

Region Does Not Mean "Race"—Reality Versus Convention in Forensic Anthropology

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ABSTRACT: Norman Sauer has posed the rhetorical question: if races do not exist, how come forensic anthropologists are so good at identifying them? The simple answer is that, as members of the society that poses the question, they are inculcated into the social conventions that determine the expected answer. They should also be aware of the biological inaccuracies contained in that "politically correct" answer. Skeletal analysis provides no direct assessment of skin color, but it does allow an accurate estimate of original geographical origins. African, eastern Asian, and European ancestry can be specified with a high degree of accuracy. Africa of course entails "black," but "black" does not entail African. The significant identifying features of a given region then are stochastically determined and are not the products of natural selection. If they are valuable for purposes of identification, they have no coherent adaptive, that is, biological, significance. Neither individual traits nor a configuration of them associated with a given region have any adaptive significance and thus have no comparative worth. Traits of adaptive value however are not constrained by region and cannot be used to identify "race."

KEYWORDS: physical anthropology, "racial" identification, "race" versus adaptation, skin color versus "race"

Recently there have been growing numbers of expressions of the view that those of us who have come to the conclusion that there is no biological reality to the concept of "race" have done so for reasons of social ideology and not basic biology (for instance, the ill-informed and uncharitable accusations of Shipman [1]). In other words, we have presumably taken our stance because, in essence, it is "politically correct" [2]. In the past, such a procedure has been referred to as "blinding with science" and equated with the "basic liberal position" [3]. If you use a reputedly scientific methodology to deny the existence of something or other, the sociopolitical problems associated with it will automatically go away.

In the views of the critics, it is almost tantamount to scientific dishonesty to use a stance based on social ideology to reach conclusions that should be determined by biology alone. In the matter of "race," if "there is something there," as has been said [4], is it not our role to identify that "something" first before we consider

the social implications? Several years ago, the suggestion was raised that I was derelict in precisely that way, and it seems appropriate to use this occasion to discuss that charge. At the Circum-Pacific Prehistory Conference in Seattle in August of 1989 a number of papers had been presented dealing with the configuration and base-pair sequence of mitochondrial DNA in a series of groups some of which were referred to as "Mongoloid." I rose to make the point that the Mongols differed morphometrically from the other populations of eastern Asia to such an extent that it was seriously misleading to use the term "Mongoloid" to characterize the peoples of China, Korea, Japan and points south. Instead, I suggested using a neutral geographic referent such as "eastern Asian." Geographic terms can be further sharpened if need be by using adjectives such as "northeastern," "southeastern," "central" and the like.

My position was immediately countered by a one-time protégé who stood up to say: "I apologize for my colleague Dr. Brace. It's all right to use the word 'Mongoloid.' . . . if the term has meaning, and it seems to . . . we should go on using the word Mongoloid. If it's a fish, let's call it a fish" [5]. I repeat those words here because they provide a classic example of the problems that can arise from the incautious use of named "racial" designations. In one utterance, the people of Asia were referred to in terms still used to characterize a kind of mental deficiency more appropriately called Down Syndrome and also, by implication, given the slimy and cold-blooded attributes commonly associated with the piscine world. If it were just a matter of the judicious choice of a name, such a gaucherie could be readily fixed.

My objection to the use of the concept of "race" is not based on the social injustices that have been perpetrated in its name—however reprehensible those may be—it is rooted instead in basic biology. Despite claims to the contrary [6], it was biology that was behind the stance taken a generation ago by Huxley and Haddon [7] and by Ashley Montagu [8]. Just as Mongols are inadequate to serve as a designation for the peoples of eastern Asia, the use of a term that is based on the reputed landing spot of Noah's Ark is at least as misleading as a designation for the spectrum of variation that runs without break from Scandinavia to Iran and on through South Asia (and see Howells' defense of the use of "Caucasian" as an innocuous designation [9]). And the term "Negroid" refers to attributes of pigmentation that are shared across the tropics of the Old World from Africa east through India to Australia by people who have nothing else in common. The "something there" is melanin, but that is all. Later on I shall develop the view that it is the concept of "race" itself that is a manifestation of "political correctness" and not the biological demonstration that there is nothing there to be named.

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¹Professor of Anthropology, Curator of Biological Anthropology, Museum of Anthropology, University of Michigan, Ann Arbor, MI.

