

Biosocial interactions in modernization

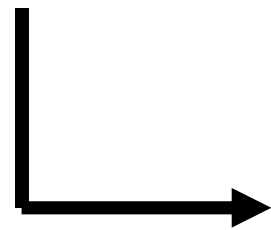
8. Racial variation and racism

'Racial' variation and racism

Race? Racism? = provocative title



Biosocial aspects of all forms of **inter-population variability**



racism,
ethnocentrism,
xenophobia

The 'race' concept:

- Definition: a population that distinguishes itself statistically significantly in its **allele frequencies** from other populations
- Racial classifications: an **arbitrary** matter
- A **subspecies** or variety?
 - standard threshold in animal species: $F_{st} = 0.25-0.30$
 - Human races: $F_{st} = 0.156$
- Races = **historical** reproductive communities
- Race = in principle a **population** concept
 - although **most individuals** can correctly be classified into nonoverlapping population genetic entities, especially when a large number of biological characteristics or genetic markers are used
- Between-population biological differences:
 - Genetic
 - **Environmental**

Race, ethnic group, nation

- Race = **biological** concept
- Ethnic group = **cultural** entity
 - Linguistic groups
 - Religious groups
- State/Nation = **political** entity

'Race': abolish concept?

➤ Abolish:

- Scientifically: race is a flawed, **imprecise concept** that should not be used in research or medicine;
- **Confused** or assimilated with cultural, linguistic, religious or even political characteristics.
- **Abused** in ingroup-outgroup relations

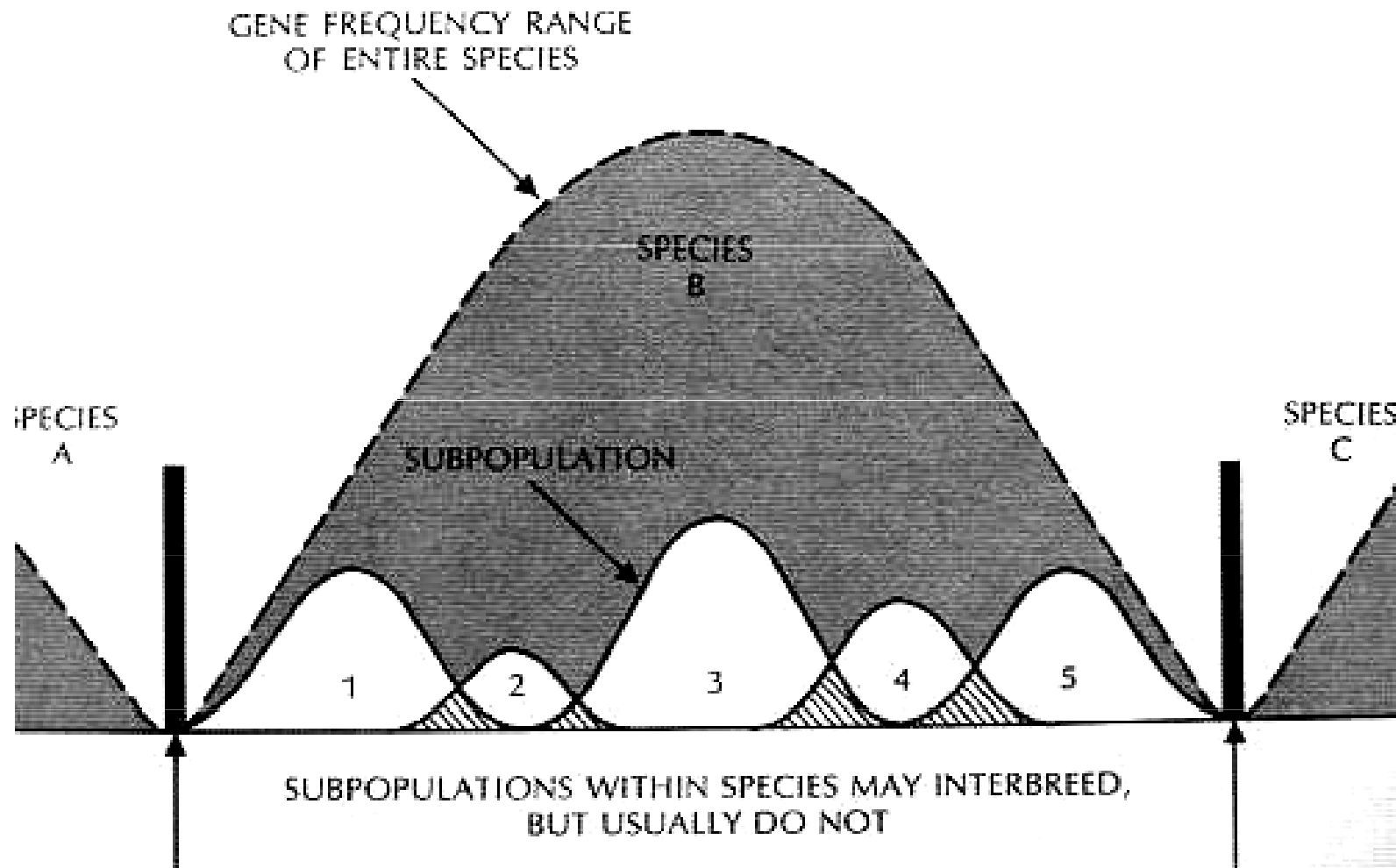
➤ Retain:

- useful proxies for **ancestry**;
- using racial categories will improve **research quality** or decrease cost by reducing irrelevant background variability between cases and controls;
- Abolish: **ostrich policy** attitude; inter-population genetic differences and relations constitute one of the important social issues and ethically and politically sensitive population problems.

The 'race' concept: historical developments

- Older anthropology:
 - characterized by its **descriptive** approach;
- Post-WWII:
 - **Genocides** and other group related crimes, biological anthropology concentrated on showing that genetic factors are not at the basis of the sociological majority-minority relations;
 - Analytic and dynamic approach: application of **evolutionary theory**;
- **Second Darwinian revolution** in the 1960s and 1970s:
 - broadening of the evolutionary-biological interest in inter-group differentiation to a broader range of socio-biological in-group/out-group relations;
- Recently:
 - Human (diversity) **genome** project
 - Upsurges or intensification of **ethnic or racial tensions** in many parts of the world.
- Conclusion: **between-population genetic variation**

