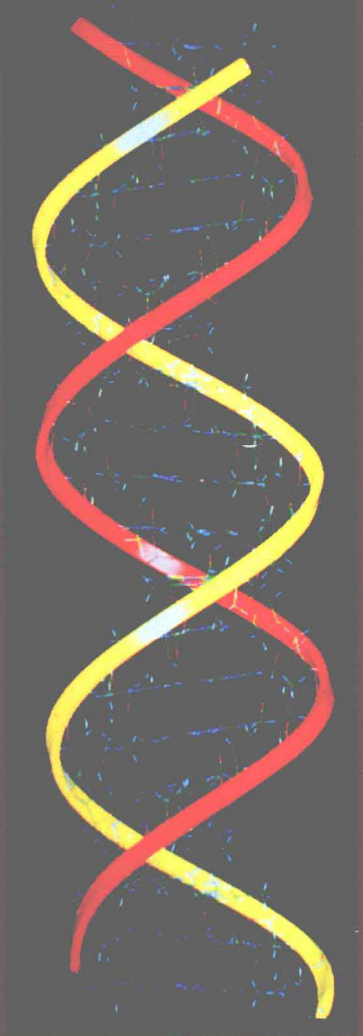

SECOND EDITION

Biological Anthropology

An Introductory Reader

Michael Alan Park

BIOLOGICAL ANTHROPOLOGY

An Introductory Reader

Second Edition

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Preface

Introductory-level readers in biological anthropology tend to be, as one such volume put it, collections "of the best of the public press." They recognize the contribution of popular magazines, newspapers, and journals in "providing current, first-rate educational information."

While it is absolutely the case that the public press, at its best, provides up-to-the-minute, accurate articles that are informative and stimulating to the general public and the beginning student, it is also the case that other sources of information are important to a scholarly discipline and relevant to a well-rounded introduction to that discipline. Older writings, perhaps now out-dated but of historical interest; technical articles; sections of important books; relevant writings from outside the discipline—all these are part of the canon of an academic field. Students in the process of becoming familiar with a field, even (and maybe especially) at the introductory level, will benefit from exposure to a broad sample of literature that expresses the ideas of that field.

This anthology provides such a sample of the spectrum of writing about biological anthropology. The array of selections includes:

- **Articles from the "popular press"** (for example, *Discover* and *Natural History*). These articles, specifically intended to introduce their readers to a subject, at the same time assume some basic background knowledge and degree of literacy. Because college students taking an introductory course may already be familiar with the subjects of these articles, reading them will not only serve to enhance and expand their knowledge of the subjects, but may well provide a positive sense of recognition and encouragement.
- **Articles from semi-professional journals** (such as *Scientific American,* and *The Sciences*). These selections serve to enhance and encourage students' abilities to acquire and synthesize more technical information within the discipline.
- **Articles from general interest scientific periodicals** (such as *Evolutionary Anthropology, Nature,* and *Science*). Students will see what primary research looks like and that the scientific method (a major theme of this reader) is not just a nice idea but is put into action by real scientists doing real science.
- **Sections from books** (for example, those by Johanson, Maples, Dettwyler, and Feder). These pieces stand by themselves as readings, but may also make some students want to read the books in their entirety and perhaps undertake further reading by those authors or on those subjects.
- **Excerpts from original works.** Although the work of Darwin, Wallace, Lamarck, Mendel, Linnaeus, and others can be summarized perfectly well, it is instructive to students (and to us) to learn exactly what they said and how they said it. When one goes even a bit beyond the "quotable quotes" and reads the rest of the paragraphs around them, one often is surprised at what else these important figures had to say. We see that Lamarck, for example, clearly understands the scientific method and applies it to his own idea in a very modern manner.
- **Writings—in all the above categories—from outside the field of anthropology.** Of all scholarly disciplines, anthropology is perhaps necessarily the least parochial. Because of our holistic perspective,we rely upon—and contribute to—other fields, and we recognize that scholars in other fields may well have something to say about our subject and may do so in a way that is every bit as faithful to the anthropological perspective as is our own work. Stephen Jay Gould and Jared Diamond stand out as examples.

