

Archaeology: The science of the human past

Mark Q. Sutton and Robert M. Yohe.

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Reviewed by Donna Arriola

Archaeology: the Science of the Human Past is a textbook authored by Mark Q. Sutton and Robert M. Yohe, archaeologists who lovingly dedicated the book to their wives. It was published in 2003 by Pearson Education, Inc. and printed in the United States of America. Dr. Sutton and Dr. Yohe are both from California State University, Bakersfield. Sutton's fascination with archaeology started early on in his life. He obtained his Ph.D. in archaeology in 1987. He worked for the U.S. Air Force, the U.S. Bureau of Land Management, various consulting firms, and taught at community colleges and universities as an archaeologist. He has published over 130 books, monographs and papers on archaeology. He has also conducted hundreds of surveys and excavations in western North America. Yohe received his Ph.D. in anthropology in 1992 from the University of California, Riverside. He had served as an assistant director and director of the Cultural Resource Facility at CSU Bakersfield, teaching at the sociology and anthropology departments there from 1990-1993. He was the Idaho State Archaeologist, administrating the Idaho State Historic Preservation Office. He was also the director of the archaeological survey of Idaho and deputy state historic preservation officer while teaching at Boise State University. In 1996, he was designated as interim state historic preservation officer. In 1999, he returned to the CSU Bakersfield faculty where he is currently as assistant professor of anthropology and director of the Museum of Anthropology. Moreover, he is the coordinator of the Southern San Joaquin Valley Historic Information Center. He has carried out research in the deserts of western North America for the past 20 years. He has also published more than 30 monographs and papers on archaeology.

From the title alone, one may assume that the book presents archaeology from a scientific standpoint. This is confirmed in the first few pages where there is a message for the instructor and the students. In the short note for the instructors, the authors give the teachers a bird's eye view

on what is to be expected in the book and how to effectively use it. The objective of the book, as stated in *To the Instructor*, is “to provide an introduction to the broad and fascinating world of archaeology from the scientific perspective” which is exactly what your first impression will most likely be. The authors admit that they have a bias in their approach to the study of the past, like all researchers. However, they also said that they would also include the contributions from other perspectives. Meanwhile, in the *To the Students*, the authors tell the students the coverage of archaeology – what archaeology is, how and why it is done. It is the hope of the authors to answer the questions posed, to expose the students to archaeology in the real world, and spark interest on the areas of technologies, experiences, successes and failures of peoples of the past. Also, the authors wanted to convey the flavor of the discipline through their book and help students respect and admire past people and cultures. Also written in the letter to the students is a list of great websites on archaeology, which could help open the study of archaeology for them. The book is truly meant to be used in the academe, operating on the assumption that its readers are newbies in archaeology. From the very beginning, science and archaeology are defined to give a better picture of how the book takes itself. The authors define science as empirical and problem-oriented. Science is an appealing lens to use because of the weight given to it by school systems and institutions and its claims of objectivity. The particulars on how the authors define science are exhibited in the topics making up each chapter. Breezing through the pages of the book, you can see that it is comprised of fourteen chapters within four hundred forty pages, which basically show what archaeology is - the acquisition of information about the past, the interpretation of the past and its applications.

Before I get to the nitty-gritty topics tackled in the book, let me first enumerate the “special features” that the book offers. These special features are meant to help students master the information and capture their interest.

In each chapter, there is a *Chapter opening story* which is an inspiring tale of an archaeological adventure that articulates the central theme of the chapter. Also, each chapter contains around three or four *Highlights* which are accounts of interesting topics or sites that are relevant to certain parts of

the text. These put the spotlight on historical, classical and prehistoric archaeology from various places around the globe. At the end of each highlight are *Critical thinking questions* which stimulate the students' independent thinking. *Location maps* show the location of regions and sites which are mentioned in the chapter. It consists of a blank map of the world where the mentioned archaeological sites or places are marked. At the end of each chapter, there is a *Chapter-ending pedagogy* which includes a chapter summary, a list of key terms and concepts, and a list of key places and people to remember. Moreover, there is a ContentSelect feature with carefully chosen search items to encourage students to research articles from the ContentSelect online database. The access to it is provided in the *iSearch: Anthropology* booklet which comes free with the book. Unluckily the copy that I have right now, for some strange reason, lacks the said booklet so I am unable to say anything about the database. Lastly, the book has a glossary and index which makes it easier for readers to find concepts and sites throughout the book.

Here is a recapitulation of the topics discussed in the book per chapter and how the authors handle these topics.