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Norman Sauer has spoken for many when he posed the rhetorical question: If races do not exist, how come forensic anthropologists are so good at identifying them? [10]. The simple answer is that, as members of the society that provides the framework within which that question is posed, they are fully aware of the social conventions that determine the expected answer. They should also be aware of the biological inaccuracies contained in that sociologically acceptable answer. Skeletal analysis provides no direct evidence for skin color for example, but it does allow an accurate estimate of original geographical origins. African, eastern Asian, and European ancestry can be specified with a high degree of accuracy. Africa of course entails "black," but "black" does not entail African. The only major adaptive component of the configuration perceived by society at large as indicative of African "racial" identity has no necessary tie to those elements that owe their appearance uniquely to Africa as opposed to somewhere else in the world. It is just possible that the significant identifying features of a given region then are stochastically determined and are not the products of natural selection. If they are valuable for purposes of identification, they have no coherent adaptive significance.

The basic source of the confusion is a failure to distinguish between those traits whose differential manifestations are controlled by aspects of natural selection and those that simply represent regional continuity. The assumption is occasionally voiced that "races" are the products of different regional selective forces. This, however, is an expectation based on blanket faith rather than something derived from verifiable observation. For this reason, it can serve as a classic example of the Panglossian paradigm. Dr. Pangloss was the figure created by Voltaire to cast ridicule on the pious Enlightenment idea that "all is for the best in this best of all possible worlds" [11]. As Stephen Jay Gould and Richard Lewontin perceptively realized, the same inherent weakness characterizes the claim that all of the details of biological form are shaped by natural selection even if the mechanics by which many of the specific results have been achieved are beyond our limited powers of reason comprehend [12].

It is true that they intended this as a critique of the whole "neo-Darwinian" or "synthetic theory of evolution." As such, it was something of a red herring. To the extent that the "synthetic theory" is a faithful representation of the "hyperselectionism" of R. A. Fisher, they were absolutely on the mark. The belief that all the nuances of human morphology owe the details of their form to the action natural selection, even if these are so arcane that their manifestations "passeth all understanding," is just as much an example of pious faith as is the one that our world is the best that it can be because its all-powerful and infinitely good Creator could not possibly have made it otherwise.

To get a proper evolutionary perspective on the nature of human biological variation, the obvious place to start is with an assessment of those traits that are known to be under selective force control. The first and most visible of these is skin color (Fig. 1). In the popular mind, skin color is almost synonymous with "race." Its distribution, however, varies in predictable fashion with long-term residence at given latitudes, but it is absolutely unrelated to differences in longitude. Pigment variation, then, is of little use in specifying regional identity [13].

Serological features are even less useful in part because their adaptive significance is so poorly known. Hemoglobin variants, however, are tied to particular kinds of malaria. The best documented association is the co-variation of hemoglobin S with *Plasmodium falciparum* (Fig. 2). Malaria, however, pays no attention to cultural, national, or regional boundaries. The coinciding distri-



FIG. 1—Skin color distribution in the Old World, from Brace (in press a).

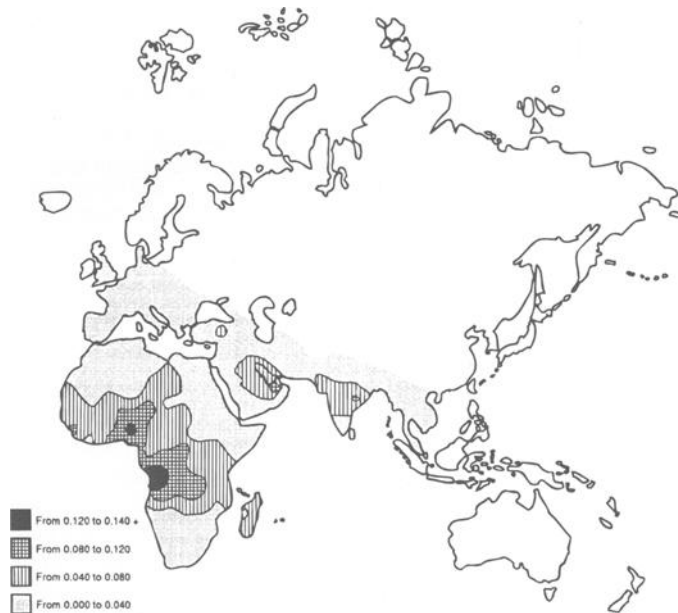


FIG. 2—Gene frequency distribution for Hemoglobin S, from Brace (in press a).

bution of hemoglobin S then cannot be part of that "something there" assumed by the popular belief in the reality of "race" [14].