Species and subspecies



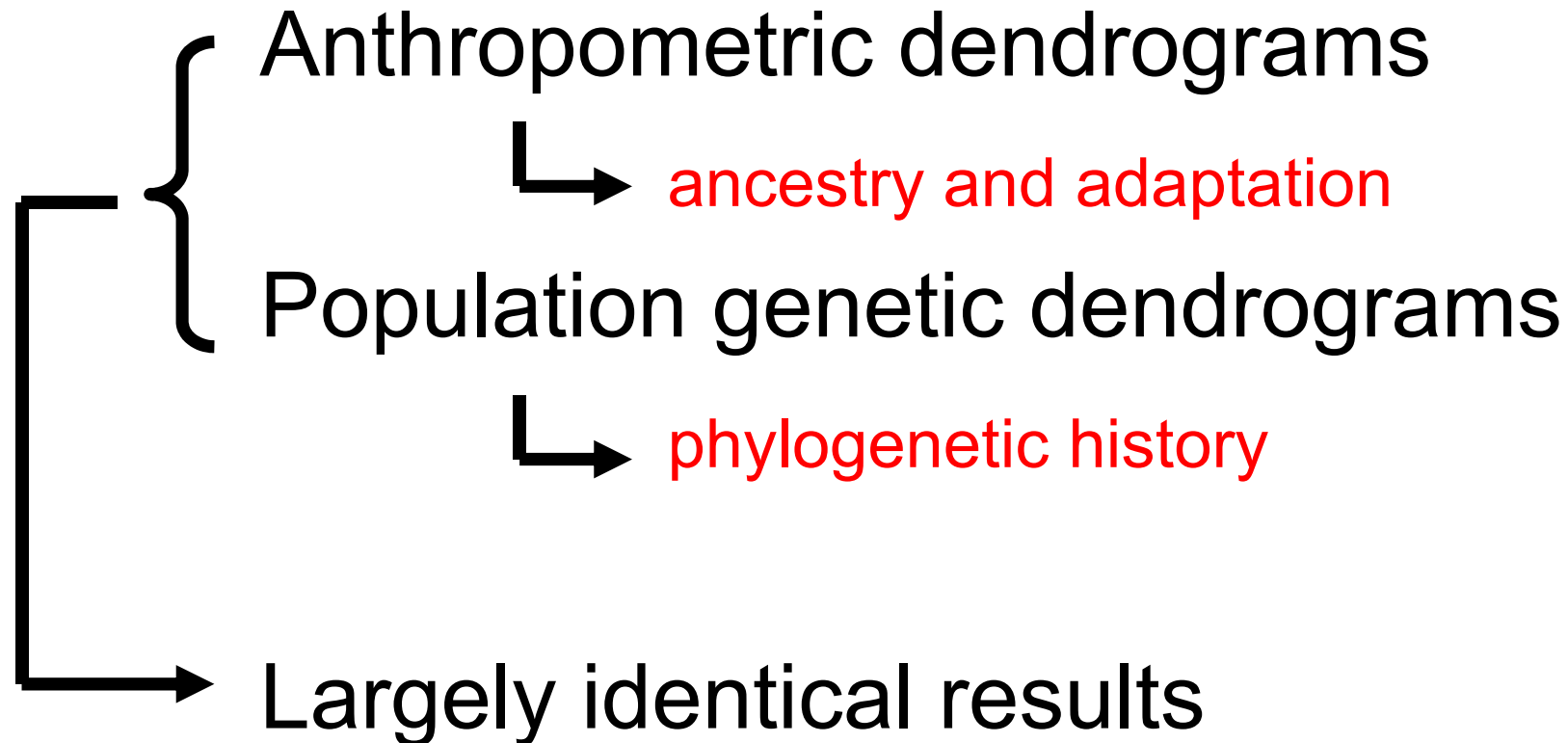
8. Racial variation and racism

- 8.1. Evolutionary background of inter-population variation
- 8.2. In-group/out-group relations in modern society

The evolutionary origin of between-population variation

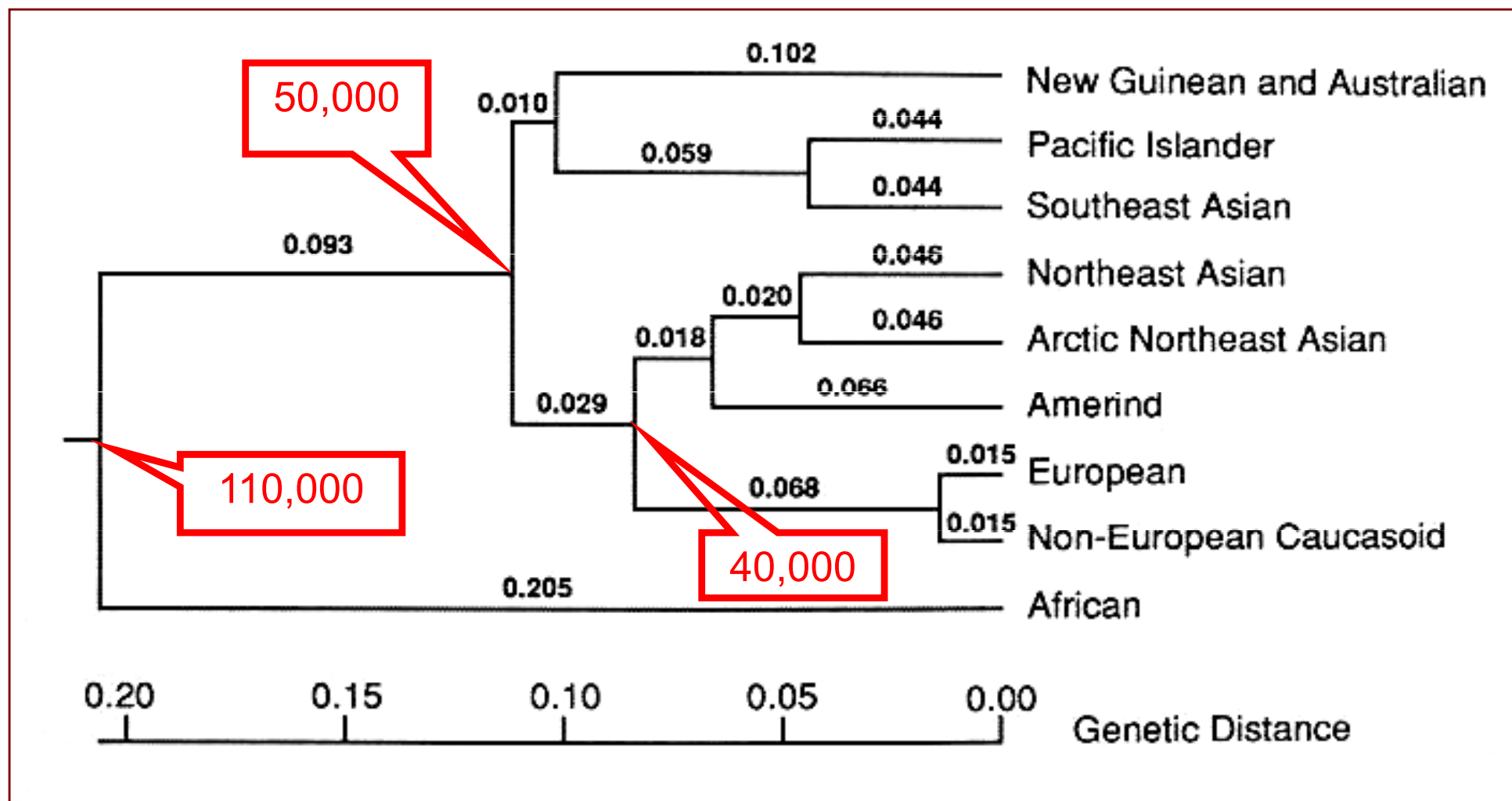
- **Splitting** of populations, resulting in genetic isolation and involving '*genetic drift*';
- **Fusion** or interbreeding of populations, as a consequence of **migration** or neighbouring contacts;
- **Adaptation** of populations, as a consequence of the occurrence of **mutation and selection** in different environmental living conditions.

Splitting of populations



except for features which are clearly adaptations
to similarities of environments

