

standing the world.

Shared habits of mind are, according to the author of this book, the essential constituents that tie a scientific community together. The author is particularly interested in the issue of paradigm shifts in science, which Thomas Kuhn had described as the bridging of logical gaps. The author proposes that paradigm shifts can more reasonably be viewed as the breaking down (or leaping over) of barriers created by habits of mind.

An example of a habit of mind that plays a prominent role in this volume is the “nested spheres” view of the sun, moon, and planets that made it impossible for followers of the Ptolemaic model to see anything reasonable in the Copernican model. It was the escape from this habit of mind, according to Margolis, that led to the revolution in astronomy in the early 17th century. Other examples from physics and chemistry are provided but, unfortunately, there are none from the social or behavioral sciences.

Kuhn’s idea of paradigm shift took the 1960s-70s archaeological community by storm and provided one framework to explain what was happening at that time in the field. Attempts by archaeologists to use the Kuhnian model to understand the recent history of the field, however, have not been very convincing and may be another instance of archaeologists importing a model without really understanding it (e.g., Leone 1972; Martin 1971). Margolis would argue that if what was going on at that time was a paradigm shift then habits of mind would have had an important part in the process. We may be too close to the events in question to do a good job of ferreting out such things and probably should look farther back in the history of the discipline for possible examples.

It is claimed that the recognition of stratigraphy and time depth in the New World only occurred in the early part of this century and that prior to this time Amerind populations were assumed to have little history (e.g., Taylor 1954; Willey and Sabloff 1980). Certainly there are discussions in the 19th century literature of deep middens implying great age and of succession of cultures over time, but the propensity to talk of archaeological remains as if they were all from the same time seems to have been common. Could this be an instance of an archaeological habit of mind that created a barrier to recognizing evidence of great time depth? More careful reading of the archaeological literature in this era needs to be done to assess this possibility.

The above question brings up an issue that Margolis discusses in detail. There is a school of the history/sociology of science known as constructivists who have made quite a name for themselves in claiming that the development of scientific theories is guided more by social and political factors than by comparisons with reality. Margolis argues, again using a Darwinian perspective, that there are strong selective pressures operating constrain theories by reality - the strongest perhaps being the scientists not wanting to look dumb in the future. Constructivists, on the other hand, would argue that there are strong social and political pressures on scientists to view the world in certain ways and that this is a more powerful force in science than reality. The author’s arguments against constructivism seem convincing for the “hard” sciences from which his examples come, but there may be greater potential for the constructivist position in social sciences such as archaeology. Did archaeologists of the 19th century believe that Amerinds lacked significant history because of some sociopolitical agenda or was it related more to issues such as lack of methods and techniques. The history of archaeology may provide an interesting arena for assessment of the varying importance of data, methods, and sociopolitical context upon theory development.

This book is of importance to historians of archaeology even if it only leads us to examine in greater depth the underlying, and usually unstated, frameworks or “habits of mind” that structured the thinking of our predecessors. It remains to be seen whether or not paradigm shifts and habits of mind have a useful role in understanding the history of archaeology.

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The Art and Mystery of Historical Archaeology. Essays in Honor of James Deetz, edited by Anne Elizabeth Yentsch and Mary C. Beaudry, CRC Press, Boca Raton, 1992. 447 pp, illustrated, references, index, \$79.95, postage and handling, \$7.50-Library Binding.

by

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Master archaeologist James Deetz richly merits this "Deetzschrift" by his students and colleagues. Reared in the hills of western Maryland and West Virginia, he was encouraged by a perceptive high school counselor to try for Harvard—successfully—as, says Deetz, "an early case of affirmative action...for hillbillies to Ivy League institutions". Deetz became a fabulously popular university professor at U.C. Santa Barbara and Brown, an author of small but seminal books on historical archaeology all while he and his wife raised a brood of nine children. Jim once told me they lived "on the greatest interior midden in Massachusetts".

This festschrift is worthy of its purpose. An amusing and witty foreword by Ivor Noël Hume sets a good pace which is followed—at various distance—by a field of essayists who know Jim Deetz and strive, with various effects, to demonstrate affinity and appreciation with regard to the Deetz's achievements. Noël Hume says that in the jargon of medieval trades, the term "art and mystery" of archaeology implies that professionals get paid for doing what so many lay persons would gladly do for nothing. So that explains the title.