Differences in human tooth size also obey rules that are unrestricted by regional boundaries (Fig. 3). Reductions from the long-term Middle Pleistocene condition are determined by the antiquity of food preparation practices that started with obligatory cooking in the periglacial portions of the northwestern quadrant of the Old World (Fig. 4). The spread of culinary practices to the rest of the world was a function of distance and time and yields the predictable picture of tooth-size variation that we find today. Obviously the aspects of facial form that are associated with tooth size do not reflect anything like "racial" essence (Fig. 5) [15].

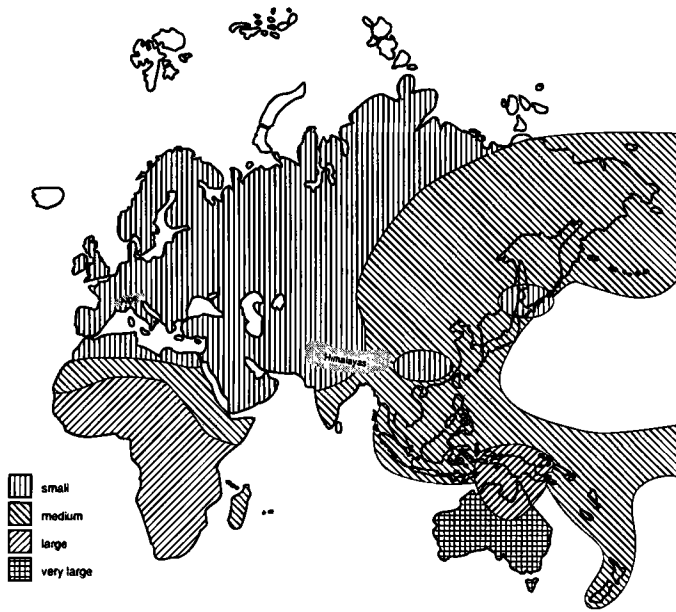


FIG. 3—Summary tooth size (TS) in the Old World, from Brace (in press a).

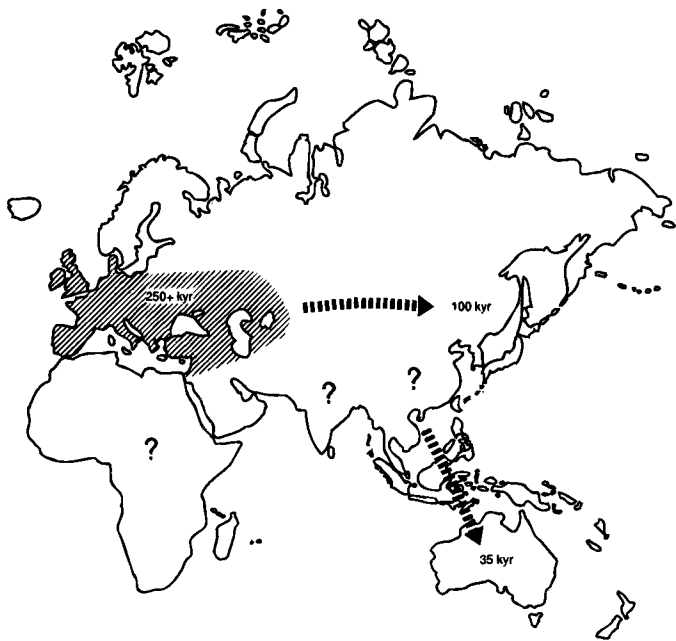


FIG. 4—The shaded area represents the locale where the use of heat to thaw frozen game was developed during the penultimate glaciation, based on Brace (in press b). Late Pleistocene dental reduction began earliest in the core of the area indicated and spread elsewhere as shown by the arrows when the techniques were copied elsewhere with the consequence that the selective forces maintaining Middle Pleistocene levels of tooth size were relaxed.

The same thing is true for virtually all the other traits whose manifestations are clearly controlled by selective force impact. From this it is but a step to the realization that no human dimension that is under selective force control will show a distribution that coincides with boundaries imposed by cultural, political, or regional geographic constraints. This was what was behind the