Genetic dendrogram for major human population divisions



Major genetic subdivisions of mankind

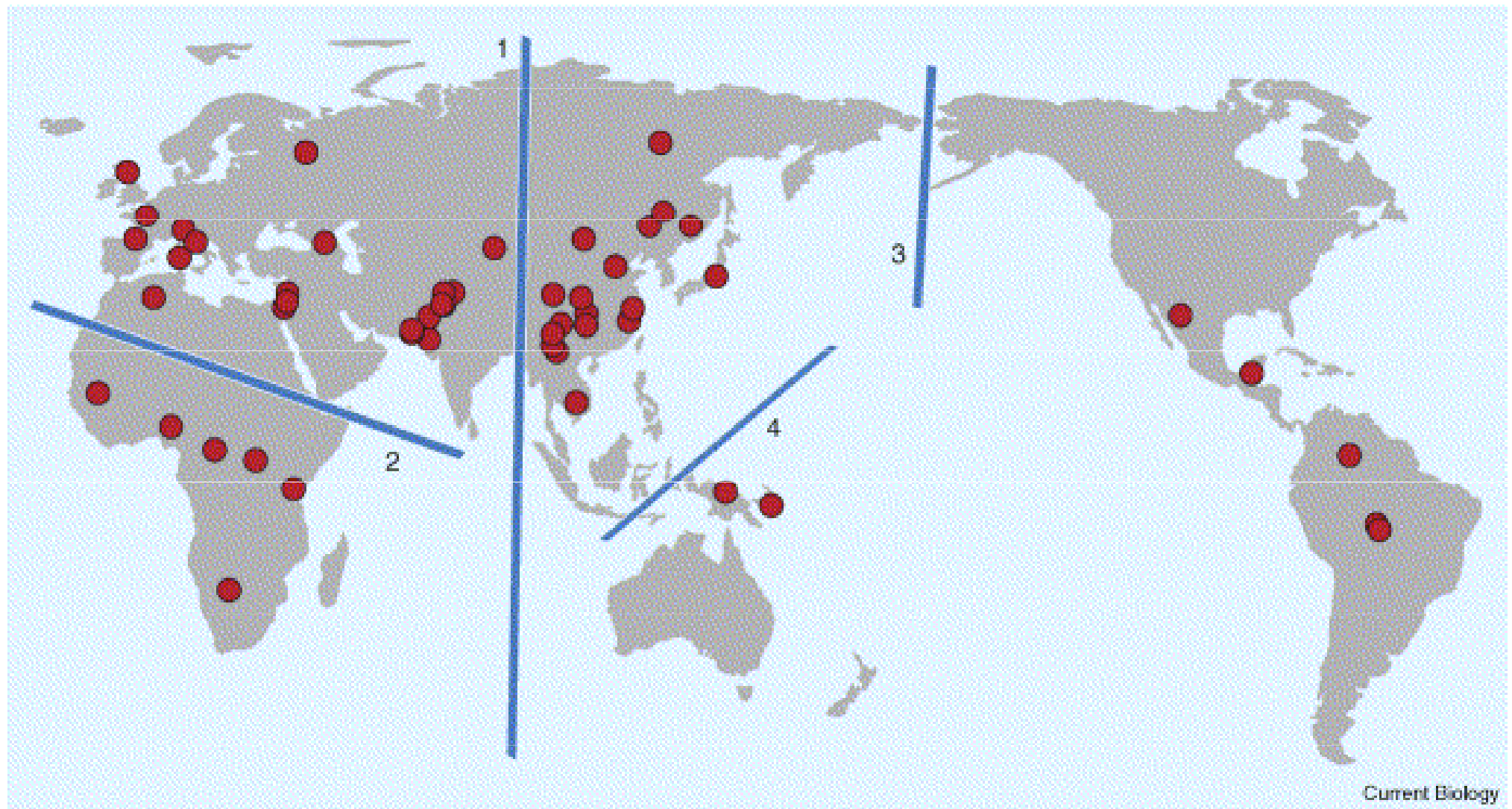


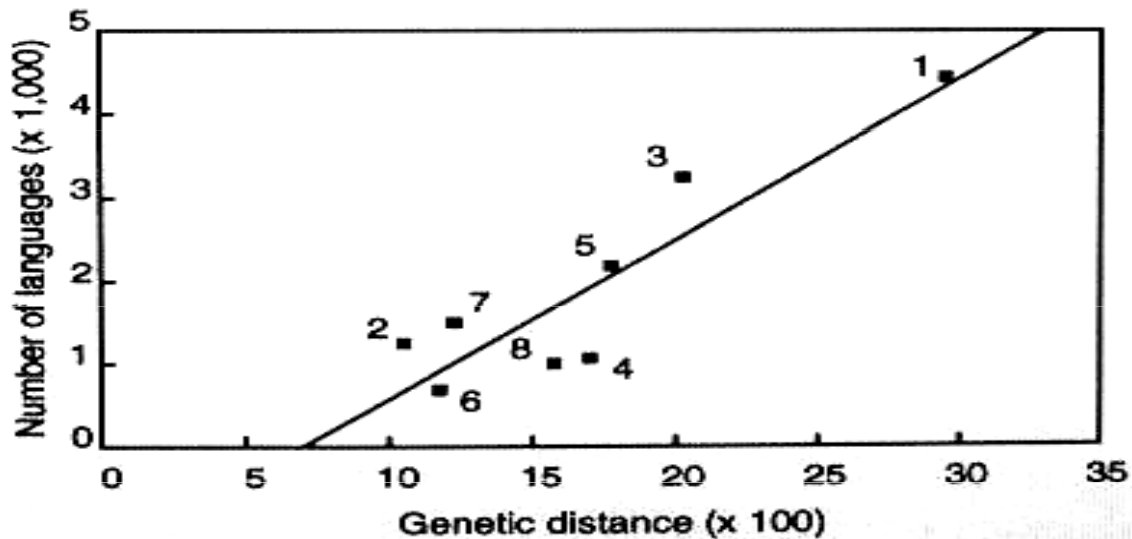
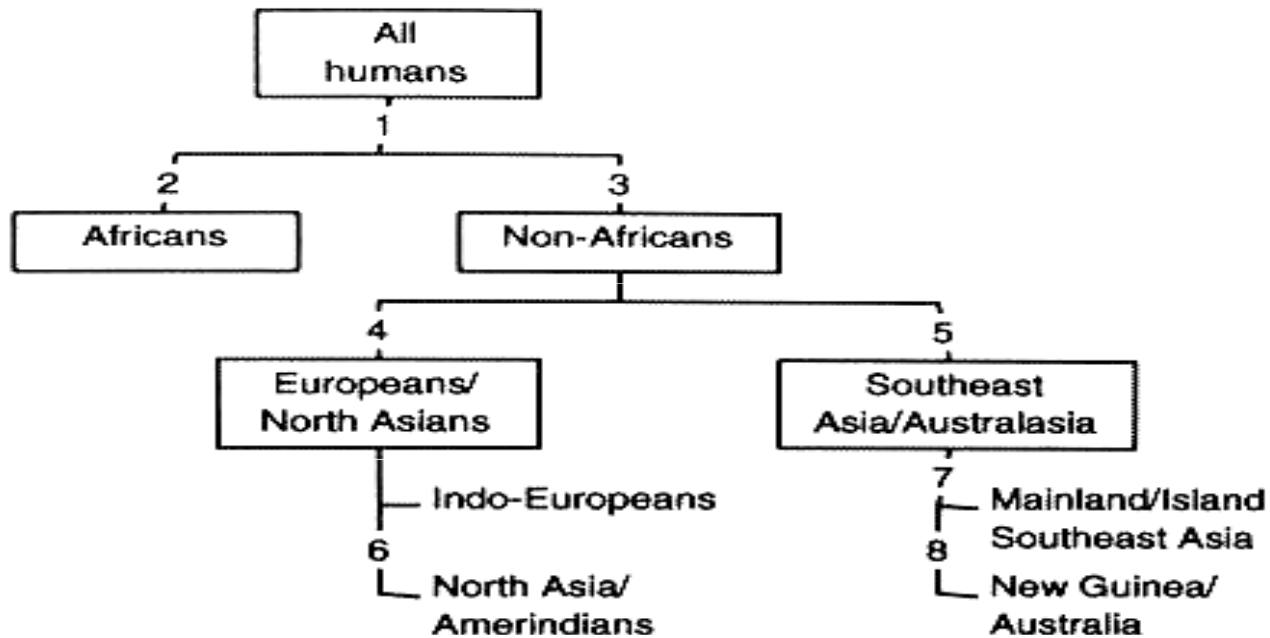
Figure 1. Geographical location of the 52 population samples studied by Rosenberg *et al.* [7]. The barriers numbered 1 to 4 correspond to the sequential partition of the sampled populations into genetic clusters.

Genetic-linguistic relations

Correspondence between the genetic affinities of human populations and the linguistic affinities:

- **not** due to genetic causal relationship with particular languages;
- but result of **historic-demographic** processes

