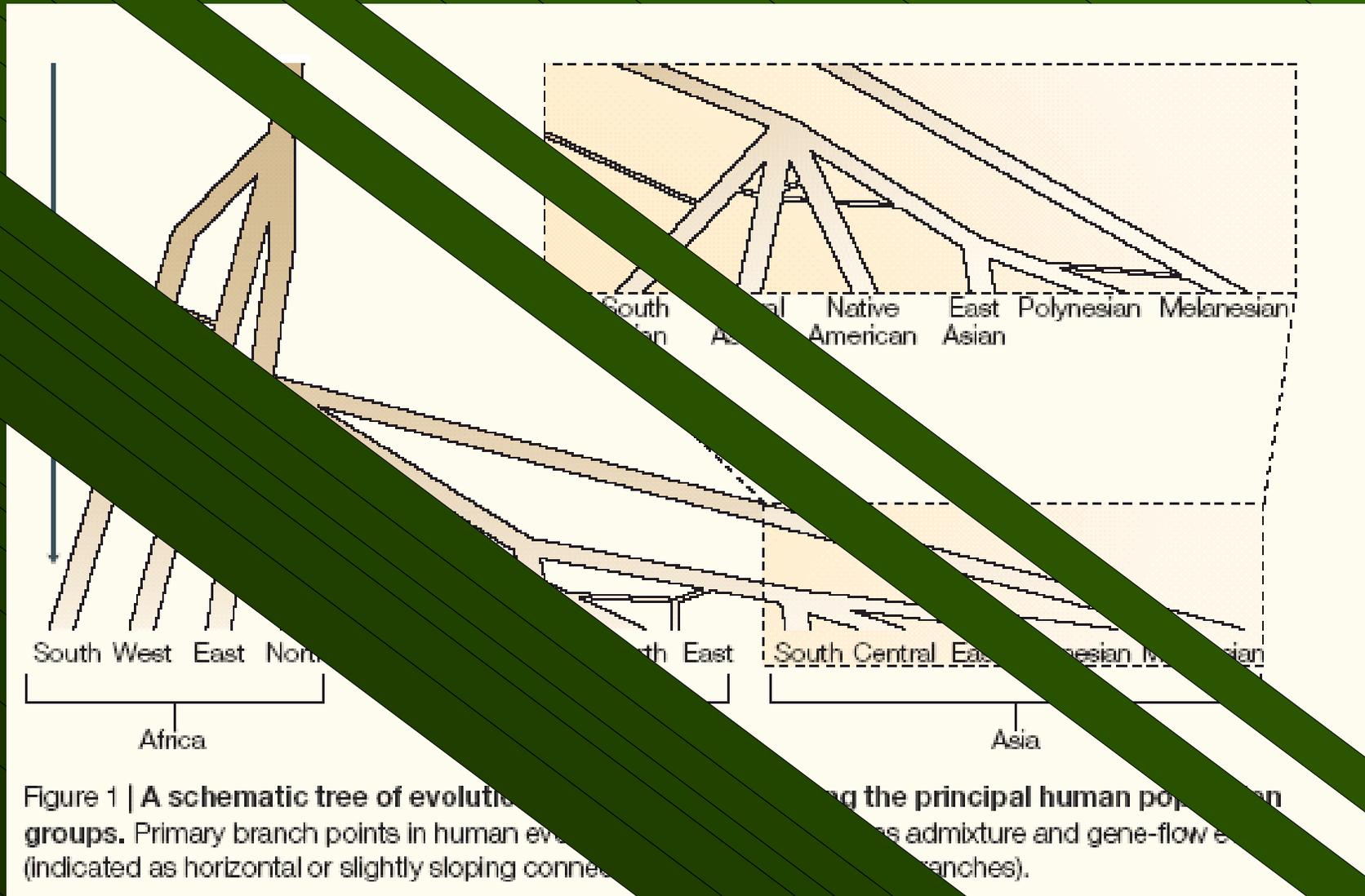
“Large Population Studies – Opportunities and Challenges”

Dichotomy Between Social Identity and Ancestry in Large Population Studies

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National Human Genome Center
Howard University

*Secretary’s Advisory Committee on Genetics, Health, and Society
February 28-March 1, 2005; North Bethesda, MD*

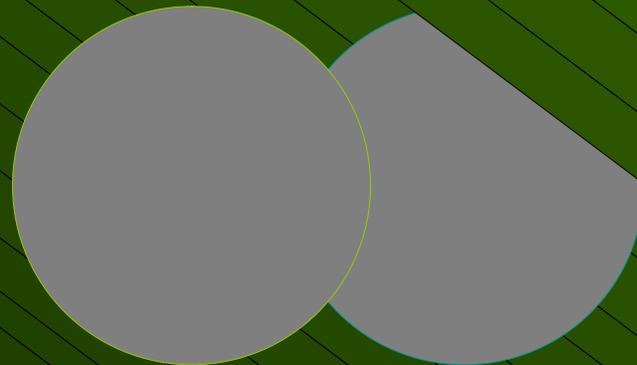
Desired Level of Resolution??



