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The History of Race in Physical Anthropology

by

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I. Introduction

Over the past two years, I have observed a trend within biological/physical anthropology: my professors, as well as the authors of multiple recent books, have stressed the difference between current and earlier biological/physical anthropology on matters of race. (From here on, I will use the term “physical anthropology” for its applicability to the discipline throughout its history) Particularly, they emphasize how morally and factually wrong their predecessors’ views on race were, and how modern anthropologists no longer consider race to have any biological reality. This led me to the questions of: what have been the conceptions of race throughout the history of physical anthropology? How and why did they arise and change? Additionally, why does forensic anthropology –an applied form of physical anthropology- continue to employ race in identifying human remains, and how does this fit into the racial understandings of this discipline?

In exploring these questions, I will employ the framework of co-production. Within this framework, “Science... is understood as neither a simple reflection of the truth about nature nor an epiphenomenon of social and political interests. Rather, co-production... calls attention to the social dimensions of cognitive commitments and understandings, while... underscoring the epistemic and material correlates of social formations” (Jasanoff 2004:3). Put another way, co-production is a way of looking at how scientific ideas are produced through inevitable interactions between social understandings and the material world. It does not separate science and society into distinct realms, with science as something that can be either objective or contaminated by societal influence. Scientific knowledge is instead understood as being produced together with social orders, with each contributing to the other.

The co-production framework is readily applicable to examining physical anthropology's conceptions of race because the social and scientific aspects of race are quite clear. On the one hand, human racial categories have long been assigned largely on the basis of physical features, and have been a part of arguments about the biological basis and origins of race. On the other hand, race was and continues to be a major aspect of social organization and power structures. This makes ideas about the biology and social role of race inseparable from one another. Thus I argue that the conceptions of race in physical anthropology have been the product of interactions between expanding anthropological research on human phenotypic and genotypic variation, and the sociopolitical circumstances of colonialism, slavery, and eugenics.

II. Typology and Polygenism

The first systematic classification of humans into several distinct races is widely attributed to Johann Friedrich Blumenbach, the so-called "Father of Anthropology" (Fortney 1977:36). (As we will see later, anthropology has several such fathers). In the late eighteenth century, Blumenbach divided humanity into five main races: Caucasian, Mongolian, American, Ethiopian, and Malay. This classification rested on the basis of skin color, hair, facial features, and geographical origin (Hammonds and Herzig 2008:4-6).

Blumenbach's racial classification was typological in its categorization of humans into several defined groups; however, it was not entirely discrete. According to Joseph Graves, Blumenbach recognized the existence of blending between these five main races, emphasized the role of environment in creating physical differences, and refrained from explicitly ranking races according to supposed mental or emotional characteristics (Graves

2001:40). Some have attributed this to the influence of “the relatively open-minded and non-xenophobic ideology of the Enlightenment” on Blumenbach (Barkan 1992:15). The accuracy of this claim is surely contestable, considering that the Atlantic slave trade was active throughout the eighteenth century. However, it is an acknowledgement of the intellectual circumstances in which Blumenbach assembled his classification of races.

Nineteenth century polygenism was an expansion of the concept of racial types. Broadly speaking, polygenism was the idea that the human races had separate origins. Prior to Darwin’s publication of *On the Origin of Species*, polygenist thinkers generally attributed these origins to separate acts of creation. Following Darwin, many turned to attributing races to distinct evolutionary origins (Fortney 1977:37-39). Within polygenism, races were considered to be predictive of mental characteristics and part of an innate hierarchy, with the African/Ethiopian race placed invariably at the bottom. In fact, some polygenists maintained that Africans formed a separate species from all of the other races (Graves 2001:43).

In “The Anthropological Concept of Race,” Fortney argues that a growing understanding of the geological timescale contributed to the rise of polygenism by showing that the evolutionary “perfection” of “savages” into Europeans occurred not within several generations but over an almost inconceivably long time (Fortney 1977:38). This demonstrates the interaction between a new scientific idea and its social context in creating a shift in the concept of race. In seeking to place race within geological and evolutionary time, polygenists used the perceived physical and cultural differences between races to construct separate evolutionary origins for them. Prior to recognizing the length of the geological timescale, those who believed in a single creation event for

humankind had little choice but to consider the differentiation of races to have occurred within a historical length of time. The construction of an evolutionary explanation for the concept of discrete races would have given polygenists a scientific argument with which to win over other biologists and physical anthropologists.