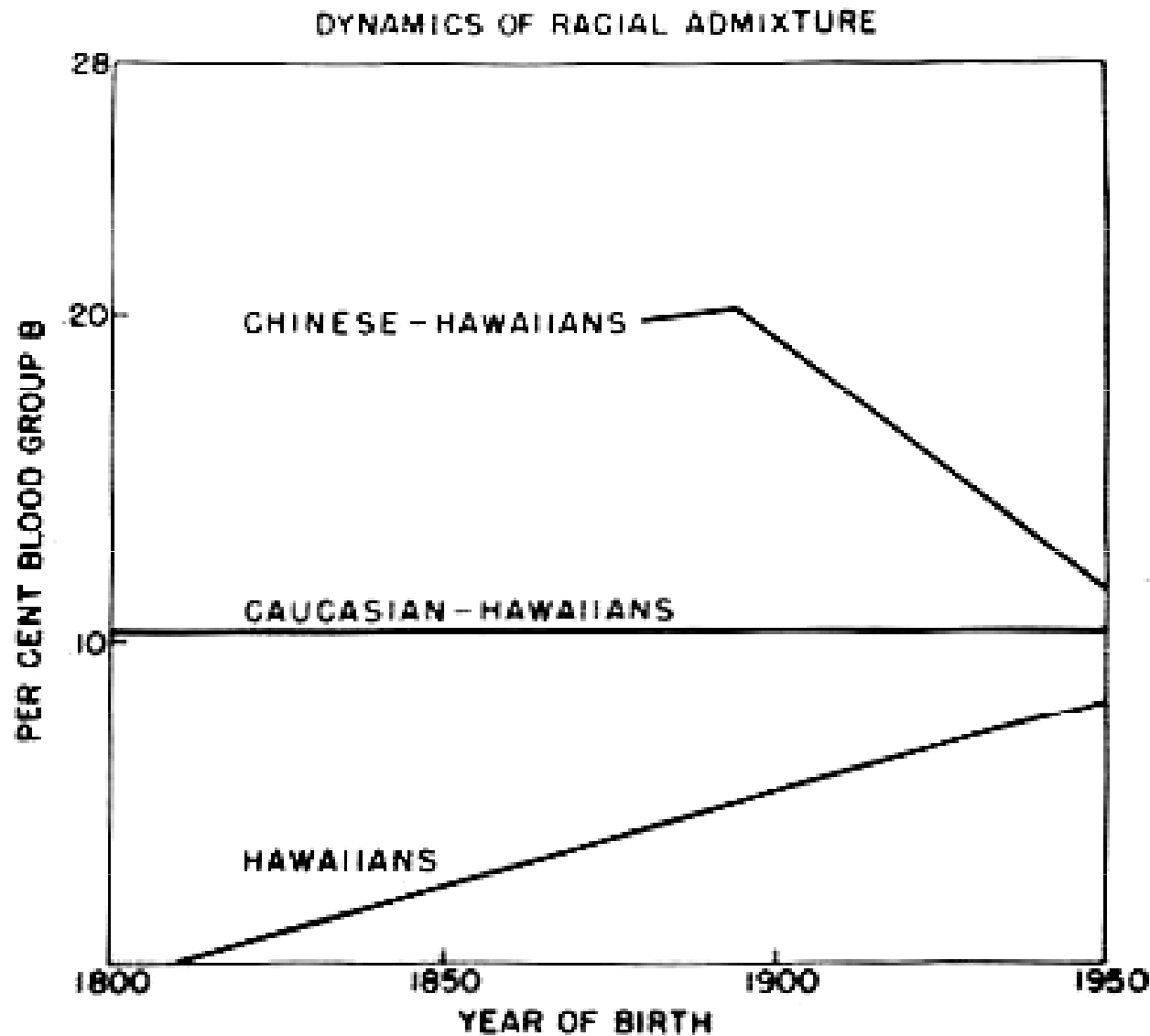
Genetic-linguistic relations



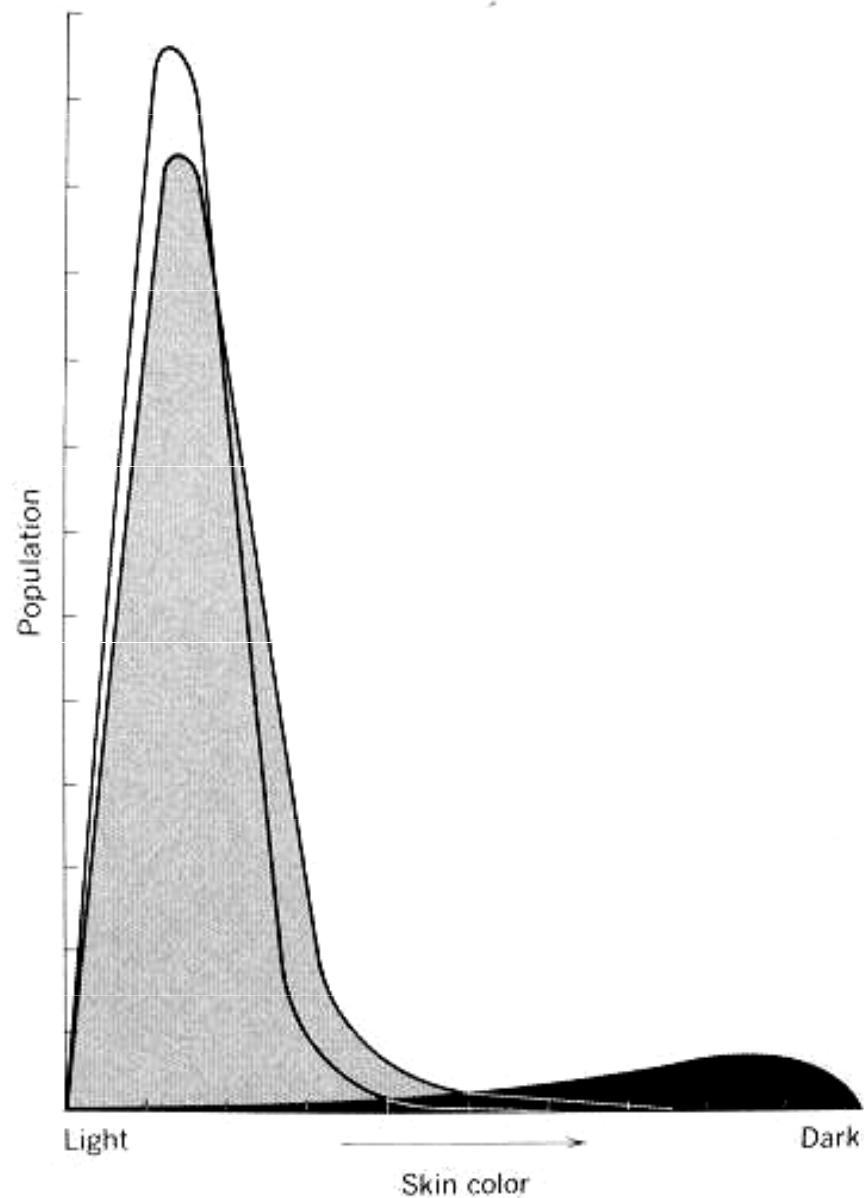
Fusion

- The **merging** of separate and genetically partially different populations:
 - **new gene pools** that are different from the original parental populations.
 - establishment of **heterozygous genotypes**
 - new hybrid reproductive units
 - increase of the **genetic variability** within the population
- **Effects:**
 - **mythology** of presumed unfavourable consequences of hybridization;
 - **Social exclusion** (with unfavourable phenotypic effects)
 - **heterosis** or hybrid vigour

Dynamics of racial admixture



Long-term evolution after racial admixture

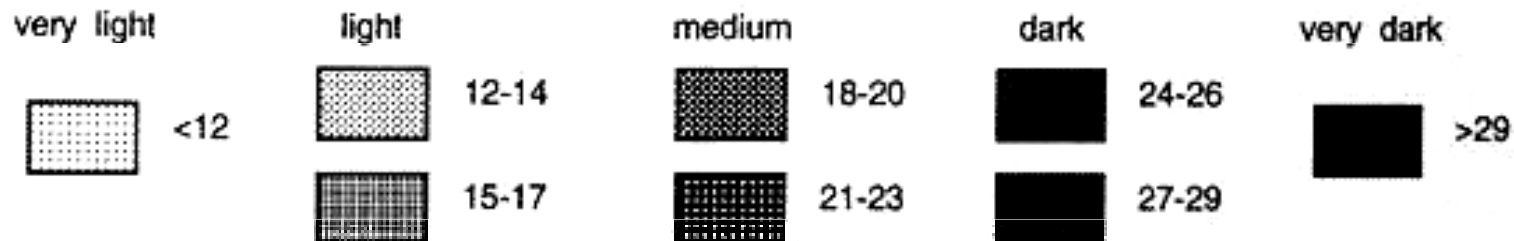
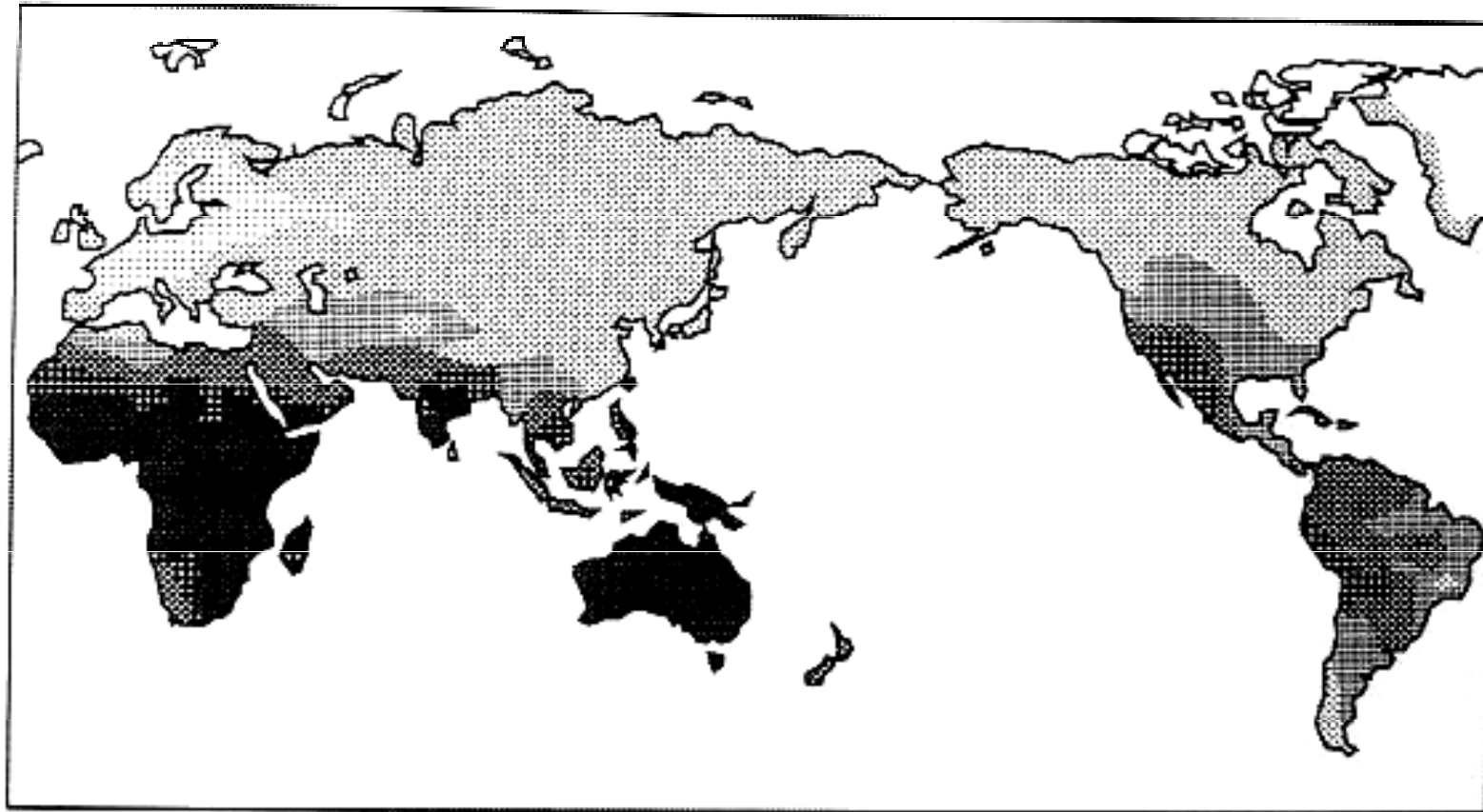