Shriver and Kittles – nature review

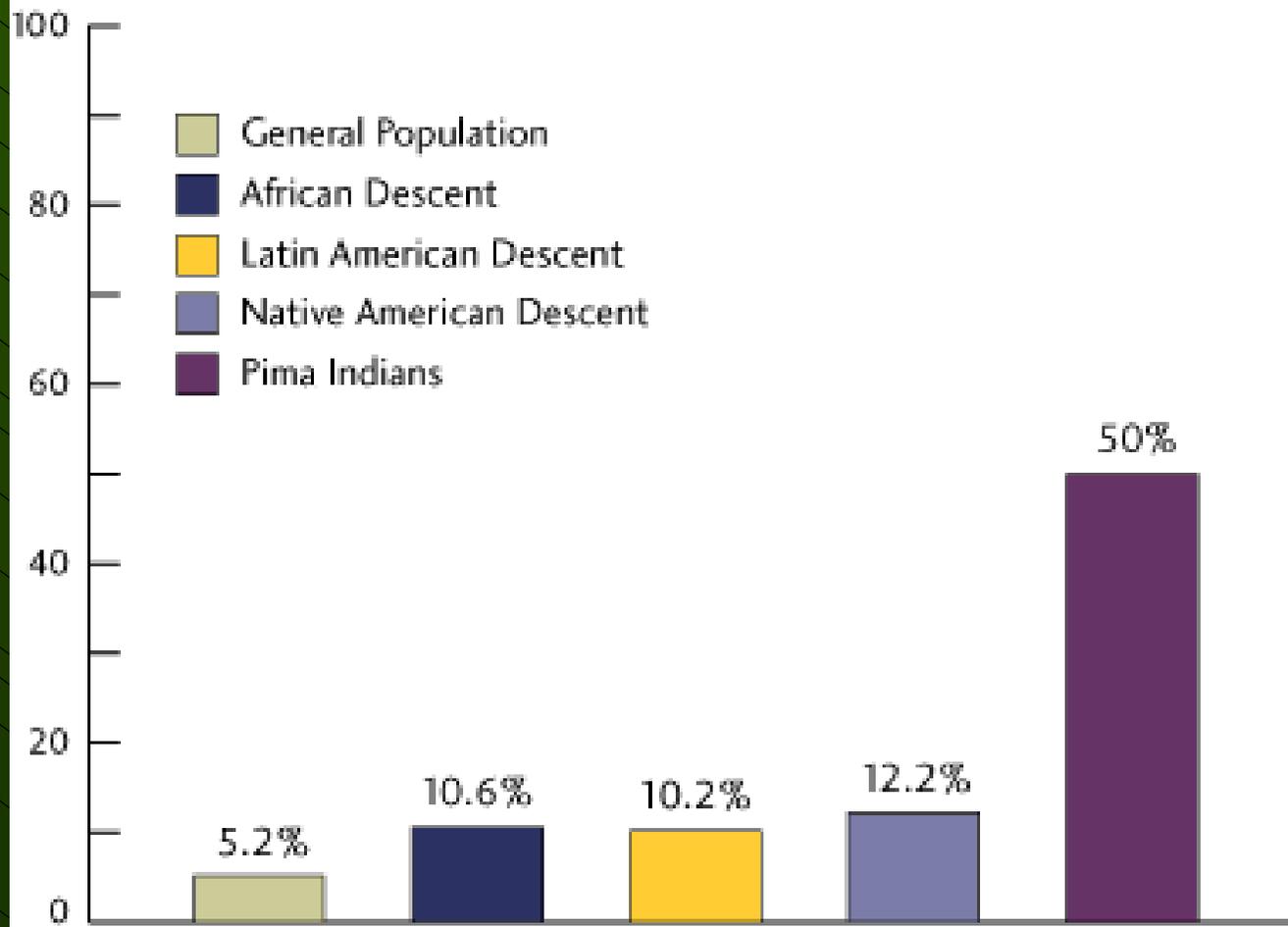
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Understanding



