The Human Genome and the Idea of Race

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Can there be a possible biological basis for the negative category called Race? As we use the term in America today, Race is an idea of a particular sort. The idea of Race uses biological differences, but it is not about biological differences. It is the classic example of the idea of a negative category, one that defies definition because it lacks a boundary. Race is not what a Racist may say it is, it is simply whatever a Racist thinks he or she is not. What can knowledge of the Human Genome contribute to the understanding of such an idea?

DNA is a chemical of great informational density, a text of great importance. But any person's genome -- his or her complement of two copies of each of about 30,000 genes, one copy of each from each parent -- is no more the complete statement of that person's life and character, than a canonical text is the complete statement of a living religion. Everything interesting in both cases, is the product of interpretation and interaction. Appearances begin with the information encoded in DNA, but anyone who knows one identical twin also knows that person to be unique, despite the presence of another person with the same canonical text in each cell.

Genetic differences among us are nevertheless great enough to account for some -- but not all! -- of the differences between one person and another. From any one person to another, unrelated person, the differences in base-pair sequence -- letters in the text -- for the coding region of any gene studied, come to between one in a thousand, and one in a hundred. Imagine a canonical text with that many variations from copy to copy: no chance of any version possibly being the Real one. So, there can be no biological data in support of the notion of oneself as the member of a genetically identical group.

All that makes our genomes human -- and all that makes us human in a biological sense -- is that these six billion different genomes -- and only they -- are all capable of coming together with each other through sperm and egg to make another generation of people. So the biology is clear: there is no chance of some human genomes being Real and others not; the biology of us makes us truly all equal.
No rational explanation of what it is to be human, then, can possibly begin with the claim that one set of these exceedingly large number of genetic variants is human, and another not. Better, the history of our species tells us that we are all the descendants of Africans. The evidence for this comes from many quarters, but in our terms the DNA evidence is most interesting: because Africa is the home of us all, people who are the descendents of the original people -- Africans -- have the greatest genetic diversity of all human subpopulations.

The rest of us are in a sense tribal offshoots, each carrying away only a fraction of the genetic richness of our species, which still remains where it began, in Africa. The irony of universal African patrimony only makes the insult of American Racism more stupid, but not less dangerous, than any other dehumanization.

We see the first signs of an NIH initiative to examine human DNA for evidence of Race, that is, to show that the versions of some genes of everybody in one Race are never found in the genomes of people not of that Race. Enough is known of human genetic diversity to make this an unlikely outcome in any event. But the more important point to make, is that it would also be silly and irrelevant at best -- and Racist at worst -- even to seek the data.

Because Race is a negative category, Racial differences cannot be the result of any number of genetic differences at all. This is the origin of the arbitrary nature of any and all Racial categories, and the absurdity of the recent evasive slide in America from Racist Race to politically correct Identity Politics. The negative category of "whom I am not" can never be reducible to a countable number of genetic differences in any event. But beyond that, there is the question of purpose. Even looking for genomic data on this question will not be of interest to the Racist, who says, or thinks, "if you are not like me, you can be anything else at all, I don't care." Why, then, should it be of interest to anyone else?

The biology of an idea:

As a negative category, Race is an idea that resists scientific elaboration, but it is a powerful idea nevertheless, and as such it needs to be studied and understood. Where, then, do ideas come from?

There are about three billion letters in the human genome. But there about a million-fold more synaptic connections in a human brain at birth than there are letters in any human cell's canonical text. These synaptic connections -- the basis of all mental activity later in life -- cannot have all been specifically encoded by our genomes. At birth some are not functional, nor are many stable or specific; synaptic connections harden into circuits only later.
We begin with a tissue that becomes a mind by social interaction. Our DNA encodes, in other words, a Learning Machine. The Learning Machine is very complicated: it requires that most human genes be present in functional versions; that is, half or more of the genes in the genome are active in the nervous system, and for the most part only in the brain.

What these genes encode, is the capacity of synaptic connections to be stabilized by use, through the activation and repression of genes in nerve cells. The Learning Machine starts up at birth at the latest, activated by initial input signals from the organs of perception. This is the mechanism by which the mind slowly emerges from the brain, through imitation of the minds of those people with whom the infant interacts. Experiences of the first two years, before language, lay down much of the stable circuitry of the thinking brain.

But even after these formative years, the mature brain forever retains plasticity in its circuits, and it never loses the capacity to link past with present experience by familiarity of synaptic pattern. Synaptic connections are made and broken throughout life; these are experienced variously as sensation, perception, memory, repression and -- for my argument's sake, most important -- ongoing teaching and learning.

The learning machine requires adequate social interaction from birth on; absent that, sociopathic disasters ensue. Racism one of these disasters. Whoever is cast as the Other by adults when they interact with their children, will become the Other to those children. When Race is learned in this way, it is a biological event, in that the synaptic wiring of associations in the brain of the child will have mimicked those in the brain of the adult. This form of inheritance is not through DNA, but it can be as stable, and as long-lasting, as genetic inheritance. But we must be clear: it is social, not genetic.

The Racist thinks of everyone in the Other category as if they were genetically identical clones: "all you people look alike to me." The irony of thinking of the Other this way is more perfect in the American case than any other. Here the Other is likely to be a descendant of Africans, who are today genetically the most genetically diverse of all people. It is the Racists who -- thinking alike despite all facts -- form a clone; not a genetic clone, but a social one. That is why there is no contradiction between thinking of Race as a social construct -- the product of Racism -- and thinking about it in the language of genetics.

In the end we cannot escape our biological histories. Everything we may think of as part of the permanent background of our living world, is likely to have been made, or made over, by life at some earlier time. We need to have biology and genetics present in any serious discussion of Race as an idea, because both are grounded in history, albeit on a very different time scale. But because Race is an
idea of great toxicity, the proper genetics here, is not the genetics of skin and lips
and hair and the shape of one's behind -- an embarrassment even to say -- but the
genetics of human neonatal neural development, and the biology of the
ineluctable, irreducible, but one hopes reversible -- role of parental modeling in
the emergence of a mind, and of ideas in that mind.

My conclusions:

All social constructs -- good and bad -- are expressions of our biological capacity
to transmit brain states vertically by a second, non-DNA channel of teaching and
learning. They are made possible by our genomes, but they do not depend on our
genetic differences.

The social construction of Race may well use the language of DNA-based science
to call on the first channel of inheritance for justification of Racism. If this
strategy of Racists is accepted by its opponents, they are left with a permanent,
"inherited" dehumanization that has meant early death but can, by amelioration
and hard political work, become merely grave psychic damage.

But yielding to Racists in this matter is unnecessary: the learning machine can
change. What is needed is the will to change the way we raise our kids. I am
optimistic that Race can be unlearned by the same mechanism as it is learned, by
synaptic rewiring through social interaction. The resources for change would then
not be drawn from the fields of genomic science, but from the fields of education.

DNA did not cause the problem of Racism and DNA will not save us from it; new
insights into teaching and learning -- boring stuff to high powered intellectuals
and politicians alike -- may just do the trick.

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