Adaptation

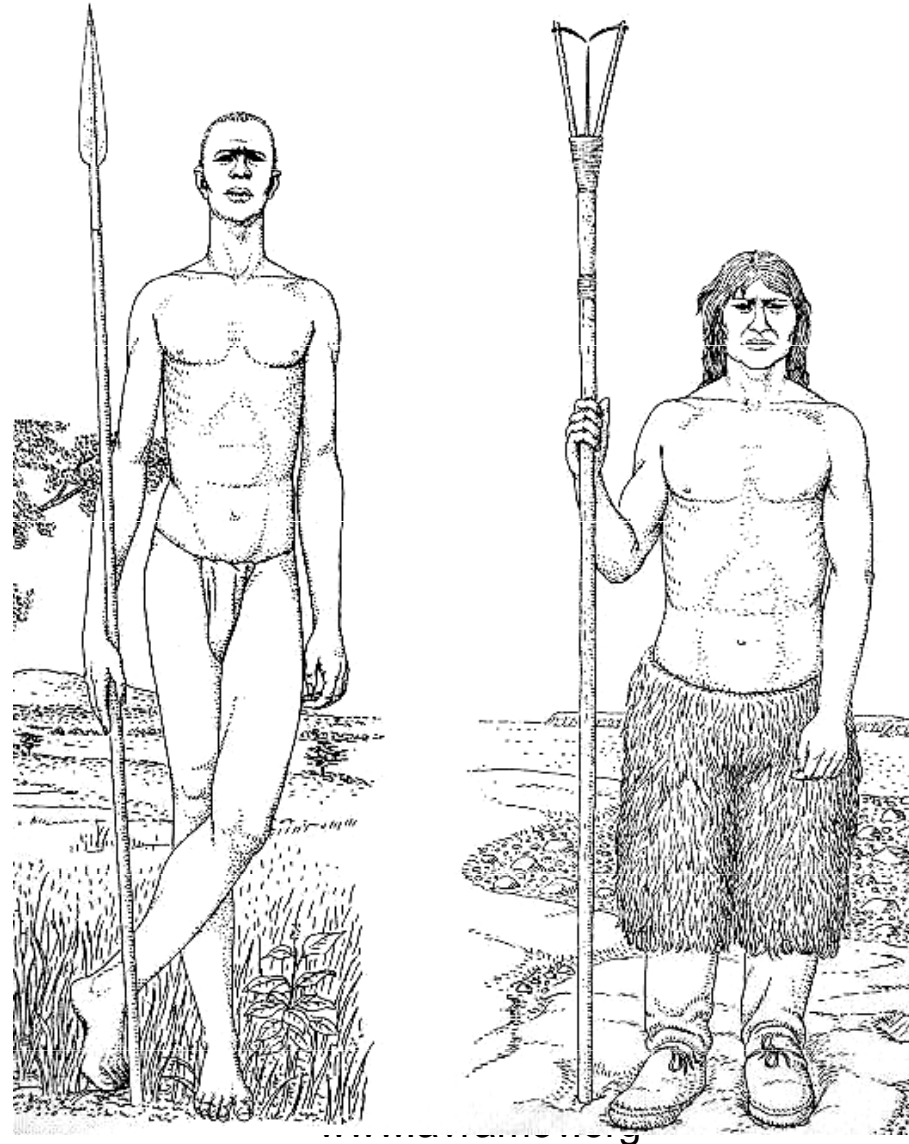
- **Forms** of adaptation:
 - Physiologically and/or behaviourally adaptation (= acclimatization);
 - **Genetic** adaptation (mutation and selection)

- Major environmental **causes**:
 - **Climate** (e.g. skin colour, body build)
 - Disease (e.g. Sickle cell anemia)
 - Nutrition (e.g. lactose tolerance)

Skin colour adaptation to climate (Gloger's rule)



Body build and climate (Bergmann's and Allen's rules)



BIOLOGICAL BETWEEN-POPULATION DIFFERENCES

- Between-population biological differences show a strong **overlapping**;
- **Genetic gradients** = gradually increasing genetic differences with geographical distance;
- Between-population genetic variation is only a **small fraction** of the total population genetic variation (= people of different racial groups probably have about 99.9% identical DNA).

Lewontin's dogma

*“It is clear that our perception of relatively large differences between human races and subgroups, as compared to the variation within these groups, is indeed a biased perception and that, based on randomly chosen genetic differences, human races and populations are remarkably **similar** to each other, with the largest part by far of human variation being accounted for by the differences **between individuals**”*

BEHAVIOURAL-GENETIC BETWEEN-POPULATION DIFFERENCES

- Between-population differences in cognitive ability, emotional personality, sexual behaviour, etc. ?
- **Sensitive** and controversial matter!
 - important **role** in various domains of social life;
 - inter-ethnic relations often suffer from historical and even present-day **inequalities and inequities**;
 - use and abuse of scientific knowledge about possible genetic differences to **justify** socially conservative or even politically exploitative policies;
 - SSSM hypothesis of **environmental determinism** of individual and group behaviour.