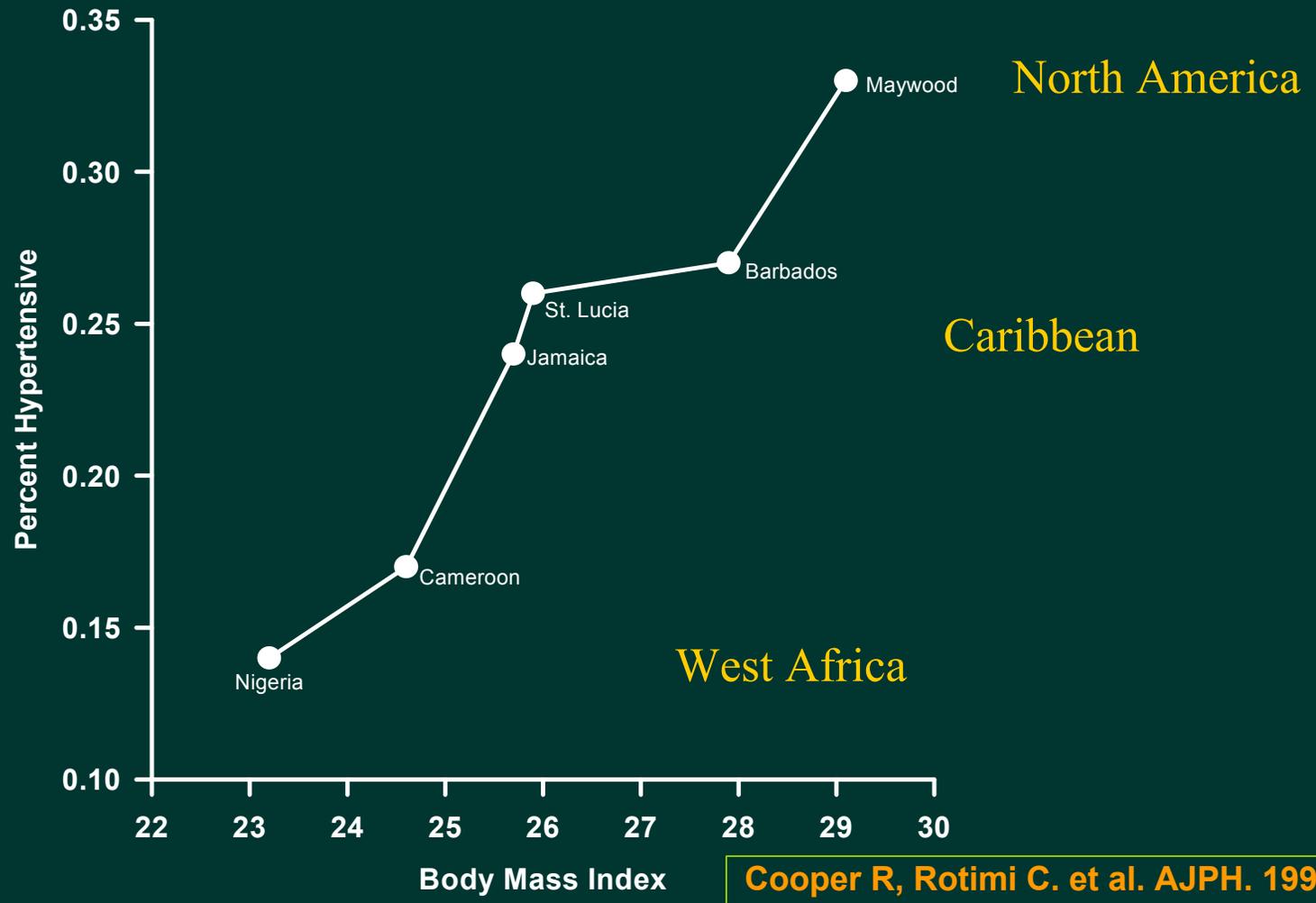
Eliminating Health Disparity

Prevalence of Type 2 Diabetes By Ethnic Groups



http://www.genetichealth.com/DBTS_What_Is_Type_2_Diabetes.shtml

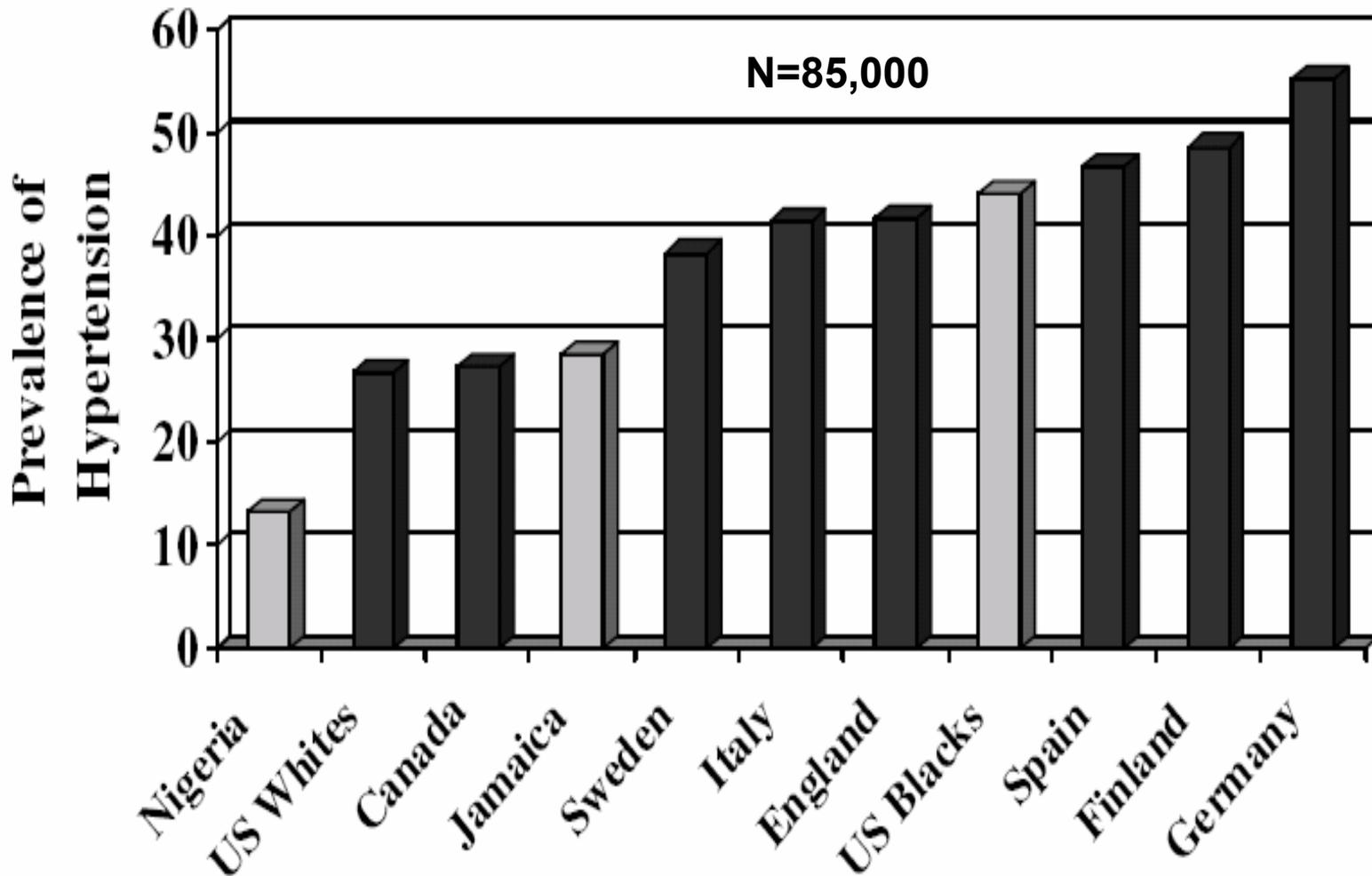
Prevalence of Hypertension by Mean Body Mass Index Among Populations of the African Diaspora



An international comparative study of blood pressure in populations of European vs. African descent

BMC Medicine 2005, 3:2 doi:10.1186/1741-7015-3-2

Richard S Cooper (rcooper@lumc.edu)



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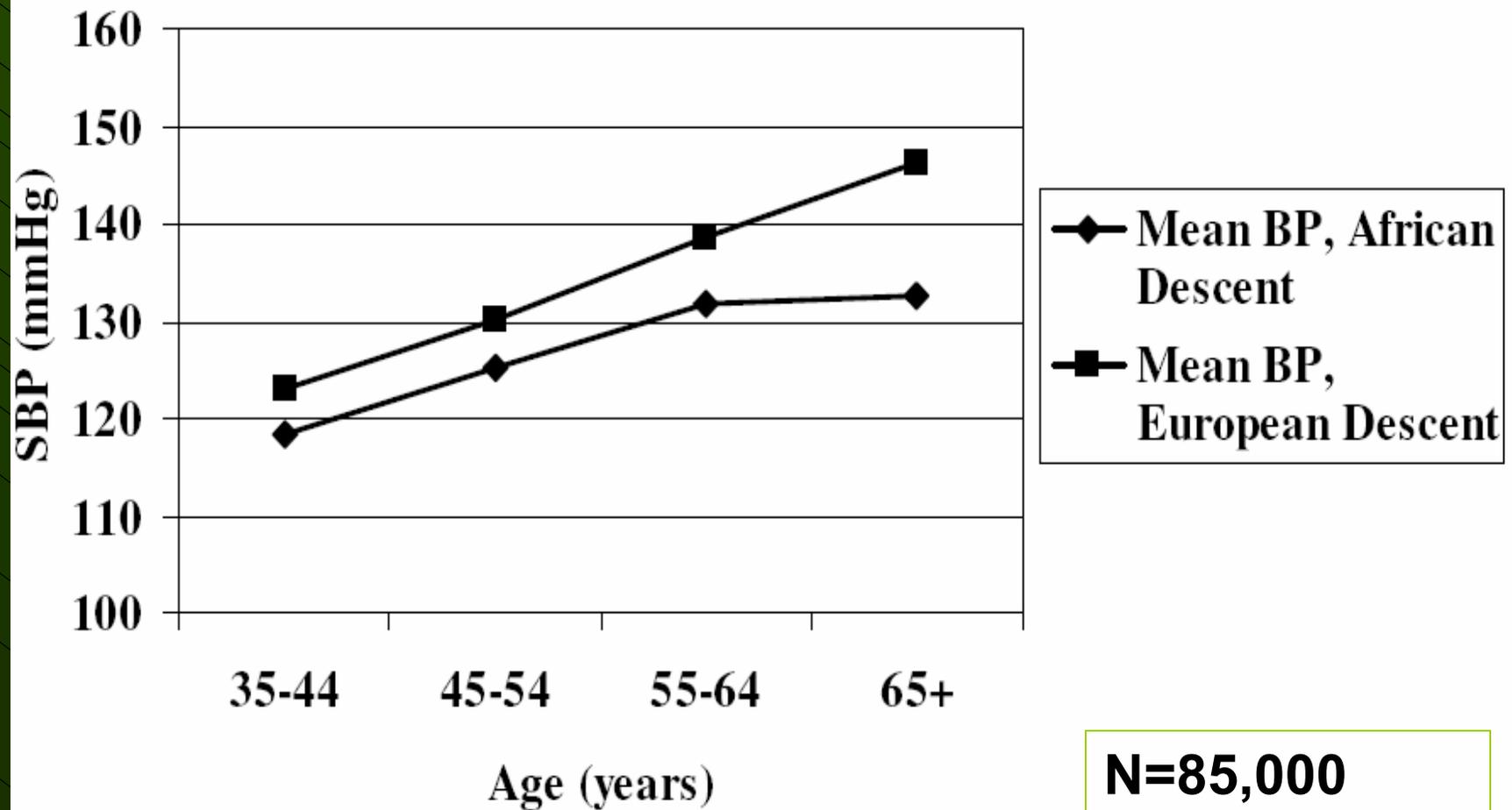


Figure 3

Popu
Betw

Challenges”
Population Studies

Out
come

Who are we?
How are we related?
Why ill health?
Why differential distribution of diseases?