However, merely perceiving differences between racial categories was not a sufficient condition for the shift towards hierarchical polygenism to occur. The social context of “political domination buttressed by biological rationalization” was key to the proliferation of polygenism (Barkan 1992:16). According to Graves, this political domination consisted of African enslavement and the United States government’s expropriation of Native American land, to which I would also add post-Civil War racial discrimination and European colonialism. These forms of political domination placed (some) Europeans and their descendants in a privileged position relative to other races (Graves 2001:50). Physical anthropologists, like the rest of the Western scientific community, were generally members of this privileged race. Thus, these sociopolitical systems of domination led physical anthropologists to research and theorize about race in ways that offered a naturalistic explanation for their position of privilege. At the same time, the concepts of wide racial difference and innate hierarchy that polygenism provided served as justification for these systems of domination. Polygenism and Europeans’ sociopolitical domination were, in short, co-produced.

III. Race as Population

The concept of races as populations is best summarized in UNESCO’s second Statement on Race. This statement asserts that all humans belong to a single species and

that races are “groups of mankind possessing well-developed and primarily heritable physical differences from other groups” (UNESCO 1952:11). This idea of races as biological populations in many ways harks back to Blumenbach’s classification. Like Blumenbach, the UNESCO Statement portrays races as being distinguishable yet not fully discrete groups that sometimes blend together and are based primarily on physical –rather than mental- traits. Unlike Blumenbach, the UNESCO Statement does not endorse any particular classification scheme as a static set of ‘types,’ and it emphasizes the importance of heritability as well as environment in creating racial characteristics (UNESCO 1952:11-15). This can be easily attributed to the fact that both UNESCO Statements were made in an era of evolutionary theory and (early) genetics, which provided theoretical tools for exploring the transmission and distribution of racial characteristics. However, this leaves a number of questions. If evolutionary explanations were also used in polygenism, then how did the contrasting concept of population-race develop within the same biological paradigm? What caused population-race to eclipse polygenism in prominence, and why did UNESCO make statements about it?

The rise of race as biological population –or, more precisely, the decline of polygenism– can be credited at least in part to Franz Boas, a broad-range anthropologist of the late nineteenth and early twentieth centuries, who is known as another father of anthropology. Boas researched both cultural and physical variation, paying particular attention to the distribution of physical trait frequencies. He used the results of his research to argue against a biological determination of mental/cultural capacities and the existence of discrete racial types, which were both major aspects of polygenism. Though the motivations of individuals are often more difficult to ascertain than wider social and

scientific patterns, multiple sources do suggest that Boas' mentor, Rudolph Virchow, influenced his later research and ideas regarding race. Virchow was a German biologist who strongly contested the notion of a superior Aryan race (Caspari 2009:5, 10-11; Tattersall and DeSalle 2011:32).

What can be determined with some certainty, however, is Franz Boas' influence on American anthropology through his teaching. Boas established four-field anthropology in the United States and trained numerous doctoral students in anthropology both at his own place of employment, Columbia University, and at other institutions. Thus much of Boas' influence on the concept of race in physical anthropology comes not from winning over other established anthropologists to his own perspective, but by shaping the academic learning environment of new anthropologists. Ashley Montagu is an excellent example of this. Montagu was a graduate student of Boas who went on to become a prominent physical anthropologist and one of the primary drafters of the UNESCO Statements on Race (Caspari 2009:6, 11). The decline of polygenism during the early twentieth century occurred in the context of Boas's research and his role as a mentor to anthropologists such as Montagu. The social and scientific aspects of Boas's influence cannot be separated from one another. The results of his research on physical variation were surely instrumental in refuting some of the factual claims of polygenism, such as that races were distinct and largely non-overlapping. Yet it was Boas's role as mentor that fostered younger anthropologists' uptake of his research findings as well as his wider conclusions about what these findings implied about the nature of race.

As influential as Boas was on many of the American anthropologists of the time, it was not his personal influence alone that turned the tide against polygenism. The lengths

to which the Nazis took eugenics played an even larger role in shifting the accepted understandings of race in physical anthropology, as well as in many other natural and social sciences. Before WWII, eugenics –in practice, the suppression of “breeding among the feeble of mind and body”– had significant support among the scientists and privileged social groups of the United States and parts of Europe. Like polygenism, eugenics was built upon the concept that there exists an innate hierarchy of pure races, and it contained the additional idea of improving of humanity through imposed artificial selection (Tattersall and DeSalle 2011:30). The scientists and anthropologists who argued against the practice of eugenics initially made limited progress against organizations such as the Cold Spring Harbor eugenics laboratory in New York, which held considerable power both with the national government and in the scientific community (Reardon 2005:24). This situation greatly changed following the Holocaust. The scientific community recoiled from eugenics and its principles upon seeing the extent to which eugenics could be taken— and that this could occur to able-bodied, heterosexual, middle class Europeans as well as to those who had long been deemed ‘unfit’ (Tattersall and DeSalle 2011:37).