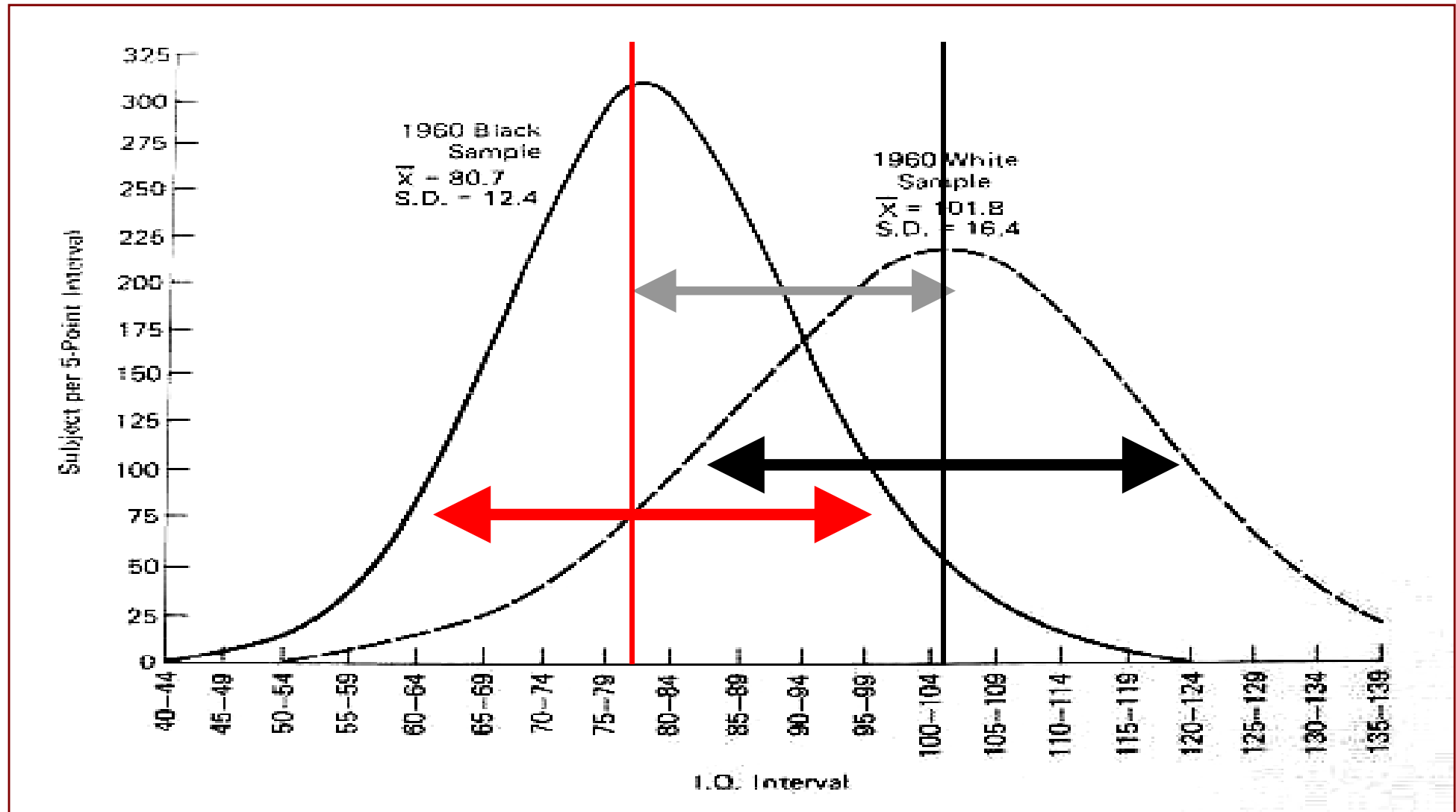
Theoretical probability of behavioural-genetic between-population differences

- **Theoretically** possible to have behavioural genetic differences, provided long term **separation**, and **adaptation** to different environments
- Even **small** differences in selective advantages between populations for characteristics such as cognitive ability may result in substantial different gene frequencies if the selective differential prevails over a sufficiently long period of time.

Between-population differences in measured intelligence

- Quite **substantive** phenotypic differences ($m = 100$; $SD = 15$) on so-called culture-fair intelligence tests have repeatedly been observed between populations of different racial/ethnic origin, e.g.:
 - Ashkenazi Jews (107-115);
 - Mongoloid (East-Asian) populations (103-113);
 - Populations of European origin (100-102);
 - American Hispanics (88-96);
 - American Indians (± 90);
 - African Americans (± 85);
 - Sub-Saharan Africans (?)
- Considerable **overlap** of the frequency distributions;
- **Individual differences** within groups make a far more important contribution to total variance: race: 14 %; social class: 8 %, interaction of race and class: 8%; and individual differences: 70 %

Intelligence frequency distribution among 'Blacks' and 'Whites' in the US



How to explain the between-population differences in measured intelligence?

In the present scientific literature roughly **two** major explanations are found:

- A mixed **genetic-environmental** (~ 50% genetic causation) theory
(e.g. Jensen, 1969; 1998; Eysenck (1971; 1998); Rushton (1995), Brand (1996), Levin (1997), Lynn, 2006; Lynn and Vanhanen (2006)).
- A **culture-only** (0% genetic causation) theory
(e.g. Flynn, 1980; Fish, 2002; Gould, 1981; Lewontin et al., 1984; Sternberg et al., 2005; Jencks and Phillips, 1998; Montagu, 1999).

The 'Jensen 1969' controversy

- Jensen, A.R. (1969), **How Much Can We Boost I.Q. and Scholastic Achievement?** *Harvard Educational Review*, 39: 1-123.
- *“So all we are left with are various lines of evidence, no one of which is definitive alone, but which, viewed all together, make it a not unreasonable hypothesis that genetic factors are strongly implicated in the average Negro-white intelligence difference. The preponderance of the evidence is, in my opinion, less consistent with a strictly environmental hypothesis than with a genetic hypothesis, which, of course, does not exclude the influence of environment or its interaction with genetic factors.”*

Arguments for the mixed genetic-environmental theory

- Within and between population **heritability**;
- **Regression** toward the mean in different populations;
- Absence of between-population **bias** in intelligence tests;
- The relation between between-population differences and **g-loadings** of the tests;
- **Shared and non-shared environmental effects** in between-population differences;
- Population-genetic **admixture**;
- Cross-population **adoption**;
- Between population differences in **brain functioning**;

Arguments of the culture-only theory

- The **basic concepts** such as race, heritability, the g factor in cognitive ability, the measurement of intelligence, on which the hypothesis of partial genetic influences of between-group population differences in measured intelligence are based, are **contested**;
- The differences in measured intelligence between population groups can be explained by the **accumulation** of differences in educational, cultural, social, political, psychological and biological **living conditions**.

Specific arguments of the 'culture-only' theory

- Race = has no biological basis, but is a **social construct**;
- **Heritability** within groups is uninformative for heritability differences between groups;
- **Intelligence**: there is no g; intelligence tests don't measure innate cognitive ability but reflect culturally acquired skills and behaviours; intelligence is not inherited;
- **Flynn-Lynn** effect.
- **Environmental process variables** (e.g., parental attitudes, parent–child interaction patterns) account for a substantial proportion of the variance in intellectual performance and academic achievement;
- **Minority status**, not race causes low IQ test scores;
- **Stereotype threats** depress the standardized test performances;
- Lower IQ test results are also partly the consequence of resistance to the **majority culture**;
- **Exposure to information**, rather than intellectual ability, may account for racial differences in IQ;
- Differences in measured IQ between African Americans and European Americans has **decreased** in recent decades

What to conclude about the genetic-environmental controversy on between-group differences in intelligence?

- The scientific community remains clearly **divided**;
- Advocates of a partial genetic hypothesis may **undervalue** the cumulative impact of unfavourable living circumstances and life experiences on the performances of minority groups;
- Contributions aiming to refute the mixed genetic-environmental theory are often **weak** and socially or politically even counterproductive;
- The **conclusions of Jensen** in his early publications on between-population differences in cognitive ability (Jensen, 1969; 1971; 1973) or in his recent classic on the g-factor (Jensen, 1998) have, neither then nor now, been convincingly refuted.
- In conclusion, the hypothesis of a partial genetic explanation of between-group differences in cognitive ability can as yet **not be excluded**.

Implications of possible genetic population differences in intelligence

- Social policies should be developed **independently** of the group identification;
- Heritability IQ = 0.50 : There is ample room for **social engineering!**
 - Importance of **biological** environmental factors
 - Impact of **dysgenic** reproductive patterns and **socially non-adaptive behavioural** patterns in modern culture;
- **Responsibility of 'minority' elite:**
 - should carefully consider **all available knowledge** about the causes of the minority conditions;
 - develop policies and actions aimed at **changing in-group behaviours** perpetuating the unfavourable in-group conditions (e.g. dysgenic reproductive patterns, irresponsible sexual and family behaviour, absence in school, drug use, criminal behaviour).

