

**Postscript:**  
**Physical Anthropology at Berkeley**  
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This is the first time anyone has attempted to put the papers of recent Berkeley students into a single volume. In organizing and editing the collection, Noel Boaz and Jack Cronin have tried to illustrate the variety of the research, but no endeavor has been made to ask all recent graduates to participate. As noted in the preface, the history of physical anthropology at Berkeley starts largely with Kroeber's strong interest in human evolution as a necessary part of an understanding of mankind. Kroeber's interests in physical anthropology and prehistory were continued for many years by Theodore McCown, and then Berkeley's physical anthropology expanded rapidly, as the science did in many other departments. When one considers the size and vitality of physical anthropology today, it is hard to realize that this is almost entirely a product of the last twenty-five years. Only a few years ago there was no molecular anthropology, no studies of primate behavior, and for many years only one influential textbook and a single journal existed. The scientific core of the field was taught in a single course, and for nearly two decades most physical anthropologists were the students of the late Ernest Hooton.

Hooton's view of research in physical anthropology, as reflected in his courses and in his own research, was much the same as that mirrored in Martin's *Lehrbuch* (1928). Whether one studied fossil man, race, criminals, growth, or constitutional types, the research contribution of physical anthropology was primarily measurement. As shown in the three volumes of the *Lehrbuch*, this was the generally accepted view, both here and abroad. But Hooton's interests and his introductory course were far broader than one might expect, either from his research or *Up from the Ape* (1931). The interests were human evolution and human biology. There was a fundamental conflict between the view of physical anthropology, as a technique primarily, and the view that its interest lay in human beings — their biology and behavior — regardless of the techniques employed.

The expansion of physical anthropology over the last twenty years, shown at Berkeley in the increase in the number of teaching positions from one to six, has intensified the questions as to the nature of physical anthropology and its relation to general education, to other parts of anthropology, and among the various parts of physical anthropology. It is my belief that the principal contribution is to the understanding of

human evolution, and the implications of human evolution for mankind's view of itself. Mayr (1972) has outlined why it was so difficult for people to accept the idea of evolution. It is still true today that most of the people in the world believe in some form of creation rather than biological evolution. If one holds that some understanding of human biological history should be a part of everyone's education, there is a long, long way to go. If this is accepted as a major goal of physical anthropology, then our educational system needs to give far more encouragement to teaching. At present, as far as I can determine, the training of physical anthropologists is primarily directed to research. Research techniques have become much more complicated and time-consuming, and the specialized subdivisions of physical anthropology hardly communicate with each other, let alone with other parts of anthropology.

It is my belief that, as the field expands (and without subtracting from progress in specialized research), some students should be encouraged to pursue the general study of human evolution — with all its rich implications for general education and with important connections to archeology, social anthropology, and, at least, the problem of the origin of language. In part, this is nostalgia for days that are past but for those who doubt the importance of the role of physical anthropology as a synthetic science, I would point out that the scientific elements going into the study of evolution are almost all done better by non-anthropologists. We borrow from other sciences, and it is only the constant application to human problems which offers us an important area for contribution.

It is the importance of human evolution which makes physical anthropology important. But human evolution can only be understood with techniques and information from many sciences, forcing at least some of us to be generalists in an age of specialization.

Suppose that some substantial number of physical anthropologists are encouraged to generalize more than at present, and that educational changes are made to make this possible, how can the specialized research needs be stimulated and met? In part, all that is needed is to recognize the present trends toward specialization and to encourage highly technical education for *some* individuals. But it is very unlikely that anthropology departments will have the facilities for supporting all the needed specialized research (excellent laboratories for molecular biology, for example).

Therefore, the future of technical physical anthropology really depends on developing new institutions. As I see it, these might be highly specialized departments, or institutes. The most useful pattern would probably be that of astronomy or oceanography, in which several departments cooperate in the support and administration of the research institute. It seems odd that there are seven major centers for the study of the primates and not a single institute for the study of human evolution. Such an institute might be for paleoanthropology studies only, or cover a much wider range of anthropological problems. But the aim should be to make possible the quantity of highly specialized research which cannot easily be supported in even a very large department of anthropology.

As one looks back over the history of physical anthropology at Berkeley, it is with a sense of satisfaction that one sees the growth, starting with Kroeber's interests and the many years of achievements by McCown. But recent expansion should give no cause for complacency. Numbers and diversity are not enough, and we have hardly begun to reformulate the uses and possibilities of modern physical anthropology. As I look over the variety of papers in this volume, I get the feeling that a new synthesis is possible and that it may be that the first of the institutes for the study of human evolution should be at Berkeley.

#### REFERENCES CITED

- Hooton, Ernest A. 1931 *Up from the Ape*. New York: Macmillan.
- Martin, Rudolf 1928 *Lehrbuch der Anthropologie*. Jena: Verlag von Gustav Fischer.
- Mayr, Ernst 1972 The Nature of the Darwinian Revolution. *Science* 176:981-989.