

Race and Medicine

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Game Plan

- 1. Introduction
- 2. Three Race Concepts
- 3. Role of Race in Medical Research
- 4. Implications for Remedies

- 1. Introduction

Aim of Talk

- To consider what place, if any, the concept of race has in medical research.

- Context

Real World Context

- On virtually all major objective measures, black Americans have, on average worse health and health outcomes than white Americans.

- Life-expectancy for blacks is about 6 years shorter than that of white Americans.

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(Anderson, 2010; Kaplan, 2010)

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- Blacks are more likely than whites to die at almost every age.
- The black infant mortality rate is almost twice the U.S. average.
- In the 75-84 age group, blacks are about 20% more likely to die.

(Anderson, 2010; Kaplan, 2010)

Blacks are much more likely than whites to die of AIDs, nearly three times as likely to die of asthma, and over twice as likely to die from diabetes, kidney disease, or infectious disease.

(Anderson, 2010; Kaplan, 2010)

Blacks have lower survival rates for most cancers. The mortality rates for heart disease, cerebrovascular disease, cancer, and other ailments are higher for blacks than for whites.

(Anderson, 2010; Kaplan, 2010)

Polemical Context

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- **Eliminativism**

Polemical Context

- **Eliminativism**
 - The doctrine that “race” should be eliminated from our vocabulary.

- K. Anthony Appiah



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Polemical Context

- **Eliminativism**
 - The doctrine that “race” should be eliminated from our vocabulary.
- **Two flavors**
 - Global
 - Medical ✓

Eliminativism in Medicine

- View that the concept of race ought not to be used *in medical contexts*.

Eliminativism in Medicine

- View that the concept of race ought not to be used in medical contexts.
- Two contexts
 - Clinical
 - Research ✓

- **Eliminativism in Medicine: Two Statements**

First Statement 1998

- Mindy Fullilove



First Statement 1998

- Title: “ **Abandoning ‘Race’** as a Variable in Public Health Research—**an Idea Whose Time Has Come**”

M. Fullilove. *American Journal of Public Health* 88, no.9

First Statement 1998

- Quote: “Why continue to accept something that is not only **without biological merit** but also **full of evil social import?**”

M. Fullilove. *American Journal of Public Health* 88, no.9

Second Statement 2017

- Javier Perez-Rodriguez, Alejandro de la Fuente



Second Statement 2017

- Title: “**Now is the Time for a Postracial Medicine: Biomedical Research, the National Institute of Health, and the Perpetuation of Scientific Racism**”

– J. Perez-Rodriguez, A de la Fuente, *American Journal of Bioethics*, 17, 9

Second Statement

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Second Statement

- 1st Quote: “The time honored tradition of [considering racial differences in the biology of disease and treatment options] has no scientific basis. Indeed the premise itself (i.e., the existence of biological differences between the commonly known races) is **false** inasmuch as **rac**es are only social **con**structions.”

- 2nd Quote: “The practice...of utilizing racial identification as a demographic characteristic with assumed biological implications

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- 2nd Quote: “The practice...of utilizing racial identification as a demographic characteristic with assumed biological implications is at best badly flawed, and at worst unintentionally contributes to perpetuating the fallacy of natural differences between persons of different skin color, which has been used in the past to **advance the cause of racial discrimination.**”

My Take on Eliminativism

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- The eliminativists are right

My Take on Eliminativism

- The eliminativists are right *and* wrong.

My Take on Eliminativism

- The eliminativists are right and wrong.
- Right about ***one* race concept**.

My Take on Eliminativism

- The eliminativists are right and wrong.
- Right about one race concept.
- Wrong about **two other** race concepts.

- 2. Three Concepts of Race

First Race Concept

- 1. The Race Concept the Eliminativists are Right About

- *Racialist* race concept (RRC)
 - = The pernicious, traditional, essentialist, hierarchical race concept often mistakenly taken to be *the* race concept.

A Definition

- The RRC is the race concept that maintains that

RRC, defined

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 1. There are **normatively important differences** between members of different races.

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 2. These differences are **correlated with visible physical features.**

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 3. This correlation is explained by an underlying **biological essence**.

RRC, defined

- The RRC is the race concept that maintains that
 - 1 There are normatively important differences between members of different races.
 2. These differences are correlated with race members' visible physical features.
 3. This correlation is explained by an underlying biological essence.
 4. Races can be **ranked** on the basis of their normatively important characteristics.

- Concept suffers from two serious defects

First Set of Defects

- Moral
 - Pernicious effects
 - Perpetuates fallacy of natural differences between persons of different skin color.
 - Promotes racial discrimination.
 - Naturalizes social inequalities between racial groups.

- The racialist race concept =



Second Set of Defects

- Empirical
 - vacuity/emptiness
 - There are no racialist races.
 - No one is a member of a racialist race.
 - No one has a racialist race.
 - concept “biologically meaningless”

Why?