ADDITIONAL FEATURES

- More articles pertaining to modern human populations are included than in any other reader. See, for example, "Differential Mortality and the Donner Party Disaster" by Donald K. Grayson and "Who Are the Jews?" by Jared Diamond.
- The anthology begins with a section on the personal experiences of biological anthropologists, and ends with six examples of bio-

anthropology "in action"—applied to specific interesting and topical concerns.
- Unique to this collection is a section on the nature of science. The articles in this section provide concrete examples of the scientific method at work. This theme, however, is carried throughout the book.
- Several articles cover current debates in bioanthropology (multiregional v. out-of-Africa, and the evolution of bipedalism, for example). Introductions and articles together help students summarize and compare competing points of view.
- The reading selections are divided into nine thematic parts, each part briefly introduced and with a short statement as to the reason for the inclusion of each contained selection. Individual selections are introduced with a short biography of the author (longer in the case of the historical figures so as to better provide the historical context), an introduction to the article itself, and a set of prereading questions. Terms that might require definition appear in a glossary at the end of the book. Also included are an annotated table of contents and an index.
- For the benefit of instructors, there is an accompanying Instructor's Manual that contains selection rationale, key terms, and multiple-choice and essay questions.

WHAT'S NEW

- Sixteen of the forty articles are new to this edition, and the volume features these changes (in sequential order):
- Part 2: The Nature of Science has a new article (7) focusing on science as a way of knowing and as a cultural endeavor.
- Part 5: The Primates and Primate Behavior has been expanded and renamed to include, through two new articles (17 and 21), new information about the genetic and evolutionary relationships between humans and the great apes, and the use of nonhuman primate models for the understanding of human behavior, the latter with a focus on the popular concept of the innate aggressiveness of our species.
- Part 6: Hominid Evolution includes four new articles that reflect updated data and new focuses in this area. The first selection (22) expands the coverage to include an interesting topic in nonhuman primate evolution–*Gigantopithecus*. Article 23 updates ideas on the origins of bipedalism. Article 25 introduces the debate over modern human origins, and selection 26 adds the topic of language evolution.
- The old Part 7 is now divided into two parts, Part 7: The Bioanthropology of Modern Human Populations and Part 8: Human Biodiversity. Although these subjects overlap, several reviewers requested a separate section on race, and an understanding of human biodiversity is one of bioanthropology's major scholarly and social contributions. In Part 7, the second selection (28) discusses both species-wide adaptions as well as growth and development. The last selection (29) focuses on disease. In Part 8, the first selection (30) adds the topic of sex and gender, selection 32 is a new article of race, and the final selection (34) ties in with Part 6's coverage of the modern human origins debate by discussing the perceived connection between this topic and the idea of human racial equality.
- Part 9: Biological Anthropology Applied and Considered has been renamed and now includes discussions (in Selections 36 and 40) of some current ethical issues. Selection 35 expands on the idea of applying data and theory from biological anthropology to the study of health and disease. Selection 39 offers a more current example of forensic anthropology with a focus on activities in the Balkans. The final selection (40) discusses new information about chimpanzees as the source of human HIV and includes thoughts about primate conservation.
- Also new to this edition is a concordance of articles (after the table of contents) that will help you match articles to appropriate chapters in the biological anthropology text you are using. You'll also find a listing of the major biological anthropology topics that each article touches on.

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As always, the staff at Mayfield has expertly transformed my words and ideas into a finished product. Special thanks to sponsoring editor Jan Beatty and production editor Melissa Kreischer.

The following colleagues reviewed the manuscript and choice of articles and made many helpful suggestions: Agustín Fuentes, Central Washington University; Susan Goode-Null, University of Massachusetts, Amherst; Nicholas Honerkamp, University of Tennessee; Jonathan Marks, University of California, Berkeley; Alan Swedlund, University of Massachusetts, Amherst; and Andrea Wiley, James Madison University.

And, finally, a long overdue thank you to my parents for the gift of reading.

Concordance

What follows is a chart indicating to which chapters in ten major biological anthropology texts each part in this reader might best correspond. The following texts are included:

Boaz, Noel T. and Alan J. Almquist. 1997. *Biological Anthropology: A Synthetic Approach to Human Evolution*. Upper Saddle River, NJ: Prentice Hall.

Boyd, Robert and Joan B. Silk. 1997. *How Humans Evolved*. New York: Norton.

Campbell, Bernard G. and James D. Loy. 1996. *Humankind Emerging*, 7ed. New York: Prentice Hall.

Jurmain, Robert, Harry Nelson, Lynn Kilgore, and Wenda Trevathan. 1998. *Essentials of Physical Anthropology*, 3 ed. Belmont, CA: Wadsworth. [listed as **Jurmain (brief)**]

Jurmain, Robert, Harry Nelson, Lynn Kilgore, and Wenda Trevathan. 2000. *Introduction to Physical Anthropology*, 8 ed. Belmont, CA: West//Wadsworth. **[Jurmain (large)]**

Park, Michael Alan. 1999. *Biological Anthropology*, 2 ed. Mountain View, CA: Mayfield.