Tooth Size ^{1/2} / Cranial Volume ^{1/3}

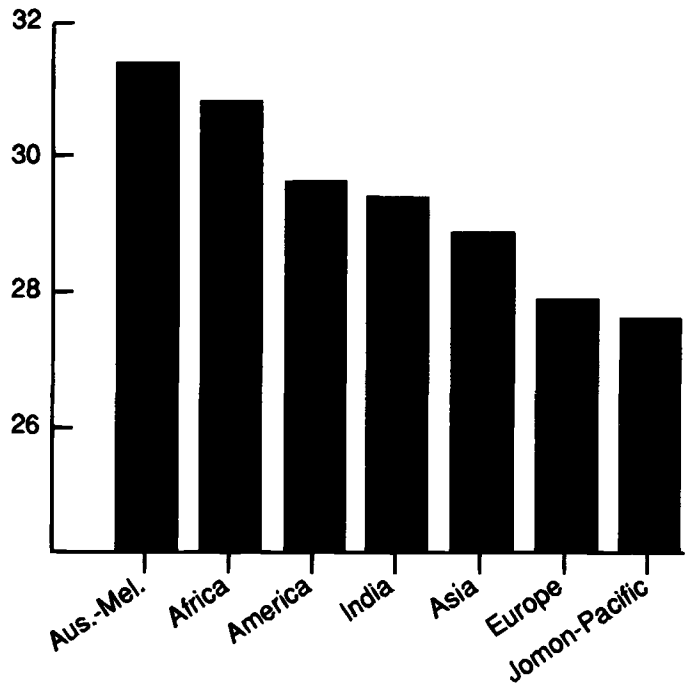


FIG. 5—Total tooth size corrected for body size for a sampling of the populations of the world, from the data in Brace, et al., 1991, Table 2.

classic comment made by Livingstone three decades ago: "There are no races, there are only clines" [16]. The idea that traits grade without break from one region to another is enough by itself to call the validity of the "race" concept into question, but when one realizes that each cline has a separate gradient unrelated to the others, then it becomes clear that there can be no meaning inherent in the configuration produced by the intersection of two or more clines, each under separate selective force control. After all, the selective forces themselves are independent and unrelated aspects of the natural world, and it would never occur to a geographer or an ecologist that their patterns of intersection have any discernible meaning such as would warrant being reified and labeled.

There is a corollary to this realization that is of at least equal importance, and that is that, if we actually can identify configurations that are associated with particular regions, these cannot be the products of selective force control (Fig. 6). Regional clusters of populations then owe the similarities in their appearance to the perpetuation of traits that are shared by virtue of kinship but which have no other biological significance [13,17,18]. If that is all the "there" that there is in what was once construed as "race," then matters such as comparisons of "racial" abilities or capabilities become impossible by definition.

As I mentioned earlier, it is not the denial of the reality of "race" that is motivated by a stance of implicit "political correctness" but quite the opposite. It is the assumption that "there is something there" which is the product of sociopolitical circumstances. Why is "race" such a prominent preoccupation of forensic anthropology? The answer is not to be found by a focus on basic biology but by understanding the circumstances involved in the peopling of the western hemisphere [19].

There was no concept of "race" prior to the Renaissance era of

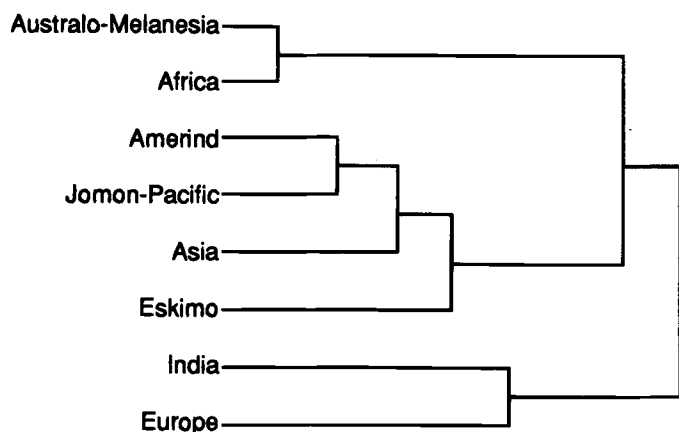


FIG. 6—A dendrogram based on the application of two dozen cranio-facial measurements to samples representing all of the major populations of the world. The measurements were converted into C-scores and the major clusters emerged from calculating Euclidean distances as shown in Brace and Hunt, 1990.

trans-oceanic voyaging and its consequences, and it was not present in pre-Christian antiquity [20]. The concept or an equivalent term is missing from the Bible and the writings of Herodotus—the father of history and the first great traveller to leave a recorded account of his perceptions. Neither Marco Polo nor his even more widely traveled Medieval successor, Ibn Batuta, used such a concept or term although they were both fully aware of the spectrum of human biological variation which we characteristically describe in “racial” terminology [21]. Their perceptions were generated by day-long voyage segments over contiguous portions of either land or coastline, and they perceived the spectrum of human variation as an unbroken continuum without displaying anything that could be designated “central tendency.”