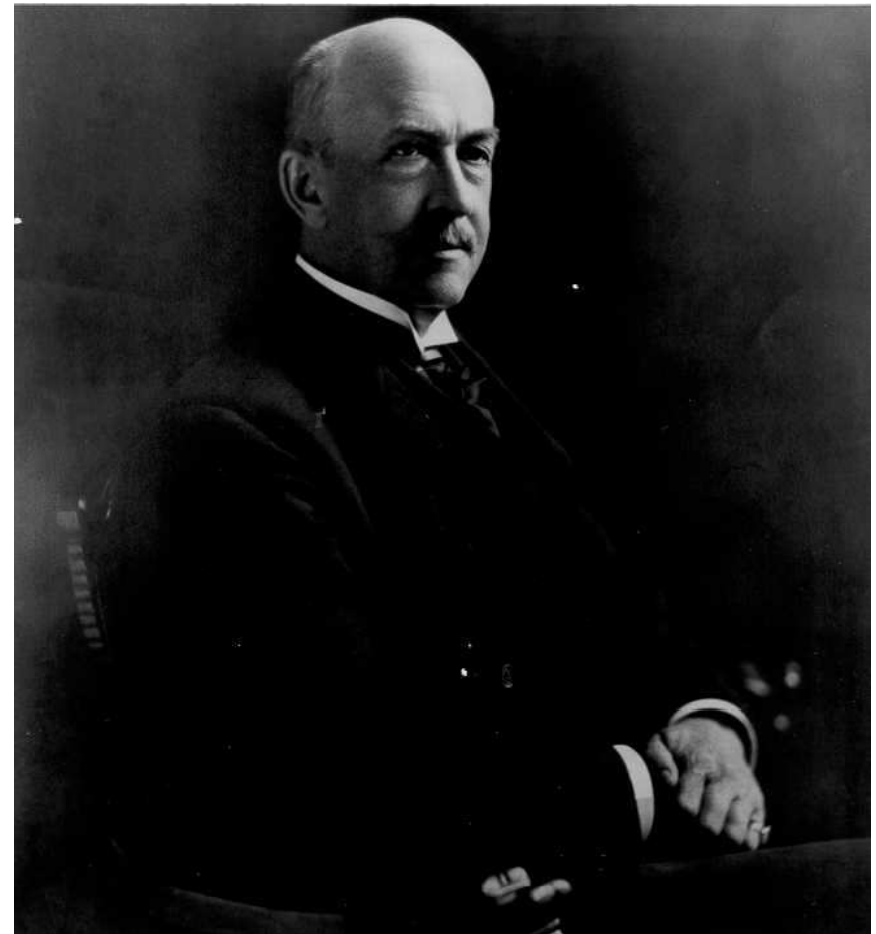
8. Racial variation and racism

➤ 8.1. Evolutionary background of inter-population variation

➤ 8.2. In-group/out-group relations in modern society

William Graham Sumner (1840-1910): “ingroups” versus “outgroups”

“A differentiation arises between ourselves, the we-group, or in-group, and everybody else, or the others-group, out-groups. The insiders in a we-group are in a relation of peace, order, law, government, and industry to each other” (1906, 12-13)



IN-GROUP/OUT-GROUP TYPOLOGY

- In-group:
 - the couple;
 - the nuclear or extended family;
 - the circle of friends, the sports club;
 - the clan, the tribe;
 - the social class, the religious/philosophical group;
 - the linguistic group, the cultural community, the nation, the race, the species.
- Out-group:
 - the ‘others’, the strangers

Between-population behavioural patterns

- **RACISM**: beliefs that **genetic** differences between human populations, determining particular socially or culturally relevant biological and psychological qualities, form a justification and legitimate basis for a **discriminating** distinction between and treatment of people belonging to or descending from those populations.
- **ETHNOCENTRISM**: feelings of **loyalty** towards the own cultural community, usually coupled to negative attitudes towards other, different communities.
- **XENOPHOBIA**: feelings of fear or aversion of, if not hatred for **foreigners**.

History of ethnocentrism and racism

- Ethnocentrism:
 - universal nature?
 - humans \longleftrightarrow ‘οί βάρβαροι’
- Racism:
 - relatively new phenomenon ? (linked to encounter of populations over a larger distance during the last 500 years)
 - pseudo-scientific racialist theories that developed in the wake of the emerging biological sciences and in particular of Darwinism
 - count de Boulainvilliers argued already in 1727 that the French aristocracy descended from a superior race of dolichocephalic nordic Franks,
 - de Gobineau (1853-1855): ‘*Sur l'inégalité des races humaines*’
 - other European countries and in America: Chamberlain, 1911; Stoddard, 1920; Grant, 1921; Günther, 1922;)
 - NAZISM (Hitler, 1933; Rosenberg, 1934)

Dogma's of racist theories

- Races can be ranked **hierarchically**, i.e. superior and inferior races can be distinguished;
- There is a strong belief in **genetic** determinism;
- All signs of cultural sort, also **customs and mores**, are considered to be genetically determined;
- Racial **admixture** results in biological degeneration;
- Sociological **majority/minority** relations are the result of genetic superiority/inferiority and/or racial purity/admixture.

Sociological majority/minority relations in pluri-racial or pluri-ethnic societies

- Differences in social status;
- Differences in opportunities to social mobility;
- Differences in economic prosperity;
- Differences in political power;
- Differences in rights and privileges;
- Presence of a superiority, respectively inferiority complex.

Emancipatory strategies of sociological minority groups

- The **assimilationistic** strategy: the minority group desires to merge into the majority group;
- The **pluralistic** strategy: the minority group wishes, on equal basis with other groups, to be integrated into a pluralistic and tolerant society;
- The **secessionistic** strategy: the minority group strives for cultural and political independence;
- The **militant** strategy: the minority group evolves from a egalitarian towards a dominant strategy.

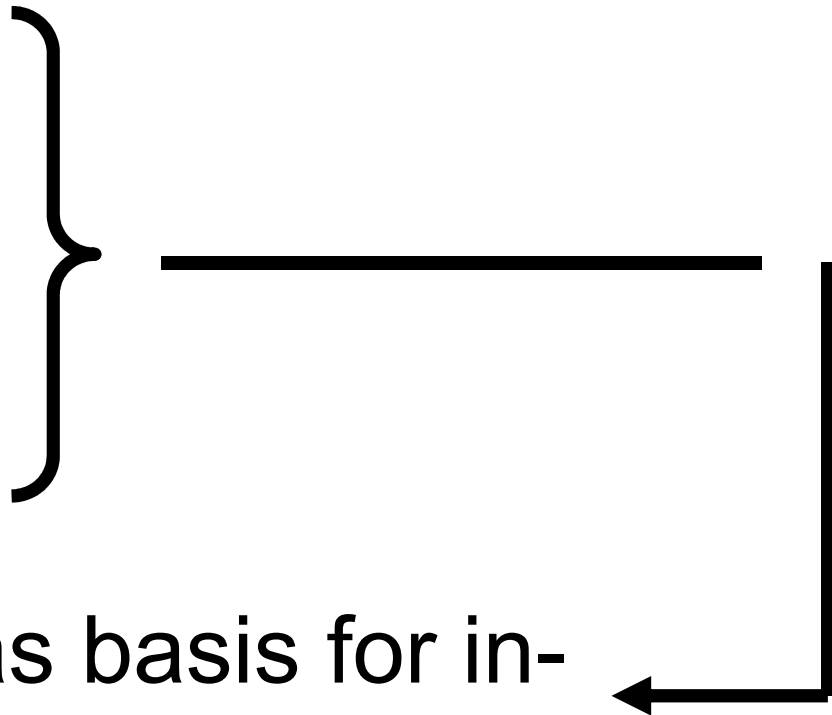
Explanations for sociological majority-minority relations

- Racialist theoreticians:
 - the presence of sociological majority/minority relations are the consequence of **genetic differences** (gene differences, hybridization)
- Scientific theories:
 - selective effects of **climate** on human intelligence for the cultural development of particular population genetic variants;
 - temporal combination of favourable or unfavourable political, cultural, economic, and possibly also ecological **conditions** that forced a particular genetic, ethnic, social or sexual group in a position of underdevelopment, neglect, and/or of exploitation.

Inferior and superior populations?

- **Belief** in the innate superiority of own group: ancient and tenacious!
- **Evolutionary** theory:
 - inferiority/superiority: degree of **adaptation** to the environment;
 - Adaptedness of biological characteristics: **relative!**
 - Dark complexion in sun-rich environment;
 - Linear body build in polar climate;
 - Sickle cell anemia in malaria-endemic environment;
 - High intelligence in modern technological society
- **Genetic** explanations for presence of particular diseases: **bottle-necks** and **inbreeding** in isolates.

Evolutionary explanations for the in-group/out-group syndrome

- Kin selection theory
 - Reciprocity theory
 - Similarity theory
 - Selfish gene theory as basis for in-group/out-group antagonisms
 - Balance of power theory
- 

