

**21A.240**  
**Race and Science**  
**Spring 2004 MIT**

**PART 1:**  
**THE ALCHEMY OF RACE: MAKING AND UNMAKING SCIENTIFIC RACISM**  
**Lecture 8. April 1**

OK, today, we're looking at RACE and MEDICINE, and we're also going to examine what has happened to the concept of RACE in the TWENTIETH CENTURY.

Just to anticipate: we're going to look at the shift from RACE to POPULATION to GENOME in scientific discourses about human biological unity and diversity. We're going to look at the evaporation of typological race categories in evolutionary and population biology and in anthropology after World War II — and particularly at the way this evaporation becomes manifest in UNESCO statements about race which we've heard so much about and which are summarized in the Will Provine piece I've had you look at.

Roughly speaking, we will examine the move from seeing race as a RACE as a typological category — enabling ranking and so forth — to seeing RACE as an illusory concept based on misapprehensions of the proper object of evolutionary inquiry: the POPULATION, characterized by *shifting gene frequencies*, to, finally, today emphasis on GENOMICS.

We want to look at continuities and discontinuities.

So, in the first hour of class, we'll look at the Kapsalis and watch the Tuskegee movie.

In the second hour, we will look at the UNESCO statement and look at ideas about POPULATION. I'll also have you critique a recent populational model of race.

In the third hour, we will read through the Duster and the Montoya, thinking about RACE in the age of GENOMICS.

As if that wasn't enough to do, I am now going to give you PAPER TOPICS for the next paper, which is due in two weeks. Items we will discuss today and next time will be very helpful, so pay attention!

**Race, Population, Genes and Medicine**

Kapsalis, Terri. 1997. Mastering the Female Pelvis: Race and the Tools of Reproduction. In *Public Privates: Performing Gynecology from Both Ends of the Speculum*. Durham, NC: Duke University Press, 31-59.

A sense of Black people (and nonwhites, more generally) as both DIFFERENT and SIMILAR from Whites — though explicit racial stereotypes about and explanations for difference (e.g., black slave women are more durable than their white counterparts [so don't need anesthetics, etc.]

story of Sims "father of gynecology"

Three claims in this article:

1. the institution of slavery served medicine in providing subjects for experimentation
2. the use of the speculum was founded on slave women's bodies
3. Sims surgical experimentation was precedent for medical institution involvement in racist eugenicist practices concerned with the reproductive capacities of poor women of color.

slaves' "triple pathology" (1. skin color 2. female sex, taken in combo with skin color 3. vaginal fistula) allowed Sims to perform multiple operations

"the simultaneous sameness and difference is what made the slave women such fitting "human guinea pigs" (p. 42),

"...Sims's eulogist's statement that 'the time was ripe' for Sims's experimentation. Implicit in this statement is the idea that the ends, gynecology and the furtherance of medicine, justified the means, slavery. The implication is that it is fortunate for humanity in general that slavery existed if only because it helped foster medical intervention" (p. 48)

*Norplant*

Black Women's Health Project: "the line between incentive and coercion is fuzzy"

"Dominant white forces go to faraway lands to identify the sameness with the exotic 'other' while simultaneously establishing and maintaining the others' differences and reaping the benefits" (p. 55)

"women in Indonesia, Bangladesh, and numerous other countries had difficulties getting Norplant removed due to resistant trial investigators whose scientific data 'would be rendered incomplete'" (p. 55).

Norplant as new eugenics

contrast repro politics under slavery and now with Norplant

*compare to Tuskegee.*

Provine, Will. 1986. Genetics and Race. American Zoologist 26: 857-887.

In this piece, Provine leads us through some very familiar stories. But I want us to start in with UNESCO Statements about RACE. Now, in the wake of WW2, these documents reposition what scientists will take human biological difference to be. Look at Montague.

POPULATION

summarize the shift from TYPOLOGICAL RACE thinking to POPULATION thinking

Montagu: "such differences as exist between different groups of mankind are due to the operation of evolutionary factors of differentiation such as isolation, the drift and random fixation of the material particles which control heredity (the genes), changes in the structure of these particles, hybridization and natural selection"

"from the biological standpoint, the species *Homo sapiens* is made up of a number of populations, each one of which differs from the others in the frequency of one or more genes ... a race from the biological standpoint, may therefore be defined as one of the group of populations constituting the species *Homo sapiens*"

"The term 'race' designates a group or population characterized by some concentrations, relative as to frequency and distribution, of hereditary particles (genes) or physical characters, which appear, fluctuate, and often disappear in the course of time by reason of geographic and/or cultural isolation. The varying manifestations of these traits in different populations are perceived in different ways by each group"

so WHAT IS RACE now?