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- The “genetic profile” of the racialist race concept is such that, for racialist races to exist, the genetic variation found ***within races*** must be *small*—smaller than the genetic variation found between races
- And the genetic variation found ***between races*** must be *large*

- The “genetic profile” of the racialist race concept is such that, for racialist races to exist, the genetic variation found ***within races*** must be *small*—smaller than the genetic variation found between races
- And the genetic variation found ***between races*** must be *large*—larger than the genetic variation within races.

- **But**

- Population genetics tells us

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 - The genetic variation actually found **within human populations** are **large** (93-95%)

(Rosenberg et al., 2002)

- **But** population genetics tells us
 - The genetic variation actually found **within human populations** are **large** (93-95%) —larger than the genetic variation found **between human populations**

(Rosenberg et al., 2002)

– AND the genetic variation found between human populations are small (3-5%).

(Rosenberg et al., 2002)

- Noah Rosenberg



So,

- The distribution of human genetic diversity is such that racialist races are **not possible**.
- So, there are no racialist races.

Upshot

- RRC should not be used in medical contexts.
- Or in any context.

In other words,

- The racialist concept of race should be **eliminated**.

Query

- Does this entail that **no** race concept should be used in any medical context?
- No
- **There are other *non-racialist* race concepts**
- I will introduce two.

2nd Race Concept

- 2. **First** Alternative Concept

- **Concept of socialrace** (*CSR*)
- Written as one word (close compound)

- Concept of socialrace is a *social* concept.

Definition

- A socialrace is a social group that is taken to be a racist race.

Features of the concept of socialrace

- Non-vacuous

Non-vacuity

- Social races exist.
- There are social groups (e.g. in the United States) that are taken to be racialist races.
- Examples
 - Whites
 - Blacks
 - Asians

More Features of Socialrace

- Not a biological concept
- Represents race as a *social construction*.
- Not oppressive
- Emancipatory

3rd Race Concept

- 3. **Second Alternative Concept**

- Non-racialist *biological* concept of race

- *Minimalist race concept (MRC)*
- Barest, most stripped down characterization of the ordinary concept of race possible

Definition

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Definition

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 - (C2) whose members are linked by a common ancestry peculiar to members of the group, and
 - (C3) that originates from a distinctive geographic location.

Visible Physical Differences

- Phenotypic differences
- Examples: skin color (pigmentation), nose shape, hair type
- Vary with geographical ancestry
- Do **NOT** correspond to normatively important traits.

Features of MRC

- Concept truly *minimalist*
 - Race = color, shape and ancestry.

Features of MRC

- Concept truly *minimalist*
 - Race = color, shape and ancestry
 - No requirement that the visible physical features of each member of a minimalist race be identical.

- Concept allows that
 - Skin pigmentation and other visible physical features can vary as much within a minimalist race as between minimalist races.
 - Determining whether a given individual belongs to minimalist race MR1 or minimalist race MR2 may be difficult.

- Concept is compatible with the very recent findings

(Crawford et al., 2017)

- Concept is compatible with the very recent findings concerning the variability of skin pigmentation within Africa

(Crawford et al., 2017)

- Concept is compatible with the very recent findings concerning the variability of skin pigmentation within Africa and the widespread distribution of loci for light and dark pigmentation across the globe.

(Crawford et al., 2017)

Genetic Profile of MRC

- Minimalist concept of race *allows* that
 - The genetic variation found ***within minimalist races*** may be large
- And that

Genetic Profile of MRC

- Minimalist concept of race *allows* that
 - The genetic variation found ***within minimalist races*** may be large
- And that
 - The genetic variation found ***between minimalist races*** may be small

Upshot

- Existence of minimalist races *compatible* with findings of population genetics.
- Population genetics does not rule out the existence of minimalist races.
- So: It's biologically *possible* that minimalist races exist.

\$64,000 Question

- *Do minimalist races exist?*

Conditional answer

- They do

Conditional answer

- They do
 - *If* there are groups that exhibit distinctive patterns of visible physical features that correspond to differences in geographical ancestry.

Now, we ask

- Are there such groups?

Answer

- Yes.
- Caucasians, Sub-Saharan Africans, East Asians, and Amerindians appear to satisfy C1-C3
- If *they* are minimalist races, minimalist races *exist*.

Query

- What's the verdict on the concept of socialrace and the minimalist concept of race?

- These two concepts should **not** be eliminated.

- They both represent something real.

- The concept of socialrace represents a real **social** phenomenon.

- The minimalist concept of race represents a real **biological** phenomenon.

- The two concepts are nonmalefic.

- They should be conserved.

- 3. Role of Race Concepts in Medical Research

Claim

- There are least two **medical research projects** in which race concepts have a place.