Stein, Philip L. and Bruce M. Rowe. 1998. *Physical Anthropology: The Core*, 2ed. New York: McGraw-Hill. **[Stein/Rowe (brief)]**

Stein, Philip L. and Bruce M. Rowe. 2000. *Physical Anthropology*, 7ed. New York: McGraw-Hill. **[Stein/Rowe (large)]**

Relethford, John H. 2000. *The Human Species: An Introduction to Biological Anthropology*, 4 ed. Mountain View, CA: Mayfield.

Biological Anthropology Reader	Boaz/ Almquist	Campbell/ Loy	Jurmain (brief)	Jurmain (large)	Stein/Rowe (brief)	Stein/Rowe (large)
Part 1: Being a Biological Anthropologist	1	1	1	1		1
Part 2: The Nature of Science	1	1	1	1	1	2
Part 3: The Evolution of Evolution	3	1	2, 4	2, 4	1, 2	2, 3
Part 4: The Processes of Evolution	4	2, 3	5	4	3	4, 5
Part 5: The Primates and Primate Behavior	6, 7, 9	4, 5	8, 9	5, 6, 7	4–8	6, 9, 10
Part 6: Hominid Evolution	8, 10, 11	6–11, 14–16	10–15	7–13	9–13	11–15
Part 7: The Bioanthropology of Modern Human Populations	14		5, 7	14, 16	4	16
Part 8: Human Biodiversity		18	6	15	4	17
Part 9: Biological Anthropology Applied and Considered	15	18	16		Epilogue	Epilogue

Biological Anthropology Reader	Park	Relethford	Boyd/Silk
Part 1: Being a Biological Anthropologist	1	1	
Part 2: The Nature of Science	1	1	1
Part 3: The Evolution of Evolution	2, 3	1, 2	1
Part 4: The Processes of Evolution	4, 5	3, 16	1–4
Part 5: The Primates and Primate Behavior	7, 8	7, 8	5–9, 18
Part 6: Hominid Evolution	9–12	10–14	10–15
Part 7: The Bioanthropology of Modern Human Populations	13	5, 6, 15, 16	17, 19
Part 8: Human Biodiversity	14	4	19
Part 9: Biological Anthropology Applied and Considered	15		

Contents

List of Articles by Major Topic Area

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Genetics and Genetic Anthropology

History of Science

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Homo erectus

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Nonhuman Primates

Origin of Modern Humans

Paleoanthropology

Population Studies

Primate Behavior

Race

Scientific Method

Sex and Gender

Taxonomy

PART 1

Being a Biological Anthropologist

Anthropology is defined as "the holistic study of the human species." A holistic study is one that assumes an interrelationship among all its parts. Thus, the human past is related to the human present. Human biology is related to human culture. One facet of a human cultural system—for example, economics—is related to any other—for example, religion.

The subject of anthropology—the human species, now and in the past—is, however, so broad and varied that the field of anthropology has traditionally been divided into four major subfields. *Cultural anthropology* focuses on cultural behavior as a species characteristic and on the nature of and variation among the world's cultural systems. *Linguistic anthropology* studies language as a fact of culture and examines the variation among languages. *Archaeology* looks at the human cultural past by locating, recovering, preserving, and interpreting the remains of past cultural systems and, ultimately, by trying to reconstruct those systems.

Biological anthropology (or physical anthropology)—our topic here—studies humans as a biological species, much the way, say, an entomologist would study insects or an ichthyologist would study fishes. A major difference, of course, is that part of our identity as a species is not only our large complex brain but also the cultural behavior that it makes possible. Thus, even as anthropologists focusing on biology, we cannot ignore human culture. The holism of anthropology is the hallmark of the discipline.

Bioanthropology itself is divided into several specialties. Some anthropologists are primarily interested in human genetics and evolution. Others, paleoanthropologists, study the results of genetic and evolutionary changes—the human fossil record. Still others focus on living human populations—their demographics and genetic and physical variations.

Because we are all members of a single species, we need to look at ourselves within a larger biological context. Thus primatologists study our closest relatives, the nonhuman primates. We also need to view ourselves relative to the environments in which we live and to which we have adapted. This is the study called human ecology.

Finally, anthropology is applied to matters of current social and political concern. This is known generally as applied anthropology; within bioanthropology,