a population that differs from others with respect to gene frequencies.  
note that differences are:  
IMPERMANENT and SUBJECTIVE (relative to the categories chosen [since focus on different gene frequencies/populations would result in different groups]). kinda confusing since the statement seems to simultaneously point to "real" groups at the same time that it emphasizes relativity of measure.

compare Boas? RACE exists and does not at the same time.

the focus is now shifted to what humans have IN COMMON:

"the one trait which above all others has been at a premium in the evolution of men's mental characters has been educability, plasticity. It is indeed a species characteristic of *Homo sapiens*"

differences between 1950 and 1951 statements? 1950 had cooperation in it and mental equality. 1951 dropped cooperation and remained agnostic on mental traits.

difference between race and population thinking: "Rather than phylogenies and types, it was processes and populations — constructed out of gene flow, migration, isolation, mutation, and selection — which were to be the privileged scientific objects of knowledge" (p. 202).

It was this view, this focus on what humans had in common, which shifted the research agenda of physical anthropology from typological questions, to questions of adaptation.

DID RACE GO AWAY? Why not? Is POPULATION inconsistent with RACE?

Clearly not, even in the 1950 statement we see the same old Mongolian, Caucasian, Negroid categories, though these are now declared temporary,

impermanant (begging the question of whether they are originary, I think. Polygenist commitments were to be disavowed when if you could still use the same categories and claim they were “plastic”). Hooton and Coon held on to race.

Look at Rushton.

Assumption here is that being r-selected (rearing many young with low parental investment) is itself genetic. The problematic logic works like this:

- 1) description of what a particular “human nature” is like (some groups are r-selected)(based on looking around... not asking whether the thing is the wrong question, social , or what)
- 2) claim that the fact that the characteristic in question is prevalent points to a strong possibility that it is genetic.
- 3) claim that the characteristic has come about through a process of natural selection (in this case, low selection pressure associated with prosperity selects FOR a predisposition to reproduce more [apparently not in whites, though — which makes the traits essential, not evolved, and demonstrates that Rushton sees the trait of r-selectedness as essential to Negroids. It’s not really an evolutionary story at all)

Duster, Troy. 2001. The Sociology of Science and the Revolution in Molecular Biology. In The Blackwell Companion to Sociology. Judith R. Blau, ed. Malden, MA.: Blackwell Publishers Limited, 213-226.

SNiPs on chips.

DUSTER argues that in the age of genomics, we are seeing the reconstruction of race as a biological/genetic category, though this time not through appeals heredity or lineage. Race is being biologized/geneticised in new ways. He centers his argument on this technology called SNiPS on chips. What are those?

SNiPs are single nucleotide polymorphisms — places where people’s genomes differ from one another by a single nucleotide substitution (sickle-cell is an example).

If you’re interested in seeing whether a complex of SNiPs is all connected to something like heart disease, you’ll want to look at a number of SNiPs at once. This is where SNiPs on chips come in. What are those?

DNA chips. Different bits of DNA are affixed to a chip and then compared to a sample of DNA for a particular person (complementary base pairing). You can put together different DNA chips to look for sets of different SNiPS. SNIP profiles.

Duster argues that this is already being used in line with social categories of race and reinscribing them, though in new ways. How? (begins on p. 16, “Molecular genetics and the new conflation of race and forensics”)

“It is possible to make arbitrary groupings of populations (geographic, linguistic, self-identified by faith, identified by others by physiognomy) and STILL find statistically significant allelic variations between those groupings”

“when researchers claim to be able to assign people to groups based on allele frequency at a certain number of loci, they have chosen loci that show differences between the groups they are trying to distinguish” **FEEDBACK**

so WHAT DOES THIS MEAN FOR “RACE”?

Go back to the Bowker and Star: Prototypical racial categories (which can be different for the FBI, for Scotland yard, etc.) are being used to divide up a group of people; these categories are then fed into questions about which genetic loci can help make the distinction; this DNA distinction is then used to identify people according to that prototypical category, which at that moment is conflated (perhaps) with an essential category — and perhaps the assumption that the racial category is real, based in lineage, etc. But it doesn't need to be so based in order to be recognizable.

So, here, we're getting the potential for a reconstruction of RACE (according to social categories) in a biogenetic idiom that doesn't explicitly appeal to lineage of heredity (since there are many reasons and histories that could account for the presence of SNIPS and heredity and lineage are not always the most parsimonious).

So, it's circular. Race becomes a self-fulfilling prophecy

““race” in molecular biological clothing” (Duster, p. 218).

Montoya, Michael. 2003. Purity and Danger: Genes and Disease on the US/Mexico Border. Presented at panel on “Populations, Race, and the New Genetics” at Society for Social Studies of Science Annual Meeting, Atlanta GA, October 15-18 2003.

NEXT TIME: we change gears to think about what it means to be a scientist, what it means to do science, what it means to be affected by science, and how ideologies of race shape these experiences, even when they are not about any presumptive “biology” of race. You'll see what I mean.