Claim

- There are least two medical research projects in which race concepts have a place.
- The *first* is the project of studying *racism as a social determinant of health*.

Claim

- There are least two research projects in which race concepts have a place.
- The first is the project of studying *racism* as a social determinant of health.
- The *second* is the project of studying *race-related medically-relevant genetic differences*.

First Project

- (1) The Study of **Racism as Social Determinant of Health**

'Racism'

- In the broad sense

'Racism'

- In the broad sense
- Includes
 - Race-targeted hostility, derogation, indifference
 - Implicit racial bias
 - Unfair differential treatment (discrimination)
 - Racially oppressive practices and institutions

- Research into racism as a social determinant of health is **initiated** by

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- (i) the observation that **substantial racial disparities in health exist.**

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- (ii) the supposition that it is **unlikely** that genetic differences between races account for **a substantial portion of these disparities**

- Research into racism as a social determinant of health is initiated by
- (i) the observation that substantial racial disparities in health exist.
- (ii) the supposition that it is unlikely that genetic differences between races account for a substantial portion of these disparities.
- (iii) the observation that **racism** in the broad sense is a **pervasive feature of social life** in the United States.

- The program is guided by the idea that racism can adversely affect health.

- Basic idea is that

- Basic idea is that, because people are taken to be members of racialist races, they are treated differently.

- Basic idea is that, because people are taken to be members of racialist races, they are treated differently.
- The different ways in which they are treated makes some of them sick.

- Epidemiologist Nancy Krieger...



- ...provides a general answer to the question: **How** does racism make people sick?

- Her answer:

- Her answer: through *embodiment*.

Embodiment

- Human beings biologically “**embody**” the lived experience of racism in forms of disease and ill health.

Embodiment

- Embodiment = the biological expression of social inequality.

- Krieger helpfully distinguishes

- Krieger helpfully distinguishes 5 distinct “**pathways of embodiment**”

- Krieger helpfully distinguishes 5 distinct “pathways of embodiment” — 5 **causal routes**

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- Krieger helpfully distinguishes 5 distinct “pathways of embodiment” — 5 causal routes through which the effects of racism **come to be embodied** in ill health.

- Racism results in

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- 1. *economic and social deprivation.*

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- 3. *socially inflicted trauma*

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- Racism results in
- 1. economic and social deprivation.
- 2. distributions of “toxic substances and hazardous conditions.”
- 3. socially inflicted trauma
- 4. targeted marketing of harmful commodities and other commodities and
- 5. inadequate health care

- All of these result in ill health.

Second Project

- (2) The Study of **Race-Related, Medically Relevant Genetic Differences**

Definition

- Race-related medically relevant genetic differences
 - *Medically relevant* genetic differences

Definition

- Race-related medically relevant genetic differences
 - *Medically relevant* genetic differences
= differences in alleles that affect susceptibility to disease, drug responsiveness, and histocompatibility

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=differences in alleles that affect susceptibility to disease, drug responsiveness, and histocompatibility
 - *Race-related* medically relevant genetic differences

Definition

- Race-related medically relevant genetic differences
 - *Medically relevant* genetic differences = differences in alleles that affect susceptibility to disease, drug responsiveness, and histocompatibility
 - *Race-related* medically relevant genetic differences = medically relevant genetic differences *between races*.

- This project is initiated by

- (i) the observation that such differences appear to exist.

- (ii) the thought that **more such differences** might obtain.

- What is the **case** for the claim that such differences appear to exist?

- There are **examples** of race-related medically relevant genetic differences.

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- These include

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- These include
- (1) *Simple Mendelian disorders*

- There are **examples** of race-related medically relevant genetic differences.
- These include
- (1) *Simple Mendelian disorders* that are “**race specific**”

- There are **examples** of race-related medically relevant genetic differences.
- These include
- (1) *Simple Mendelian disorders* that are “race specific” in *the limited sense*

- There are **examples** of race-related medically relevant genetic differences.
- These include
- (1) *Simple Mendelian disorders* that are “race specific” in *the* limited sense of being **most prevalent within single continental-level racial groups.**

- (a) *Cystic fibrosis* is present at high frequency among Caucasians, less common among African Americans, and less common still among Asian Americans.

- (b) *Tay Sachs disease* is common among sub-groups of Caucasians (Ashkenazi Jews, Cajuns and French Canadians) and uncommon among non-Caucasians.

- (2) Some *complex genetic disorders* appear to be associated with race, too.

- (a) An **association** between *venous thromboembolic disease* and the genetic **factor V Leiden** is present in about 5% of whites and quite rare in East Asians and Africans.

- (b) Racial genetic variation also appears to play a role in *susceptibility to HIV*.

- How?

- Most strains of HIV-1 gain entry to cells by binding to the CCR5 receptor.