In the first chapter, the science of archaeology is discussed. It covers archaeology and anthropology, other sciences, and the basic goals of archaeology. It also includes the branches of archaeology which the authors classify as prehistoric, historic, classical, maritime and public archaeology. The archaeological record, cultural deposition, stratigraphy, dating and archaeological cultures are discussed, too. The discussion of archaeology as science is furthered by the inclusion of the structure of scientific knowledge, the scientific method, research design, pseudoscience and frauds. The chapter ends by explaining the importance of archaeology – a sensible topic to put at the beginning of the book.

Chapter two deals with the background of archaeology – its history. Ancient archaeology, antiquarians and the discovery of prehistory are included. The emergence of professional archaeology is elaborated through the discussion of the historical approach, unilinear cultural evolution, diffusion as an early explanatory model and improvements on field methods – the changing approaches to archaeological scientific thought and field work. The

development of world prehistory is portrayed by showing the archaeology of Americas, Sub-Saharan Africa, Asia and Oceania. Another relevant topic in world archaeology is the politics of the history of archaeology. The effects of colonialism, nationalism and general biases are tackled here.

The third chapter is on the development of contemporary archaeology. It kicks off with post-WWII archaeology followed by processualism and scientific archaeology. Then, post-processualism and archaeology as a narrative is explicated. A topic which is worthy of note here is on archaeological frontiers, extending the scope of archaeology beyond the study of human material remains to that of extra-terrestrial ones in exoarchaeology. Careers in archaeology are enumerated in this chapter, along with requirements for certain jobs which are both encouraging and challenging. More than just information, it is an invitation to become an archaeologist now that the reader has an idea of what an archaeologist does, without forgetting to emphasize that the endeavor is not an easy one.

Chapter four is about the archaeological record – the types of sites, site deposits, and artifacts versus ecofacts versus features, architecture and human remains. It also covers site formation and transformation through geology and hydrology, taphonomy, bioturbation and human agency. The chapter also talks about preservation conditions, and preservation and the environment. Recognition and recovery of evidence plus ongoing impacts on the archaeological record are also embraced by the chapter.

Chapter five is all about conducting field work. It is comprised of finding accidental and project-related sites, remote sensing, archaeological survey, excavation, practical aspects of field work and ethics which handles the delicate subject of legal issues, human factors and professional obligations. The chapter makes it clear that archaeology is an encompassing field which seeks collaboration with specialists from other disciplines such as geology, chemistry, etc. This portion of the book also cautions us with the hazards and monetary aspect of archaeology especially when it comes to the field.

The sixth chapter focuses on the classification and analysis of artifacts. The chapter talks about classification and typology, and classifying types of artifacts which the authors broadly designate as stone, ceramics, metal, glass,

shell and bone. In analyzing artifacts, techniques such as use-wear analysis, geochemical sourcing, residue analysis, and DNA analysis are explained.

Chapter seven centers on determining time. First of all, the chapter tells us what is so important about time. It also talks about relative dating and absolute dating and the different methods used to determine these dates.

Chapter eight is on bioarchaeology which is the study of human remains. It discusses how to get to know ancient peoples, preserved bodies, skeletal remains and analytical approaches to bioarchaeology. This part of the book elucidates the attempt to reconstruct the lives down to the physical appearance of the people we study in archaeology. We can see here strongly the need to know how similar we are to our ancestors.

The ninth chapter is on environment and adaptation. It discusses the environment and environmental archaeology under which are reconstructing past landforms, animals and plants, and climate. Also written about are human biological adaptation and human cultural adaptation. Lastly, the chapter talks about domestication and the agricultural revolution.

Chapter ten is about understanding past settlement and subsistence. It describes the four primary subsistence systems, archaeological evidence of subsistence, subsistence technology and organization, recovery and identification of ecofactual evidence and quantifying ecofactual remains. Also, past settlement systems, and the interplay between settlement and subsistence are presented.

Interpreting past cultural systems is the main subject matter of chapter eleven. This portion of the book marks the turn from hard science to soft science in the discussion. The chapter deals with how archaeology can answer anthropological questions, interpreting past social structures, political organization, belief systems and the individual.

Chapter twelve is on understanding culture change. Various theories on the archaeology of change such as systems theory, evolutionary approaches, invention and diffusion, social and political movements, migration and diasporas are tackled here. Other topics are interpreting evidence of change, cultural contact and conflict.