The UNESCO Statements on Race can be seen as the scientific community’s effort to officially renounce the ideas about race that contributed to the eugenics of the Holocaust. According to Jenny Reardon, “drafters of the first UNESCO Statement on Race went to great pains to distinguish the legitimate scientific use of race from ideological uses in society,” (Reardon 2005:27). For this to be accomplished, there must exist identifiable differences between science and ideology. The Nazis’ use of racial science to violently further their political agenda would suggest that such differences are relatively easy to find. Yet as the drafters worked on the Statement, “no consensus emerged on... how rational scientific

knowledge could be distinguished from the irrational forces of ideology” (Reardon 2005:26). There was consensus on some points, such as the nonexistence of pure races. But other points were less certain, particularly when it came to mental characteristics. The drafters of the first Statement (mostly social scientists) asserted that mental and emotional traits had no place whatsoever in the scientific study of race. However, the drafters of the second Statement (mostly geneticists and physical anthropologists) insisted that wholly refusing to look at mental traits in the study of race was likewise ideological (Reardon 2005:29). This shows that there can be little objectivity in deciding on what human traits count as legitimate objects of biological study. The decision is inevitably informed by the social, scientific, and political climate in which it is made. Furthermore, the scientific community’s decision to try to separate science from ideology by writing a Statement on Race was in itself both a reaction against Nazi political ideology and an effort to shape the future social ideology on race.

IV. Clines

Frank Livingston first put forth the concept of clines in his 1962 article “On the Non-Existence of Human Races.” In it, he defines a cline as the geographic distribution of the frequency of a gene or trait. By 1962, research in physical anthropology and biology had shown that variation in most racial traits was not closely concordant, which is to say that the presence of one trait in an individual or a local population often did not predict the presence of other traits. Therefore the more traits were considered, the more “problem populations” arose which could not be unambiguously placed into any one major race. Livingston used these observations to argue that the entire concept of race is of no

scientific value and should thus be abandoned in favor of studying clines (Livingston 1962:279).

The concept of clines has since risen to prominence in physical anthropology and in anthropology as a whole. The American Anthropological Association (AAA) and the American Association of Physical Anthropologists (AAPA) both released Statements on Race during the late 1990s. Both the AAA and the AAPA assert that the physical differences between geographically distant populations are the result of different assortments of gene frequencies, that gene frequencies vary gradually and independently of one another, that the classification of humans into broad races/populations is always arbitrary, and that there is no link between genetics and cultural capacity (AAA 1999:712; AAPA 1996:569-570). It is interesting to note that while both Statements describe the concept of clines, neither explicitly uses the word “cline.” Since the AAA and the AAPA are both meant to represent large groups of anthropologists, it is possible that this was done to avoid excluding any physical anthropologists who find the concept of race to be of some use in studying local populations.

There is also one noteworthy difference between the AAA and AAPA Statements. The AAPA Statement says that “the genetic capacity for intellectual development is... known to differ among individuals. [Yet] the peoples of the world today appear to possess equal biological potential for assimilating any human culture” (AAPA 1996:570). This ties back to the second UNESCO Statement on Race. In it, the physical anthropologists and geneticists chose to leave the door partly open for the inclusion of mental traits in the study of race. It appears that by 1996, physical anthropologists had come to at least some level of agreement on the idea that there are no population-level differences in innate mental

capacity. Yet unlike the wider anthropological community represented by the AAA, they continued to explicitly assert some genetic basis for “intellectual development,” even if only on the individual level.

The AAA and AAPA Statements on race demonstrate that in the decades following its introduction, the clinal approach to variation gained significant acceptance throughout anthropology. But why? I think that the answer lies in the conceptual upheaval that followed the Holocaust, and in the uncertainty on where to draw the line between science and ideology. Following the publication of Livingstone’s article, supporters of the cline concept argued that population-based race “acted to obscure patterns of natural variation, and thus impeded the study of the mechanics of evolution” (Reardon 2005:36). This argument associated the concept of population-races with the earlier typological understandings of human variation. Taken with Richard Lewontin’s demonstration that the vast majority of human genetic diversity occurs within –rather than between– commonly used racial categories, it is easy to see why many physical anthropologists have come to view the biological use of race as a case of ideology influencing science (Lewontin 1972:397).