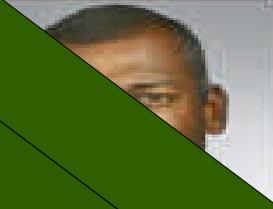
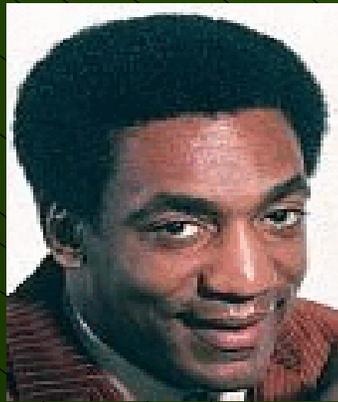
Who is Black?
Widely Different
Ancestry



Australian Aboriginals



Surma bribe from Ethiopia



AADM

Study

Ghana

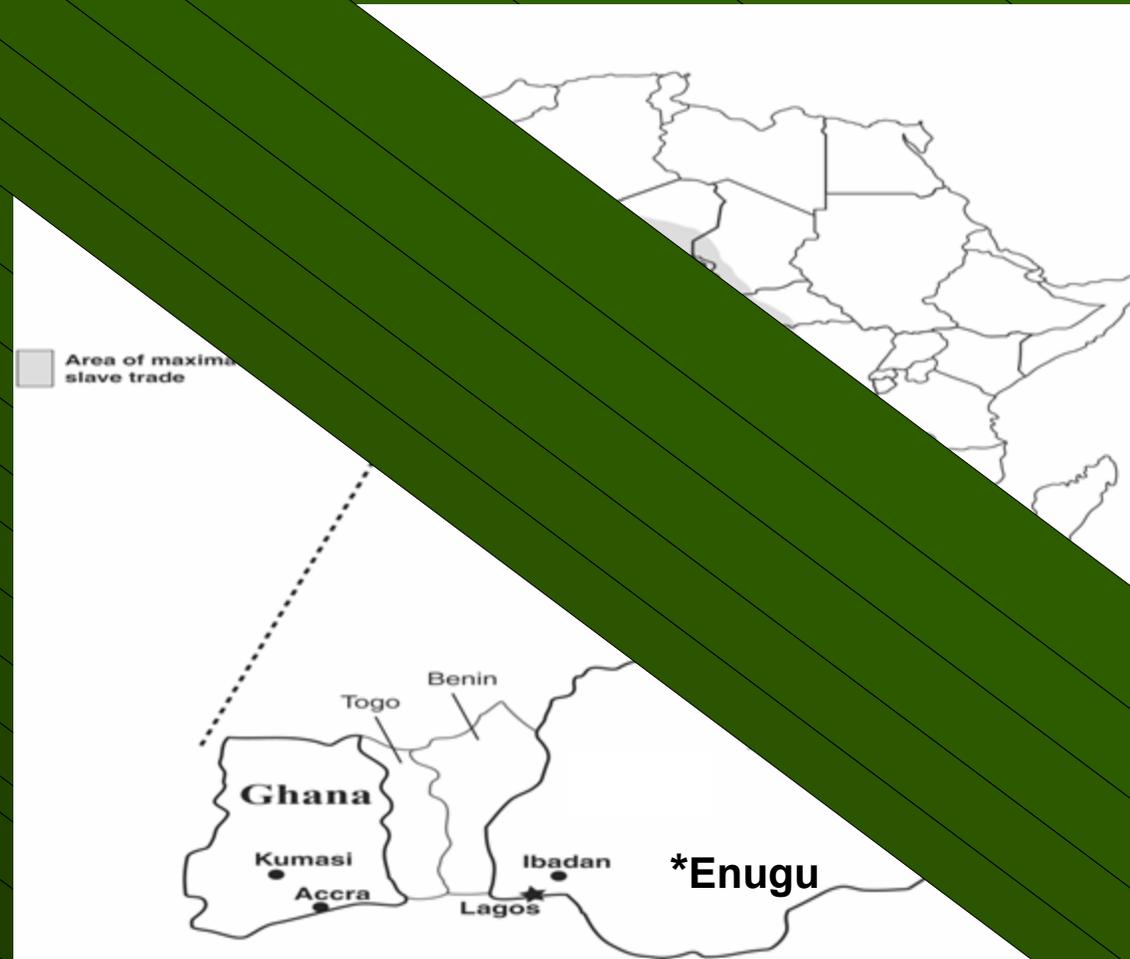
Akan

Gaa

Nigeria

Yoruba

Ibos



Confusion: Group identity is confused with group ancestry. The group identity African Americans does not reflect a single path of ancestry.

Self-identification is confused with more complex tapestry of ancestry.

