

Broca's anthropology (and much of contemporary and subsequent French biology [Boesiger 1980, Ruse 1981]) to the stress on the dynamics of evolutionary mechanism that has dominated much of biological science since the 1930s. That the dynamics of the change were influenced by the emotion-laden social dimensions mentioned by Littlefield et al. cannot be denied, but aspects of basic science cannot be left out of the picture. One could make a good case that the very institutions they suggest were slow to accept the paradigm shift under discussion were also the places where the ethos of active research led to the demonstration of the scientific evidence for the validity of the nontraditional view.

I regret that they have used the terms "splitters" and "lumpers" to characterize the adherents to the two paradigms under consideration. These two terms have long been used to designate those who prefer more exclusive and more inclusive approaches to dealing with acceptable taxonomic categories. To use them in the present context is to guarantee that the differences between the groups they are attempting to deal with will be blurred. Calling them "categorizers" and "clinalists" would have been greatly preferable. In orthodox taxonomy, both lumpers and splitters accept the existence of population categories. Their only argument concerns where to draw the lines. Clines, however, "apply to characters, not to populations" (Rogers 1954:126). In dealing with human variation, clinalists maintain that lines should not be drawn at all and that only when we trace the distribution and history of each trait separately in relation to the selective forces which control them can we really begin to understand the nature of human biological variation.

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There are three reasons the term "race" appears less frequently in physical anthropology textbooks now, but none of these is the one imagined by Littlefield, Lieberman, and Reynolds.

The first reason is that the word "race" has been supplanted in part by "ethnic group" and in part by "population." ("Ethnic group" was introduced as an exact replacement for "race"; "population," of course, was borrowed from population genetics and is appropriately ambiguous.)

The second reason is that taxonomy has become of less interest and concern to physical anthropologists, as is true in the biological sciences in general. This decreased emphasis on taxonomy is evident in the texts and bears mentioning.

The third reason is that physical anthropologists have found many new directions of interest, such as bone biology, primate behavior, dental anthropology, demography, epidemiology, and human nutrition. These newer interests are reflected in contemporary texts and especially in the several journals that physical anthropologists support.

While it is true that there has been a great expansion in the number of doctoral degrees in physical anthropology awarded by state-supported institutions, it was never true that the private universities produced an academic "elite." The graduate students were largely impecunious; they tended to come from the state-supported schools, and so did the professors. Littlefield et al. should not confound the undergraduate students and the graduate students of such universities in their thinking.

The moral is that the history of a concept cannot be unravelled simply by setting undergraduate students to count words in textbooks. Even more to the point, it cannot be reconstructed by imagining what doctoral students were like in the depression, the war years, the years of the GI Bill, or the McCarthy era.

by P.-A. GLOOR

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This is an informative and useful contribution to the recent history of physical anthropology. The demise of the concept of race in Anglo-American studies is a reality. The concept is also on the decline, although to a lesser extent, in other parts of the world (see Schwidetzky 1974, 1979). In my opinion, this is an unfortunate trend, scientifically as well as psychologically.

The authors have carefully analyzed various factors: the impact of new scientific data, especially in genetics; the changing sociocultural characteristics of anthropologists; the fear that studying human races could be interpreted as condoning racism and imperialism.

To the first of these three factors another element might be added: the lack of discipline of anthropologists, who have been unwilling to obey the basic rule of zoological taxonomy opposing the use of synonyms. As a result, we have witnessed the emergence of fanciful "races" and of superfluous classification systems. The whole thing is thoroughly confusing for everyone. The traditional taxonomy has been accused of being pre-Mendelian; it has also been said that its most widely used parameters (height, cephalic index, eye color) have been affected by microevolutionary "secular" changes. In this context, the new developments of human genetics have given rise to doubts and reassessments; they have also fostered negative and defeatist attitudes (at least until the geneticists come up with a new geographical taxonomy for the variations in our species).

One solution for the problem of a high fever is to break the thermometer. Similarly, physical anthropology is in a crisis, and for some the remedy is to eliminate the concept of race (at least from our vocabulary) altogether. Thus we have the following scenario: Palaeolithic "raciation" by natural selection; then the Neolithic, with its social selection and increased cross-breeding erasing the "raciation" process; then a unified humanity without distinct racial boundaries. But this is jumping to conclusions.

Turning to the second and third factors analyzed by the authors, it is indeed true that anthropologists have had to overcome many ethnocentrist and colonialist biases. For psychological reasons, we must repeat forcefully that the study of human races is *distinct* from the fallacious applications which sometimes follow (Gloor 1980). Fear is a bad advisor. Replacing "race" with other words is an unnecessary measure; the suppression of a term leaves us with the facts of geographical variability. In my opinion, this attitude does nothing to make things clearer and only helps feed racism instead of starving it.

by ARTHUR R. JENSEN

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The substantive contents of textbooks used in the public schools, from the elementary through the high school level, are controlled to some degree by state legislatures and local school boards, usually on grounds having nothing to do with objective scientific considerations. To my knowledge, college textbooks do not suffer any such formally explicit and extrinsic constraints on their contents. At least in the case of science textbooks, then, one would expect the changes in the central theories and concepts seen in textbooks to be a result of advances in empirical knowledge which force revision of previous conceptions or of new theoretical formulations which provide a more satisfactory account of the existing knowledge or afford a more comprehensive integration with other fields of study.