The key difference between the rise of the clinal approach and the near replacement of polygenism with the population concept of race is the presence of open contestation. In the very same issue of *Current Anthropology* as Lewontin’s article, Theodosius Dobzhansky presented a counterargument against the replacement of races with clines. According to Dobzhansky, “clines are not uniform; they are steeper where natural, or social, impediments to travel and intermarriage interpose obstacles to gene exchange” (Dobzhansky 1972:280). He argues that “race” is a useful term for the resulting patterns in

overlapping clines. Additionally, he claims that denying race “plays into hands of race bigots.” This statement serves to show that while he is against the elimination of the biological race concept, he does not support scientific racism (Dobzhansky 1972:280). Supporters of the clinal approach to variation and those of the continued use of race agree on the unacceptability of using the science of race/human variation to justify social inequality. I think that this agreement on the social role of the study of human variation made disagreement on technical aspects more acceptable within the scientific community. Though the supporters of clines and of race each thought that the other concept was ideologically influenced and risked “playing into the hands of race bigots,” they did agree that this would be an undesirable consequence. Such had not been the case shortly after WWII, when continued support of polygenism and typological classification would have strongly linked the supporter to the no longer accepted practice of eugenics.

Carleton Coon’s 1962 publication of *The Origins of Races* is an example of what happened when a physical anthropologist supported polygenist notions after WWII and the publication of the UNECSO Statements. In his book, Coon argued that there exist five distinct races and that each evolved from local populations of *Homo erectus* at different times, with Africans being the last to achieve *Homo sapiens* status. Coon’s idea won little support. Many physical anthropologists declared Coon a racist and disputed the evolutionary soundness of his suggestion that a single species could arise several different times (Tattersall and DeSalle 2011:43). While the evolutionary reasoning behind Coon’s idea is indeed highly dubious, the fact that it was so promptly and widely questioned demonstrates the biological and anthropological communities’ distrust of concepts reminiscent of polygenism.

V. Forensic Anthropology

I shall now turn to the matter of race in modern forensic anthropology. Forensic anthropology is the applied sub-discipline of physical anthropology that seeks to create biological profiles of human skeletal remains, usually for the purpose identifying whom they belonged to. One of the characteristics in the biological profile is race. As the previous section of this essay shows, the claim of being able to determine race is bound to be a controversial one. Steven Byers acknowledges this in his textbook, *Introduction to Forensic Anthropology*, by noting that there is a debate among anthropologists as to whether biological race exists. He goes on to say that “forensic anthropologists do not have the luxury of debating this issue; rather, they must arrive at an assessment... to aid the police in their identification process” (Byers 2008:152). Yet forensic anthropologists surely must debate the issue, for it questions the very existence of the ‘race’ characteristic, and thus the legitimacy of trying to assess it. Additionally, Byers states that due to this debate, many forensic anthropologists “favor the term *ancestry* [rather than race] to describe the genetic background of persons” and use the racial groups listed in the U.S. Census for the ancestry categories (Byers 2008:152-153). This practice is seemingly at odds not only with the concept of there being no races, but also with that of population-races as well. This is because the racial groups listed on the U.S. Census are explicitly defined as being social rather than biological categories, are subject to change, and are determined by self-identity alone (U.S. Census Bureau). How, then, do forensic anthropologists explain their use of race/ancestry?

One explanation is that there exists geographic patterning to human variation, and the forensic attribution of race/ancestry rests upon recognizing this patterning. According

to this view, the variation of human traits is continuous yet geographically patterned, and what society calls “race” is an arbitrary set of categorical divisions foisted upon a continuous pattern. This means that “if one defines clusters in such a way that geographical distances among clusters typically exceed distances within clusters... then there will be a high degree of accuracy in classification” (Relethford 2009:20). In other words, greater geographical distance between two human clusters leads to greater morphological difference. The number of and particular delineation between clusters is then virtually irrelevant, provided that the clusters (races/ethnicities) are based on geographically continuous regions. This view is clinically inclined in that it portrays human variation as having no clear and “objective” population clusters. However, it also acknowledges the population-race concept as not being entirely invalid by suggesting that while large populations are not clearly present, there is some patterning to human variation.