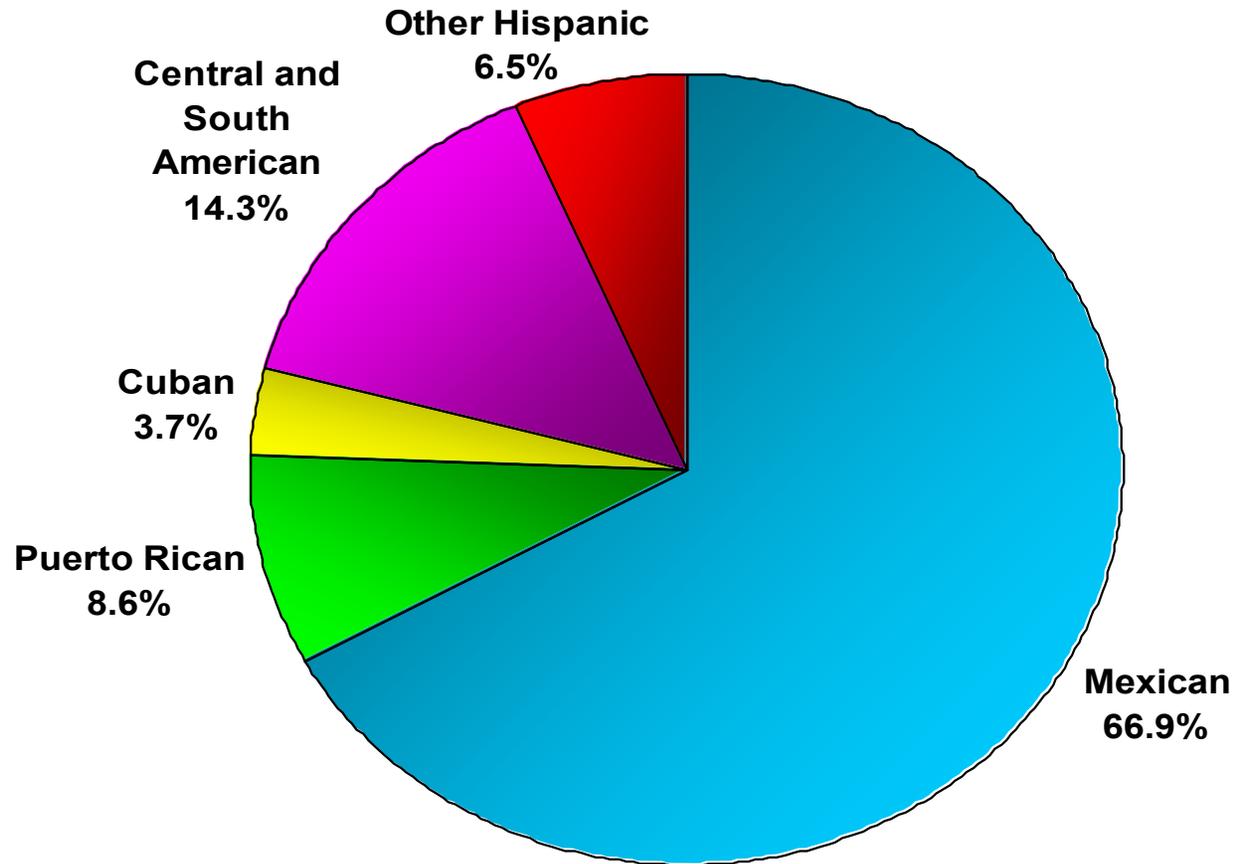
Ancestry,

in

- The concept of race reflects self-identification, not a clear-cut scientific definition.
 - The Census Bureau uses four broad categories of race: 1) White, 2) Black, 3) American Indian or Aleut and 4) Asian or Pacific Islander.
 - Persons of Hispanic origin may be of any race (Hispanic and non-Hispanic).
-

Percent Distribution of Hispanic by Type: 2002

13.3% of the U.S. population is Hispanic (37.4 million)



Source: Current Population Survey, March 2002, PGP-5

Hispanic population by origin or ancestry

	population in thousands	percent
ALL HISPANIC OR LATINO...	35,306	100%
Mexican	20,641	58.5%
Puerto Rican	3,406	9.6
Cuban	1,242	3.5
Other Hispanic or Latino	10,017	28.4
Dominican	765	2.2
Central American	1,667	4.6
Costa Rican.....	69	0.2
Guatemalan.....	372	1.1
Honduran.....	218	0.6
Nicaraguan.....	178	0.5
Panamanian.....	92	0.3
Salvadoran.....	655	1.9
Other Central American.....	104	0.3
South American	1,354	3.6
Argentinean.....	101	0.3
Bolivian.....	42	0.1
Chilean.....	69	0.2
Colombian.....	471	1.3
Ecuadorian.....	261	0.7
Paraguayan.....	9	0.0
Peruvian.....	234	0.7
Uruguayan.....	19	0.1
Venezuelan.....	92	0.3
Other South American.....	58	0.2
Spaniard.....	100	0.3
All Other Hispanic or Latino.....	6,112	17.3

Source: Bureau of the Census, Census 2000

Rio, Brazil

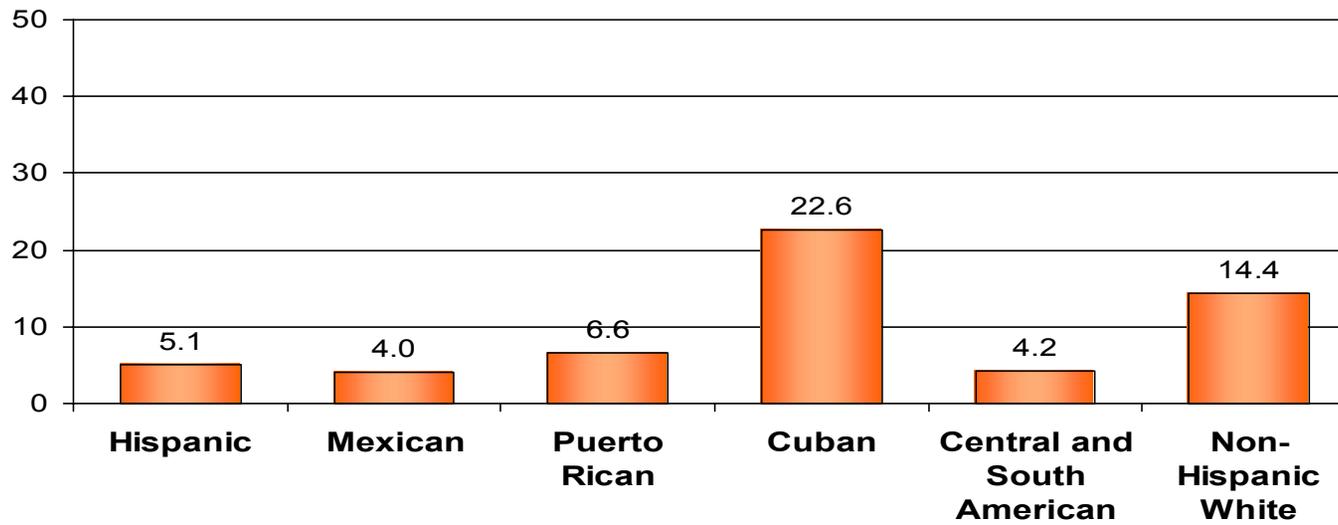
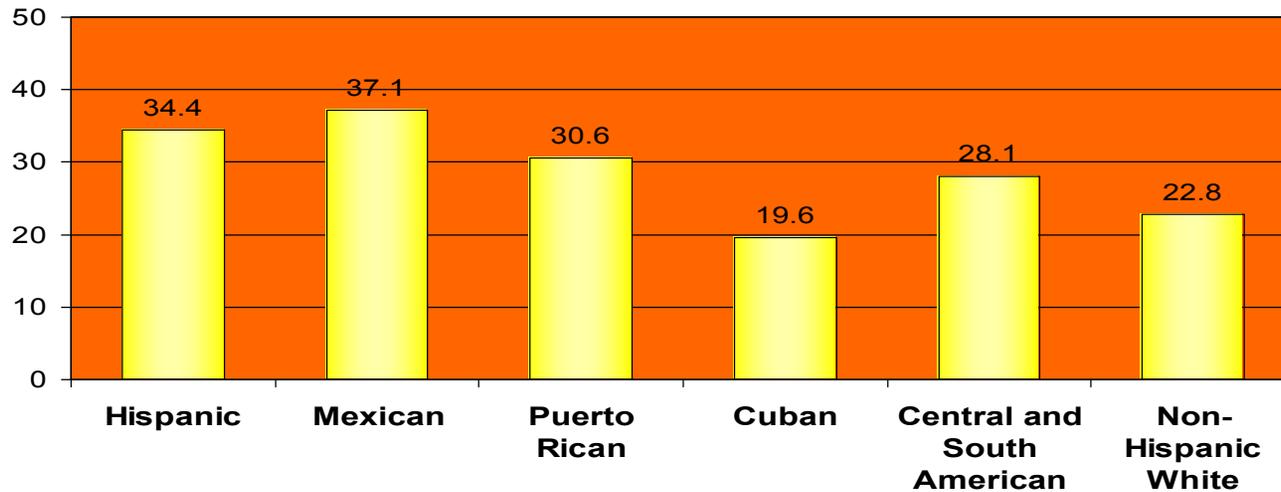
Rio from above.