Kin selection theory

Kin selection \longrightarrow Inclusive fitness



Nepotism



ethnic groups = extended kin groups



extended kin nepotism



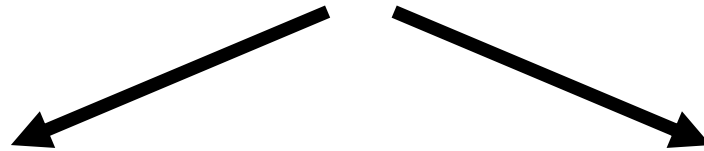
ethnocentrism

Reciprocity theory

Inclusive fitness

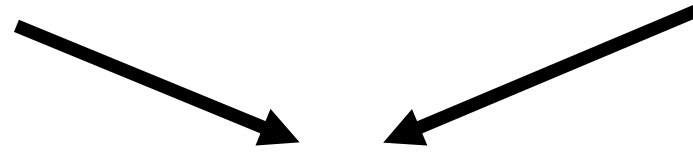


Altruistic behaviour towards **non-kin**



Close genetic relationship

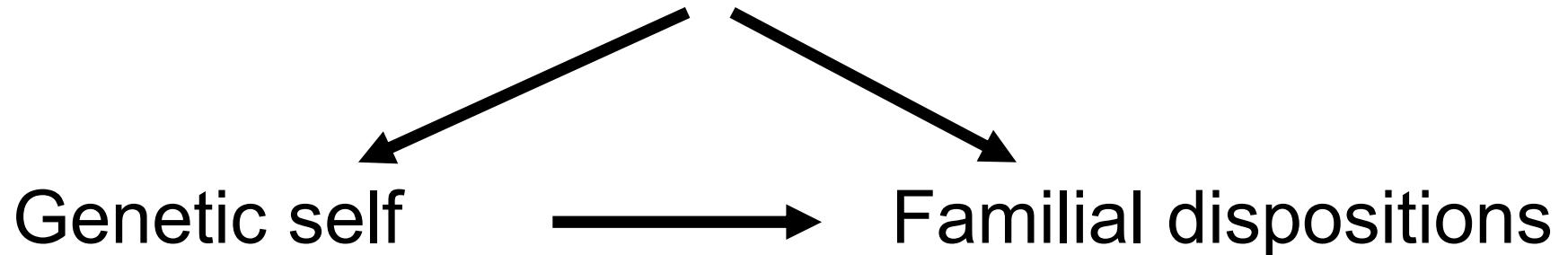
TIT-FOR-TAT



Reinforcement of ethnic and racial sentiments
as **extensions** of kin and nepotistic sentiments

Similarity theory

Genetic similarity



Mutually supporting environments as friendship,
marriage, social relationships,

ethnocentrism

Selfish gene theory

Kin selection

Reciprocity

Similarity

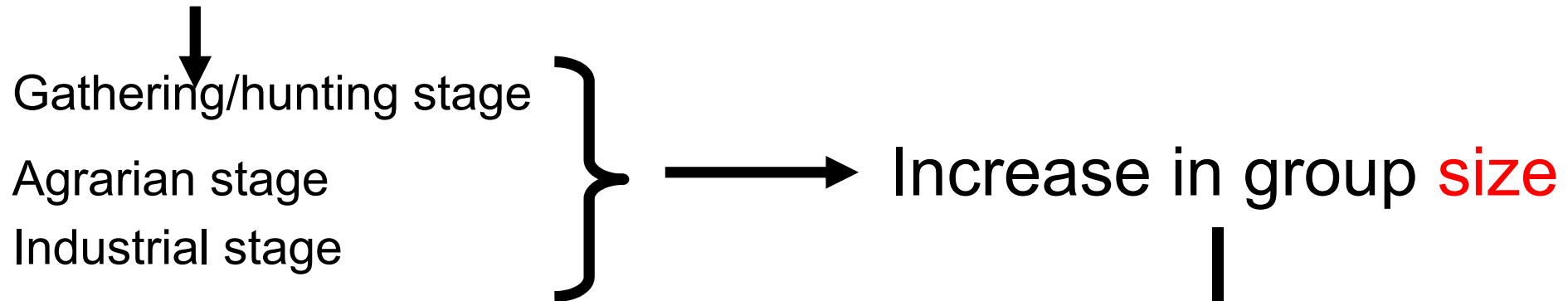
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graph TD; A[Kin selection] --> B[Intergenerational transmission of the individual's own genes]; C[Reciprocity] --> B; D[Similarity] --> B; B --> E[Groups of people sharing markers of biological, social or cultural identity];
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Intergenerational transmission of the **individual's** own genes

Groups of people sharing markers of biological, social or cultural **identity**

Balance of power theory

Cultural evolution of humankind



-
- » Protection against external **threats** (raiding and predation of other human groups)
» Instrument in the **conquest** of new territories and resources
» Reinforcement of power of in-group **elites**
» More intensive **cooperation** within the groups
- A large L-shaped arrow originates from the 'Increase in group size' text and points to a large left-facing curly bracket that groups the four bullet points below.

Adaptedness of the In-group/Out-group Syndrome

- **Successful strategy in the environment of evolutionary adaptedness (EEA) and even in agrarian culture:**
 - survival and reproductive advantages
 - defensive or offensive actions against competing out-groups
 - increasing inclusive fitness
- **Maladapted to the Novel Environment of modern culture:**
 - too **dangerous** (technological means of mass destruction)
 - **globalisation** of commerce, culture and politics
 - **individual talents and abilities** more important than markers of group identity

Modernization and in-group/out-group syndrome

Modernization



- strongly increased geographical **mobility** over large distances, both of individuals and groups



- increased genetic and cultural **heterogeneity**
 - Increased cultural diversity/enrichment
 - increased risks of new in-group/out-group conflicts



- emergence or strengthening of **emancipatory movements** among ethnic groups in pluri-ethnic societies

How to resolve the societal problems related to the in-group/out-group relations ?

- **MULTI-CULTURALISM?**
- **CULTURAL AUTONOMISM?**
- **INTEGRATIONALISM?**

Multiculturalism: fact or fiction?

- Basic **principles** of multi-culturalism:
 - right of ethnic minority groups to **collective expression** of language, values and norms in the **institutional** setting
 - equal treatment and equal access to law, employment, education, social services, and political representation
- **Self-proclaimed** multicultural societies (e.g. USA, Canada, Australia):
 - **national language** is the only official and public instrument of communications, all of the constitutional and other legal rights and obligations have **absolute precedence** over ethnic-specific norms, and autonomy does not encompass political components;
 - Immigrants are expected to **integrate** and adapt to the national language, legislation and customs
 - Equal treatment (particularly of original indigenous populations) has still a **long way to go**

Cultural autonomy/independence

Three major groups of countries in Europe:

- Some historical multi-ethnic countries have **constitutionally** organized the 'multi-cultural' relations between their ethnic components (e.g. Switzerland, Belgium)
- Several former multi-ethnic countries in Europe that had a **federal organisation** of their major ethnic constituents – Tsechoslovakia, Yugoslavia, the Soviet-Union – have **disintegrated** largely or completely on the basis of their former ethnic composition.
- Some other countries such as Spain, France and UK, with historical ethnic minorities that have **no or not yet full constitutional rights** or autonomy, but are in the process of multi-cultural institutionalization or are struggling with minority emancipatory movements

Integrationalism

- Historical small ethnic minorities:
 - numbers, local fragmentation or dispersion in border areas form an obstacle to the development of structurally underpinned multicultural systems;
 - They rarely have fully equal linguistic or cultural rights, or complete cultural or political autonomy.
- New immigrant populations:
 - are expected to **adapt and integrate** in their host society
 - Have **equal rights to profess their faith** (within the boundaries of the law) as the nationals

Integration of immigrants

- Immigrants:
 - need to **adapt** to the host country, to learn the **language** and to get used to **customs and rules** of the host country, to obey the **laws** and to all societal regulations and customs which deal with the major aspects of social life;
 - Multi-culturally variable behaviour: restricted to issues belonging to the **private domain**: leisure, worship, dress (?), private use of language.
- Social integration:
 - full integration in the host society is the only path towards **prosperity and social mobility**;
 - in-group isolation and residential and social segregation and enduring endogamy entail risk of:
 - ghetto formation, **social exclusion**;
 - **social stratification** based on ethnicity/race.
- Sociobiological integration: interbreeding with members of out-groups
 - transformation of **endogamy to exogamy**;
 - Sharing of gene pools between ethnic groups.

Multiculturalism: fiction!

- Multiculturalism = vague, multi-meaning **concept**;
- Scientific and political community strongly **divided**:
 - diverging views of 'multi-culturalists' and 'integrationalists' are often more of a theoretical and philosophical nature than of pragmatic consequence
- Ideological/political use and **abuse** of the concept:
 - Mask for hidden political agendas;
 - Means for acquiring political power;
 - Instrument for ideological proliferation.
- Full or true multiculturalism:
 - Either **impossible to fully implement**;
 - Or results in societal strife and, in the end, **splitting up**;
 - Risk of cultural regression (return to values and norms that emerged in pre-modern and pre-democratic societal regimes).

Multiculturalism, autonomism, integrationalism: rearguard actions?

- Modernization: conquering the world
 - NB. Ambiguity of fundamentalist ideologies and countries:
 - Want all the advantages of modern technology;
 - Want to preserve pre-modern values and norms.
- Internationalization and globalization require:
 - Acceptance of biological and cultural diversity;
 - Acceptance of modern, democratic, humanistic values and norms;
 - Decrease of internal and international differentials in wealth and opportunities for development and emancipation;
 - Acquisition and use of a universally practiced language, in addition to national and neighbouring languages.