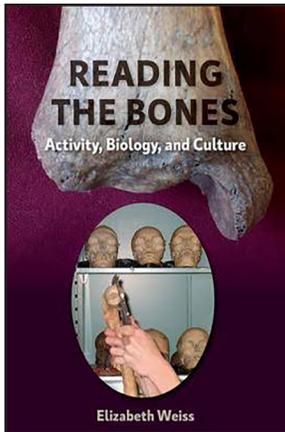


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Reading the Bones: Activity, Biology, and Culture

Elizabeth Weiss. 2017. [University Press of Florida](#). 204 pp., 14 figures, 2 tables, glossary, references. \$89.95 (Hardcover).

Reviewed by Meadow Campbell, Assistant Professor, Logan University

Elizabeth Weiss has produced a succinct, accessible, and well-researched book about methods and anthropological interpretations using osseous material. Each chapter addresses a specific topic—osteoarthritis, stress fractures, cross-sectional geometries, etc, with the aim of discussing whether the observed bone morphology is best interpreted

as the result of biological and genetic processes or activity and cultural practices. As is usually the case, things are not quite that black and white, and the author does an excellent job of guiding the reader through decades of both anthropological and clinical/medical research to demonstrate the multifactorial nature of human bone morphology.

The book begins by explaining bone biology—all the way from the various bone cells and composition of extra cellular matrix of connective tissues, to osteons, different types of bone, and the processes of bone growth, modeling and remodeling, and repair. This level of explanation and detail is crucial to a full understanding of the processes that produce observed bone morphologies. As researchers of dry skeletal remains, it can be easy to forget that bone is a well-supplied, innervated, dynamic living tissue that works within a larger physiological system. It is thereby sensitive to stress (mechanical as well as psychological), hormones (parathyroid and growth hormones are mentioned several times), diet as the basis on which new bone is made and maintained, and yes, activity patterns and use. The final chapter begins by rehashing the fundamental question of environmental versus genetic influences on human skeletal form. The answer of course is that both come to bear on the human skeleton. The discussions in the final chapter highlight salient points from the rest of the book—the effect of confounding factors like age, sex, and overall body size towards reconstructing past lifeways, for example—and offers suggestions for future research and methodologies.

The author presents what the bioanthropological community tends to say about a given topic—that cross-sectional properties are useful for understanding activity patterns, for example—then does a thorough job vetting that standard usage. In fact, the most valuable contribution in this book is the inclusion of the author's own viewpoints on common bioanthropological methods and interpretations. Dr. Weiss has been an active and prolific researcher for the past few decades, giving weight to the perspective and candor she shares in this book. Along the way, she reminds us that biology too, informs cross-sectional and other bone properties through genetic regulation of bone growth, sex differences due to genetic and cultural factors, hormones, the natural aging processes, trauma and pathology, climate, and a whole host of external influences to human skeletal form. She is careful to guard against the circular reasoning that can come from combining artifactual and bioanthropological data sets. A further strength of the book is the inclusion of data and

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interpretations from clinical settings. The examples come from literature on sheep, rats, chickens, and pigs, as well as human physiology.

This book is appropriate for upper-level undergraduate students and graduate students. Important concepts are introduced, defined, thoroughly discussed, and critically evaluated. Case studies and salient journal articles are summarized nicely and then put into bioanthropological context. When information presented earlier is needed in later chapters, a reference is given and the reader is reminded about the concept without having to go back and re-read earlier chapters for context. This makes the chapters digestible as rather independent entities. The final section of the book includes a robust glossary, too.