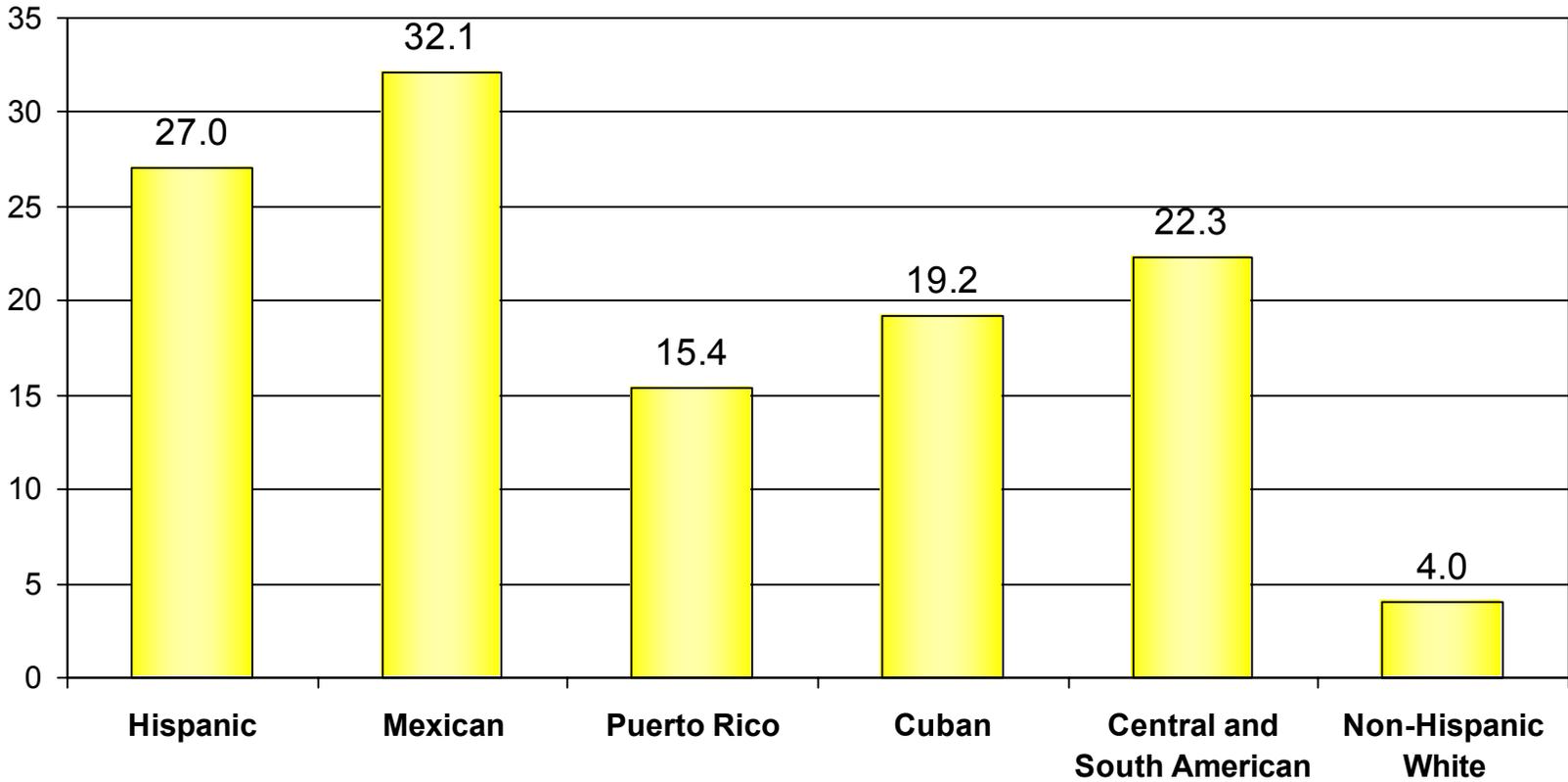
3,000,000 Angolans were brought to Brazil to work on the different tobacco, cotton, and coffee plantations.

Geographic locations of **Haiti, Cuba, Brazil, and Jamaica** played a major role in the amount of similarities between these cultures and those of W. Africa.

Percent of Population Under Age 18 and 65+ by Hispanic Origin: 2002



Percent of Population with Less Than 9th Grade Completed by Hispanic Origin: 2002



Asian and Pacific Islander Ancestry	Population	Percent of Total Asian and Pacific Islander Population
All Asian	10,242,998	96.3%
--- Asian Indian	1,678,765	15.8%
--- Chinese	2,432,585	22.9%
--- Filipino	1,850,314	17.4%
--- Japanese	796,700	7.5%
--- Korean	1,076,872	10.1%
--- Vietnamese	1,122,528	10.6%
--- Other Asian	1,285,234	12.1%
All Native Hawaiian and other Pacific Islander	398,835	3.8%
--- Native Hawaiian	140,652	1.3%
--- Guamanian or Chamorro	58,240	0.6%
--- Samoan	91,029	0.9%
--- Other Pacific Islander	108,914	1.0%

Europe

stral

Roots

In the US the number of people with German, Irish, English, and Italian heritage have dropped since the 1990s.



Members of different European Groups (Danes and Spaniards) wearing clothes that identify their ethnicity



Why do we assume that individuals from the Luhya or Xhosa have always been there? Africa has over 350 linguistic groups.

The sense of identity of the Yorubas, for example, is reinforced by the myth of common origin of the principal ruling families in the ancient city of Ife and to some extent by the effort of the missionaries to translate the bible to a common language – Yoruba.

The Yoruba identity and, indeed, most identity issues are multi-layered and depending on the question at hand, genetics could be a major or a minor or an irrelevant factor.

We know from oral, historic and other accounts that none of these groups have remained exclusive or historically static

The king (15th-16th century), in what is now Niger.