A shift to applied archaeology is apparent in the last two chapters. In chapter thirteen, the focus is on cultural resource management and public archaeology. Here, the issues are the impact of population growth and developments of archaeology, field and cultural resource management, the role of public education in archaeological preservation, cultural resource management among traditional peoples, and archaeology and ethics.

In the very last chapter, archaeology in the real world was the chosen theme to close the discourse of the book. It covers archaeology today, archaeology and politics, ownership the past, computer technology, mass media and public perception and finally, the most relevant question: so what? After a long read of largely scientific archaeological information, the book tells us the significance of archaeology.

The arrangement of the chapters is logical, flowing from the definition of archaeology, to its history, to the scientific methods and thought involved, ending with how pertinent and useful archaeology is to our lives today.

Archaeology: the Science of the Human Past is a very straightforward book which interacts with its readers. Aside from the special features, the illustrations, diagrams and tables are very convenient for students. An example is the concordance of the three primary time systems which are often confused by students and professionals alike. Another effective table is the timeline of the history of archaeology. Even the layout and artwork of the book is well-thought about. The organization of the text is easy to read. Also, the icons such as the sarcophagus in the first page of each chapter, the tribal image on each major topic or the Stonehenge beside each highlight accentuates the fact that archaeology deals with material culture while making it easy to locate the said parts of each chapter.

The language is simple but not simplistic. I find the tone inviting to newcomers in the field of archaeology. Everything is understandable on the level of the new student of the discipline. The book often speaks in second person so you feel that it is actually talking to you and not merely spewing data to a cold and faceless audience. There are stories about archaeologists' experiences as well as tales shared by authors themselves. This makes the book more than a textbook but a sort of extension of their personal lives. I

would say that the book has personality, contrasting hard science with heart by making students feel for archaeology. Emotions of fascination are stirred up in highlights such as the footprints at Laetoli or the paintings in Lascaux. One may also feel anger or disgust in the story of the looting of Angkor Wat. The book also addresses certain controversies or myths related to archaeology such as the Shroud of Turin and Atlantis. Also, there are accounts of famous discoveries such as the Terracotta Army in China and scandals like the planting of evidence in Japan. The authors found it imperative to represent archaeology through science. In fact, the book criticizes Hollywood's poor use of the past.

The book has a lot of merits. However, the book could work on some points. Humans are visual beings so we like to see color, especially when it comes to pictures of sites and artifacts. It's a good way to attract attention and to depict photographs. Although it is not possible to provide representation for each and every culture or state in the world, the book delves more on Western archaeology. Obviously, the authors lean more on the processualist side and science is their main concern. They also come from a Western country so you cannot blame them entirely for their bias (which they confessed to have in the first place). Nevertheless, the mention of the Kabayan mummies made me smile.

It is definitely a good book to start with especially if you want to see archaeology from a scientific point of view, whether you are formally studying archaeology or just self-studying. It fulfills the premise that it is a school textbook. All that they had promised in the beginning materialized in the text, remaining within the realm of archaeology without completely dismissing other views which were covered in brief.

So how does this book compare to a few other introductory books to archaeology? More popular (yet not necessarily better) authors such as Colin Renfrew and Paul Bahn have produced *Archaeology: Theories, Methods and Practice*. It contains a more comprehensive history of archaeology. The contents are also oriented towards the sciences but it covers a broader scope in archaeology. Like Sutton and Yohe's book, it is also a textbook, only thicker. It is also a good book to have when formally undertaking archaeology. The third edition is the

best choice because it is the most updated – printed in 2000. Sutton and Yohe’s book has an edge over the other such that it presents archaeology as science only. The only danger in science is that there are developments here and there and after a few years, Sutton and Yohe’s book may become outdated. Another book by Bahn is *Archaeology: A Very Short Introduction*, a book that is indeed very short. Published in 1996, it deals briefly with the origins and development of archaeology, dating, technology, how people lived, change, public archaeology and the future of the past. The book is a good read for those who are pressed for time and are not really looking for an in-depth comprehension of archaeology. *An Introduction to Archaeology (1998)* by Lesley and Roy Adkins is almost just as short as Bahn’s solo work. However, it makes up for its brevity when it comes to the photographs which most of the time are the first to captivate the imagination of readers. Most books on archaeology on library and bookstore shelves are fairly old – published more than ten years ago. It is important to get an updated book such as *Archaeology: the Science of the Human Past* to get the latest developments especially when it comes to science. The book has an advantage because it is very much up to date, has ample content, has good presentation of information and stimulating for those who would like to learn about archaeology, especially with a scientific angle.