Another explanation is that despite the term “biological profile,” forensic anthropologists are seeking to attribute social, rather than biological, race (Ousley et al. 2009:73). If that is the case, then it is of no relevance whether biologically defined races exist within the human species. All that matters is whether there is enough morphological difference between the social races for forensic anthropologists to have a better than random chance of determining how the deceased racially self-identified. This explanation contradicts with Byers’ explanation for the use of the term ancestry in that it claims no close correspondence between the deceased’s genetic background and the race/ancestry attributed by forensic anthropologists. It is, however, consistent with the clinal approach to variation and Relethford’s explanation as described above. That is because the

identification of social race presumes that racial groupings are at least partly based on (ancestral) geographic variation, without assuming that this variation comes in the form of large, distinct populations. This can be seen in Ousley et al.'s caveat that though remains can frequently be attributed to the "correct" race, the variation within the social race must be adequately represented in the comparison sample for the attribution of race/ancestry to have a reasonably high success rate. The attribution success rate thus drops when the remains come from a region not represented in the comparison sample, even if the deceased and the sample would have been placed in the same social race on the basis of continental origin or skin tone (Ousley et al. 2009:73). This is consistent with the concept of there being no biological race because it suggests a lack of correlation between racial characters, such as skin tone and various skeletal traits.

VI. Conclusion

In the nineteenth century, polygenism and Europeans' and European descendants' global position of power were co-produced. Polygenism arose largely as a naturalistic, evolutionary explanation for why they were in this position of power. The naturalization of this dynamic was in turn used to justify its continued existence. The picture began to change at the turn of the twentieth century, by which point slavery -though not other forms of racial dominance and inequality- was no longer in existence in the United States. The decline of polygenism began with the influence of Franz Boas' research and teaching on the intellectual development of many members of the next generation of American anthropologists. This transition was virtually complete after WWII, when a backlash against the concept of hierarchical, pure races occurred in the wider scientific community

as a result of the Holocaust. Yet the widespread rejection of one concept of race did not lead to a consensus on what was the objective, non-ideological concept of race. In the 1960s, a disagreement arose among physical anthropologists (and other biologists) as to whether the popular race categories roughly corresponded to naturally occurring human populations, or whether they were an entirely arbitrary social construct that merely impeded the study of human variation. The practice of race/ancestry attribution in forensic anthropology exemplifies the continued uncertainty about how much clustering there really is in human variation, and whether (and why) racial grouping by physical traits is ever useful.

References

- American Anthropological Association. 1999. AAA statement on race. *American Anthropologist* 100(3):712-713.
- American Association of Physical Anthropologists. 1996. AAPA statement on biological aspects of race. *American Journal of Physical Anthropology* 101:569-570.
- Barkan, E. 1992. *The retreat of scientific racism*. Cambridge, Cambridge University Press.
- Byers, S. N. 2008. *Introduction to forensic anthropology*. Third Edition. Boston, Pearson.
- Caspari, R. 2009. 1918: Three perspectives on race and human variation. *American Journal of Physical Anthropology* 139:5-15.
- Dobzhansky, T. 1992. Comment. *Current Anthropology* 3:279-280.
- Fortney, N. D. 1977. The anthropological concept of race. *Journal of Black Studies* 8:35-54.
- Graves, J. L. 2001. *The emperor's new clothes: biological theories of race at the millennium*. New Brunswick, Rutgers University Press.
- Hammonds, E. M. and Herzig, R. M. 2008. *Dictionary definitions of race. The nature of difference: sciences of race in the United States from Jefferson to genomics*. Cambridge, The MIT Press.
- Jasanoff, S. 2004. *The idiom of co-production. States of knowledge: the co-production of science and the social order*. London, Routledge.
- Lewontin, R. 1972. The apportionment of human diversity. *Evolutionary Biology* 6:381-398.
- Livingstone, F. B. 1962. On the non-existence of human races. *Current Anthropology* 3:279.
- Ousley, S., Jantz, R. and Freid, D. 2009. Understanding race and human variation: why forensic anthropologists are good at identifying race. *American Journal of Physical Anthropology* 139:68-76.
- Reardon, J. 2005. *Race to the finish: identity and governance in an age of genomics*. Princeton, Princeton University Press.

- Relethford, J. H. 2009. Race and global patterns of phenotypic variation. *American Journal of Physical Anthropology* 139:16-22.
- Tattersall, I. and DeSalle, R. 2011. *Race: debunking a scientific myth*. Texas A&M University Press.
- UNESCO. 1952. *The race concept: the results of an inquiry*. Paris, UNESCO.
- United States Census Bureau. Race.
<http://www.census.gov/topics/population/race/about.html>. Accessed: June 6, 2014.