- The **CCR5-delta 32 deletion mutation** obliterates the CCR5 receptor.

- and for this reason is protective against HIV infection and progression.

- How is this racial?

- The CCR5-delta 32 deletion mutation is found in groups from Northeastern Europe **and virtually absent** in other groups.

Another example

- (3) There are genetically based racial differences in **drug responsiveness.**

- Carbamazepine has two possible side effects: Stevens Johnson syndrome and toxic epidermal necrolysis.

- These horrific side effects are significantly more common in patients with HLA-B*1502.
- This allele occurs almost exclusively in patients with **Asian ancestry.**

Another example

- (4) *HLA alleles* are unevenly distributed across racial groups.

Another example

- *This* uneven distribution is *medically relevant* because it has consequences for histocompatibility.

- Finding suitable donors for bone marrow transplants for African American patients is sometimes difficult because differences in the HLA alleles of whites and blacks.

Clarifications

- Data provided here do not **prove** the existence of a significant number of medically relevant genetic differences among races.

Clarifications

- But, when taken together, the data suggest that there are *some* medically relevant genetic differences among *some* racial groups.

Query

Two questions

Query

Two questions

1. What race concept is best suited for deployment in the **study of the health effects of racism?**

Query

Two questions

1. What race concept is best suited for deployment in the study of the health effects of racism?
2. What race concept is best suited to the study of **medically relevant, race-related genetic differences?**

Answer to Question 1

- The groups we wish to study when studying the health effects of racism are **social groups**.
- The study of **these groups** calls for a *social concept of race*.

So,

- What's needed is a race concept that picks out groups that are *taken to be* races.
- A concept like **socialrace**.

Answer to Question 2

- The study of **medically relevant genetic differences** among races calls for *a specifically biological concept of race*.
- The minimalist race concept provides one such concept.

- The compatibility of the two projects

- Are the two projects compatible?

- They are often thought to be at odds.

- But they are compatible.

- The **different race concepts** with which the two projects operate are not competitors.

- They pick out two distinct phenomena.

- The concept of socialrace picks out a **social** phenomenon.

- The concept of minimalist race picks out a **biological** phenomenon.

- The two distinct phenomena *coexist*.

- There is **no contradiction**

- There is no contradiction between the notion that **some** racial health differences are due to racism

- There is no contradiction between the notion that some racial health differences are due to racism and the notion that **some** racial health differences are due to genetics.

- There is **no contradiction**

- There is no contradiction between **studying** race-related health differences that are due to racism

- There is no contradiction between studying race-related health differences that are due to racism and **studying** race-related health differences that are due to genetics.

- One project studies one thing, the other project studies another.

- To forgo either project *altogether* would be to abjure inquiry into a potential source of race-related health differences.

Caveats

- The critics who suggest that race-related medically relevant genetic differences are unlikely to account for a substantial portion of race-related health differences are probably right.

- It is most unlikely that biological race will turn out to be a “master concept” in medicine.

So

- The wedding of genomics to epidemiology is **not** the best way to eliminate racial health disparities.

- But the possibility that even a few race-related genetically based health differences suffices to make the study of such differences worthwhile.

4. Implications for Remedies

- We should take **two different approaches** to remedying race-related health inequalities.

- One is to study racism as a social determinate of health

- The other is to study race-related medically relevant genetic differences.

- Pursuing **both** projects provides our best hope of addressing race-related health disparities.

- Thank you

References

- Crawford et al., *Science* (2017)
- Rosenberg et al., *Science* (2002)
- Lewontin *Evolutionary Biology* (1972)

- Appendix

Appendix

- The Populationist Concept of Race

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- *The Populationist Concept of Race*
- A race is a subdivision of *Homo sapiens*

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- A race is a subdivision of *Homo sapiens*—a group of populations that exhibits

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Appendix

- *The Populationist Concept of Race*
- A race is a subdivision of *Homo sapiens*—a group of populations that exhibits a distinctive pattern of genetically transmitted phenotypic characters that corresponds to the group's geographical ancestry and belongs to a biological line of descent initiated by a geographically separated and reproductively isolated founding population.

- ***Concept of minimalist race*** is biological in the sense that
 - It characterizes its objects in biological terms, representing them as falling within the biological domain.
 - It is consistent with the principles and findings of contemporary biology

- *Minimalist **races*** are biological groups in that they are morphologically marked ancestry groups.

- They originate in the prehistoric movements of human populations.
- As populations moved into new territories they became reproductively isolated and adapted to local climatic conditions.
 - Examples
 - Skin color
 - Nose shape
- Not social constructions

- Minimalist races are also biological in the sense that it is possible to assign individuals to such races on the basis of genetic information alone. (Rosenberg et al., 2002)
- Minimalist race has a biological basis