Yet the emphasis by Littlefield, Lieberman, and Reynolds is

not on factors such as these, but on such scientifically extrinsic influences as the social and family backgrounds of those who teach anthropology and the characteristics of the various college audiences that enroll in anthropology courses. It strikes me as surprising that Littlefield et al. seem to register no alarm at this state of affairs. Is such a reaction uncalled for when a field that presumably strives for the status of objective science is shown to allow one of its key concepts to be wafted about by the play of social and ideological forces on the political scene that are not at all intrinsically related to the scientific elements of the argument? If central concepts in physical anthropology can be pushed around by such nonscientific considerations as those described by Littlefield et al., it would seem to be high time for those in the field to take stock of its status as objective science. I would say the same thing for my own field (psychology) and, indeed, for all of the behavioral and human sciences.

Concepts in science, even if we would wish it, cannot be importantly changed or permanently killed off by ideological edicts or by religious, political, or social attitudes. Scientific concepts change only through replacement by new ones which more clearly comprehend the objectively observable phenomena that gave rise to them, as oxidation replaced phlogiston in understanding the phenomena of combustion. The same kind of change could conceivably occur for the concept of race in our attempt to understand human variation, but so far there certainly seems to be little agreement that any such scientifically bona fide conceptual change has occurred in physical anthropology with respect to race.

Probably the vicissitudes of the race concept are largely attributable to the fact that the concept, albeit in a taxonomically unsophisticated form, extends far beyond the boundaries of its scientific utility in physical anthropology. "Race" as conceived in the prevailing "folk taxonomy" (as Littlefield et al. call it) has many educationally, socially, and economically important correlates, and it is most unlikely that such conspicuous covariation of race, as popularly perceived, and socially significant variables will be ignored, whatever anthropologists may say. I think that the proper response to this condition, by all behavioral and biological scientists, is to try to understand, by all of the objective scientific means available, the nature and causes of the observed covariation between racial taxonomies and socially significant forms of behavior.

by JACK KELSO

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As one who contributed 2 of the 58 volumes—one who preferred to switch rather than fight—I can only agree that there may be deep meaning in the shift from race to no race, but it did not seem that way at the time and it does not seem that way to me now.

Race is only one of many topics that has gone from extensive to minimal coverage in physical textbooks over the past few decades. Growth and development, anthropometry, somatotyping, and craniology come readily to mind as illustrations of subjects that share somewhat the same fate as race. In my view, these changes, together with those the authors discuss concerning race, are symptoms of a basic shift in the outlook of physical anthropologists (in this country) on the significance of human biological variability. I see the change in outlook as an expression of the impact of evolutionary theory, which hit the study of human variability with full force for the first time after World War II. The reason this may be difficult to see is that cause and effect are separated by nearly 100 years. But the racial approach to human variety was set firmly in place well before Darwin and Wallace, and it took a long time, especially in the case of human biology, for the evolutionary perspective

to bring to light other ways of making sense out of the distributions of variability.

The "demise" of race seems to me not fundamentally different from the "demise" of culture area as an approach to understanding cultural variability. The culture area concept gave ground to other analytical strategies as essentially historical questions were replaced by questions of process and adaptation. Indeed, race is to biological variety as culture area is to cultural variety, and I wonder if Littlefield, Lieberman, and Reynolds regard the shift away from the latter as another instance of the "social management of knowledge."

There is still the question of timing. The authors could agree with my interpretation and continue to hold that the full force of the evolutionary blow struck when it did because physical anthropology instruction was extended from elite to mass institutions. Perhaps, but in retrospect it appears that the transformation of the field was well under way before the socialization of instruction began. As evidence of this I would cite the publications of Angel (1948), Boyd (1950), Demerec (1951), and Washburn (1951). These publications were signals of a basic change in outlook, and they came well before the subject matter began to move out of the institutions the authors regard as elite.

CA☆ treatment seems always to harden the differences brought to light between authors and commentators, but it also offers an opportunity for questions. I have two: (1) Do the authors see all of the many changes in the subject matter of physical textbooks (during roughly the same period as the treatment of race was changing) as caused by the spread from elite to mass institutions? and (2) What evidence would they regard as contradictory to their interpretation?

by TERESA ŁASKA-MIERZEJEWSKA

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In my opinion, the rejection of the existence of races or the disappearance of the term in textbooks published since 1965 is indeed due to influences other than scientific evidence. This is apparent from the coincidence of the serious race conflicts in the United States beginning in the early 1960s with the increase in questioning of the scientific principle of dividing the human species into races. In Poland, the meaning of races in reference to human beings became devaluated in the years 1939–45 through Hitlerite racism. Instead we use the term "variety" in application to the three main varieties, white, black, and yellow. In English-American versions the terms Euro- and Afro-American have appeared. Terminology is, however, a marginal matter in the discussion of this issue.

It is true that physical anthropology is unable to offer a widely accepted definition of race and cannot indicate sharp boundaries between geographical races. Human races, however, do exist in the form of populations differing in the frequency of appearance of various genes in spite of the fact that they have for centuries inhabited the same territory, spoken the same language, and professed the same religion. The removal of the term "race" from textbooks cannot eliminate the centuries-old justification for the existence of races. The genetic factors distinguishing populations are often enhanced by environmental conditions that allow members of one race fully to take advantage of their genetic potential in body dimensions or intellectual features while members of another race may do so to a lesser degree. This causes differentiation between races that is sometimes associated with a value judgment. The existence in nature as a whole of abundant varieties of life does not justify this type of evaluation of groups of people any more than the valuing of one colour of the rainbow more highly than the others.

The denial of the existence of races is therefore a misunderstanding. With the use of only a few body measurements and