15th-16th century), in what is now Niger.



the

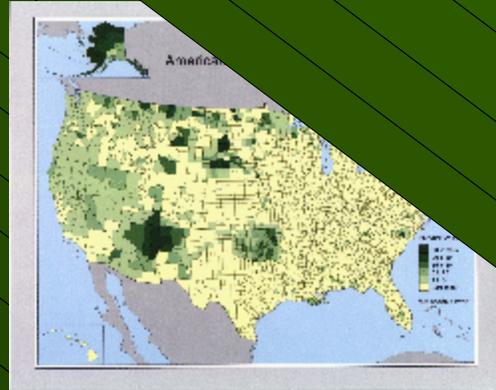
When British forces entered Benin City in 1897 they were surprised to find large quantities of cast brass objects. The technological sophistication and the overwhelming naturalism of these pieces contradicted many 19th-century Western assumptions about Africa in general and Benin. **The objects made in Benin, it was supposed, have been made by the Portuguese, the Ancient Egyptians, even the lost tribe of Israel.** Their status was marked by the establishment of the term 'Benin bronzes', despite their being largely of brass.

Whatever the term,
fact that identities in
ambiguous, complex, mo
other parts of the world.

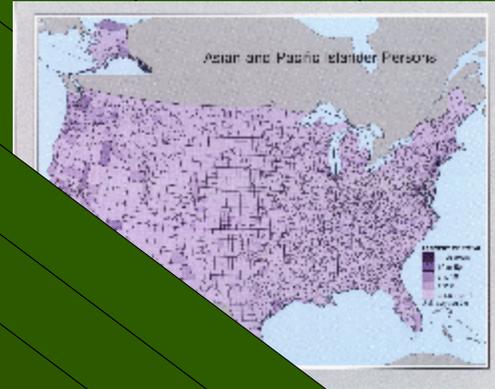
Also, it is important to understand that
ethnic identities and divisions now labeled
ancient and unchanging were not there before
colonial presence in Africa.

Where are they located within the United States?