All of this changed, however, with the navigational capabilities that led to the European discovery of the western hemisphere. From that time on, perceptions of the human world became categorical. One got on a boat in Bristol or Bordeaux and got off in Biafra or Bombay without seeing anything in between. That successor to the square-rigged packet—the jumbo-jet—has simply reinforced the categorical nature of our perceptions of the world, and this has been further magnified by means of the lens of the television camera. Starting in the Renaissance, the western hemisphere was extensively colonized by people from a relatively restricted segment of western Europe. These in turn imported quantities of unwilling additions from a relatively restricted segment of western Africa. Prior to all this, the whole hemisphere had been invaded at the end of the Pleistocene by people from a relatively restricted segment of coastal northeast Asia.

The social barriers between these three artificially distinct human constituents of the western hemisphere have ensured the perpetuation of the discrete identity of those components despite an increase in the blurring around the edges, and this is what constitutes the “reality” that is the “something there” for the forensic anthropologist to discover. The “race” that is at the heart of forensic assessment is a politically correct manifestation of the circumstances that governed the peopling of the western hemisphere [19]. That it is regarded as an “important” forensic finding is simply a product of what is politically correct in contemporary North America (and see the recent agonizing over the nature of this “correctness” in [22]). The situation in Latin America has had quite a different

trajectory as a consequence of the long-term involvement of the Catholic Church [23]. Because ongoing political systems have a vested interest in perpetuating themselves, American forensic anthropologists are continually asked to provide assessments of race that satisfy the agencies which provide the money. Since “race” has an established political reality, it demands documentation [22].

There are larger consequences of this artificially created construct of which the American Academy of Forensic Sciences may not be aware. While I hardly envision forensic anthropologists as conscious promoters of a Comintermlike revolutionary movement, waving a banner emblazoned with the sacred “racial” trinity, and marching forth to the cry of “Today America, tomorrow the World,” yet something similar to this is actually taking place whether we are aware of it or not. For better or for worse, America can be regarded as a New World tail that is wagging an Old World dog. Everything that happens here has momentous and often unexpected impact on the rest of the globe. American popular music is avidly imitated in Paris, Moscow, Tokyo, and elsewhere. American values have incurred massive and even homicidal rejection in the world of Islamic fundamentalism. Things American, whether extolled or denounced, have a worldwide impact that is often beyond the comprehension or intent of their creators.

This is no less true for the realm of academia than for the more visible manifestations of popular culture. And one of our academic exports now is a concept of “race” that was forged because of the peculiar circumstances of the peopling of the western hemisphere. In fact, the geneticists who used the term “Mongoloid” with its essentialist implications at that Pacific Prehistory Conference were themselves Japanese. We should be aware that, just as we cannot use the spectrum and distribution of biological variation of the living human inhabitants of the western hemisphere to understand the dynamics of how human form evolved to its present manifestations, so we cannot take made-in-America “racial” categories and try to apply them to the rest of the world with any hope of making sense of those evolutionary dynamics.

Now, having said all that, you have the right to ask whether I disapprove of the efforts made by forensic anthropologists to provide the politically acceptable assessments of “race” that they are asked to do. Actually, I have no objection to this at all, and I have actively participated in that very activity. We cannot alter the fact that “racial” identification has been used in the past as a basis for the unequal distribution of justice. Today, however, as we assess the always interesting issue of ultimate regional origins, we can at least note that the answers we provide to the powers-that-be are of necessity completely unrelated to the issues of adaptation or fitness that are at the heart of evolutionary biology. The traits that cluster in regional fashion do so only because they have no differential adaptive value.

Forensic anthropology then can continue in good conscience to supply the “racial” answers that the prevailing sociopolitical milieu pays it to discover, but, in the course of time, some further level of conscience should impel it to add the reminder that the “racial” labels it provides are of biological or evolutionary significance only as indicators of regional kinship where the regions themselves have no determinable boundaries. At the very most, “race” is simply local kinship on an expanded scale.

However, since kinship itself grades without boundaries from one region to the next and has no implications of adaptation in and of itself, the old term “race” adds dimensions that are not entailed and fails to account for the graded nature of the biological reality that is actually “there.” The term “race” is a social construct,

and it can only be used with a full awareness of the sociopolitical circumstances that require its application [19,24]. From a strictly scientific point of view, it can only prevent us from understanding the nature and significance of human biological variation. When we are wearing our hats as basic biological scientists, the term and the concept should be abandoned.

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Address requests for reprints or additional information to
C. Loring Brace, Ph.D.
Museum of Anthropology, University of Michigan
University Museums Building
Ann Arbor, MI 48109