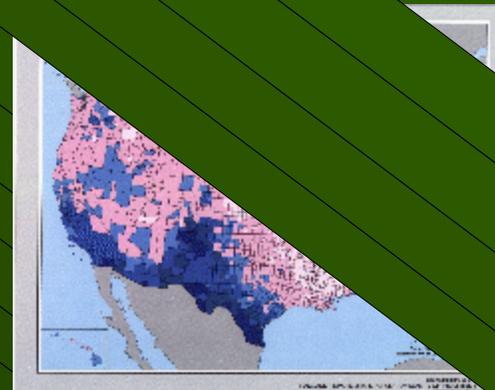
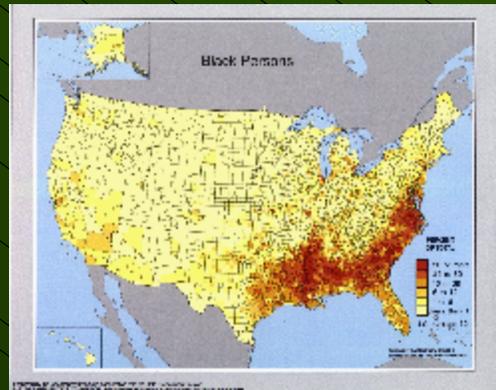
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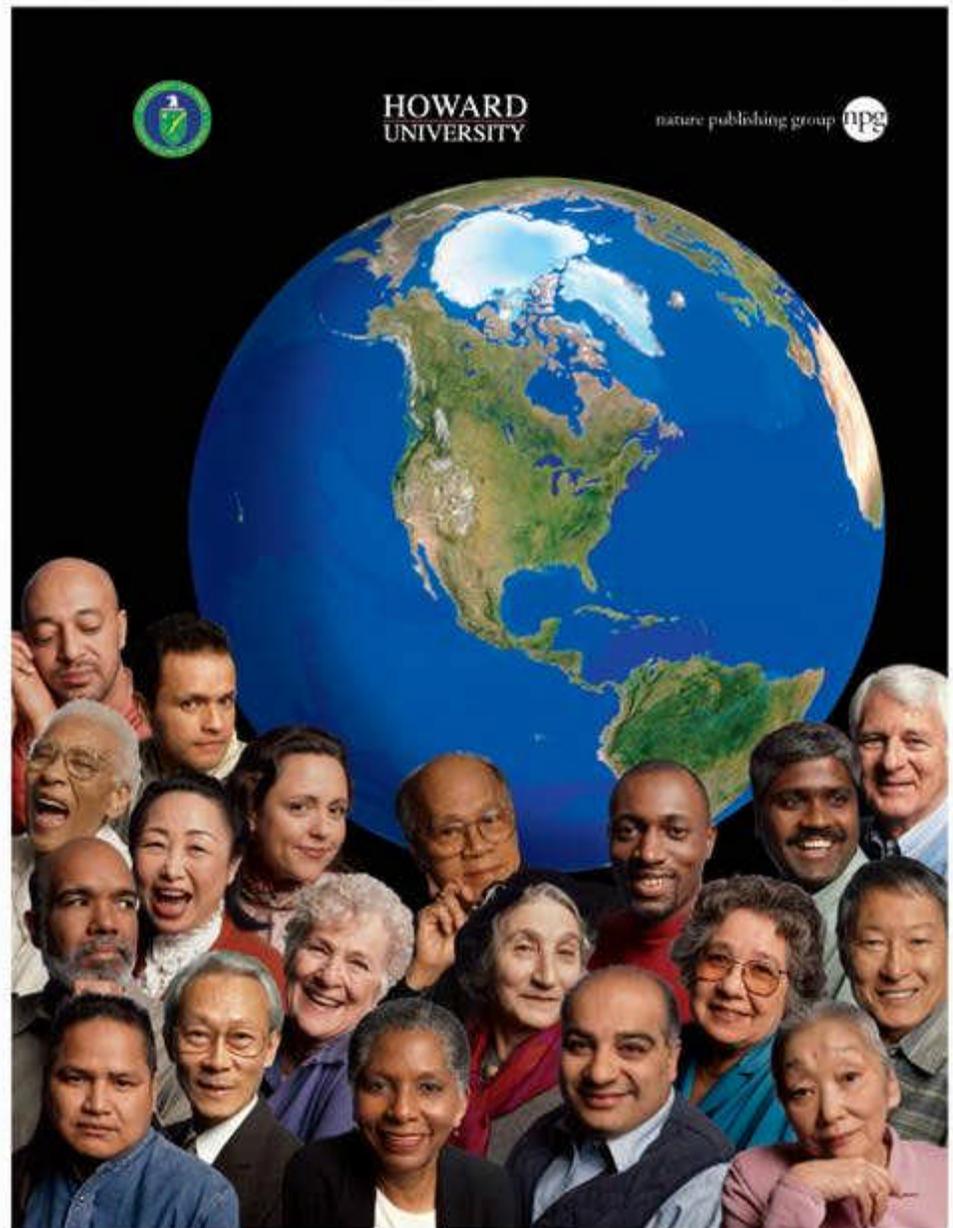
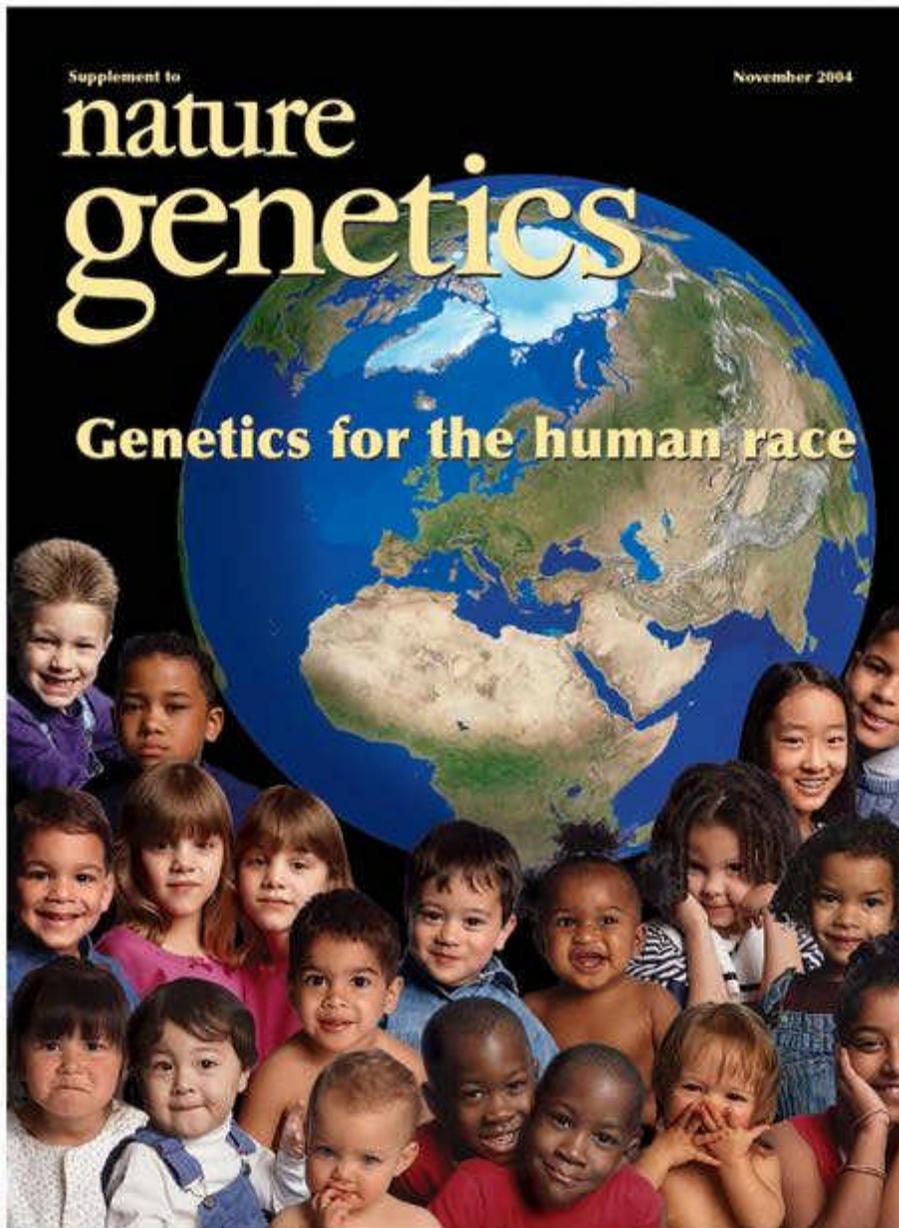
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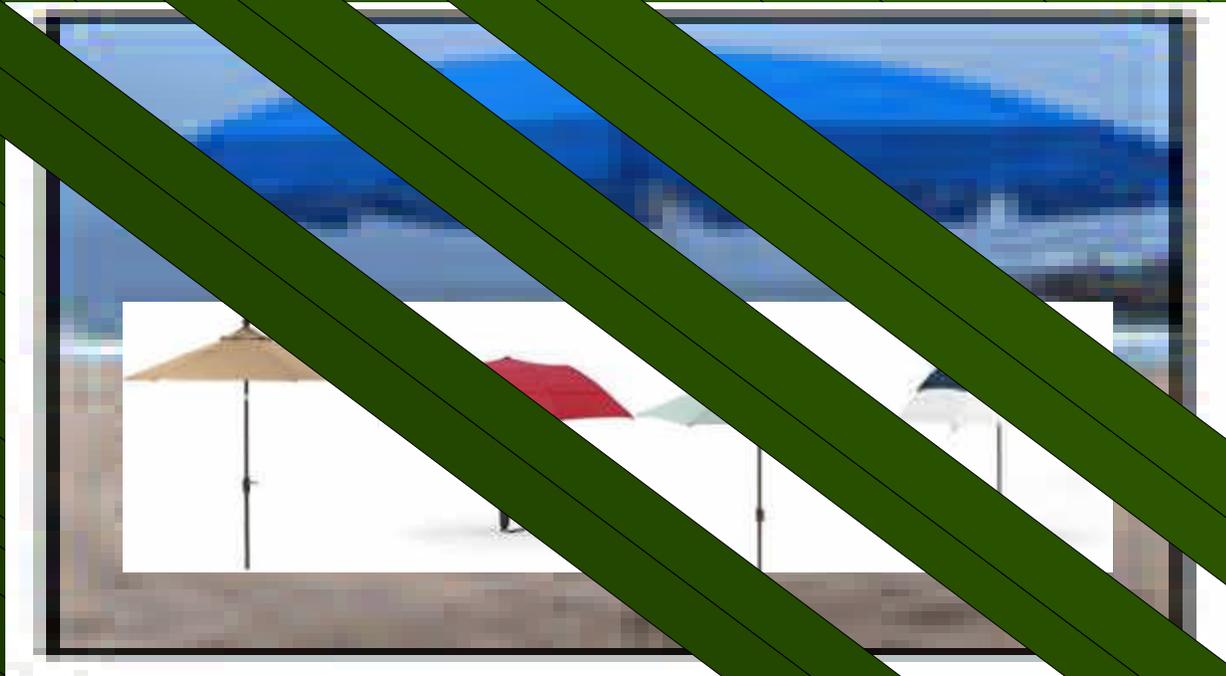
3



1. American Indian, Eskimo, and Aleut Persons
2. Asian and Pacific Islander Persons
3. Black Persons
4. Hispanic Origin Persons



...ne r...lation Studies: The Opportunities ...d Challenges ”



“Large Population Studies. Challenges and

The historical, anthropological, and linguistic “populations” with which genetic findings are compared represent superficial understandings of the dynamic present-day ethnic populations and how they were formed---*Lundy Braun: Perspective in bioethics and medicine 2002.*

Future use of drug therapy will not depend on the imprecise indicators as race or ethnicity, but on the individual patient genotype.

The idea, then, is not to eradicate or ignore differences but to redefine or move beyond social group label such as “race” to more precise categories of difference with justification for establishing such differences. *M. Rothstein and P. Epps, Pharmacogenomics 2001*