Anne Yentsch and Mary Beaudry initiate the volume with a review in perspective of "the set of lively case studies written by people whose work has been touched...by Jim's own life". This puts the reader in touch, in turn, with the disparate essayists and this work. Anne Yentsch follows with a meaty offering on "Man and Vision in Historical Archaeology"—the man being, of course, Jim Deetz. Anne speaks of her first in anthropology at Harvard when she met Deetz and Dethlefsen, who were discussing the patterned past to be observed in Massachusetts cemeteries. That season of 1963 "Harvard was filled with an intense, creative energy. "I was", says Anne, "quiet as a churchmouse"—which speaks the power of that environment. She proceeds to characterize the difference between the Deetz approach to archaeology and that of the New Archaeologists and their derivatives who began with deductive thought and spun a fabric of data analysis of quanta that emerged as processual and post-processual meditations on how archaeologists think. Thus method and theory was mystified in jargon that denied access to the uninformed—uninformed, that is about the jargon. On the other hand, Deetz went after clarity and simplification on the premise that the best test of the archaeologist's prose was if an intelligent layman could understand it. So, he tested his power of inductive logic worked from the data outwards, as Yentch puts it, in his enormously popular *Invitation to Archaeology* (1967) and *In Small Things Forgotten* (1977) which together sold half a million copies, proving that logic and clarity pay handsomely in archaeology. In testing his verbal clarity, Deetz tried out passages of his books on growing children. If they got it, so could the student and lay reader alike, undismayed by jargon and mystery of pedantry. This is not to say that Deetz has not demanded exhaustive familiarity with artifacts, their identities and dates from his students, as well as a recognition of the value of historical studies. And in his course, Deetz moved from the first texts he used—Cotter's *Archaeological Excavations at Jamestown, Virginia* and Noël Hume's *Here Lies Virginia*—back in 1963 to Larkin's *The Reshaping Everyday Life 1790-1840*, which was published in 1988.

The essays are grouped into eight parts and 21 chapters. Part I: "Background", introduces the Deetzschrift and its subject in the first two chapters. Part II: "The Spirit of the Place", gets into the Deetz mood with a look at fundamentals. In Chapter 3 Dell Upton inhales deeply of "The City as Material Culture (Philadelphia)", and adds an olfactory dimension to material culture, and other little-noted associations as well. In Chapter 4 Adrian and Mary Praetzelis look behind the Victorian façade of Early Sacramento and view the gentrification symbols generated from the rapacious frontier gold rush beginnings of California's capitol. Leslie C. Stewart-Abemathy in Chapter 5 applies current buzz-words to the half-century duration of an Ozark farmstead before WW I, and comes up with the not-surprising evidence that "industrial goods were purchased routinely"; moreover, it is stated, "It was also contemporary with the modernist reactions of Picasso, Joyce, and others who sought to express through art the dehumanization and alienation associated with industrial culture." Oh, come on! Deetz could have said it in a page and a half, including soliloquy, if any.

On the other hand, William Kelso speaks with impressive authority in Chapter 6, dealing with "Big Things Remembered" and 'the Impact of Common Sense'. Deetz does, indeed, go for the big things, conceptually, in archaeology, while noting how little things are forgotten, and the base for his cultural-theoretical patterns was New England, and a specific part of New England, at that, where he perceived medieval housing and taste in artifacts., especially tombstones, giving way to Georgian and Federal. Kelso notes that Deetz only suggested that a like pattern might apply elsewhere on the Atlantic seaboard, and awaited research to produce evidence. Kelso finds that the New England pattern did not apply to Anglo-Virginian taste which offered its own distinctive pattern in earthfast houses, brick building, and other manifestations of taste in material culture.

Part III, "Seeing Through the Stones", offers two chapters of gravestone analyses by Edwin Dethlefsen and Ian W. Brown. The late partner of Deetz in the famous New England gravestone studies. Dethlefsen presents his last observations on the topic here, perceiving a relevance between "chaotic turbulence in material culture" and the "fractal dimensioning of archaeology, itself a cultural phenomenon, new spinning off specialities in every direction. Brown, however, is content to reflect on "stacked leaves" patterns on rectangular tombstone faces at the turn of the 18th century, and let it go at that,

Part IV, "History from the Bottom Up", deals with the revisionist role of historical archaeology developed by Deetz when he found that his implicit assumptions based on Anglo-American sites did not pan out at the Afro-American Parting Ways site in the 1970s. Larry McKee continues the search for African cultural clues in slave cabin sites in 19th century Virginia, and notes how slaves manipulated African cultural entities to maintain some identity and link to the homeland. As for the plantation owners, they prospered

best from healthy slaves, and most took precautions to maintain decent structures and sanitation on their property.

Chapter 10, "Fathers and Daughters: Land Ownership, Kinship Structure, and Social Space in Old Cahawba", by Linda Derry has something to say about the assumption by historical archaeologists that individuals used their possessions to transmit messages about ethnic or economic affiliation. Derry turns this upside down by showing that community and kinship ties and their obligations are overlooked, even when they are reflected in material goods. Antebellum Cahawba, cotton rich frontier capitol of Alabama, yielded its whole corpus of census data, legal records, diaries, newspaper accounts, and living memories to a painstaking computerized "record stripping". The result was the discovery of a kinship network held together by the women whose maiden names are lost in superficial data searches. The conclusion was that researchers of the old South had better do more than use artifacts, static dating tools, and find out just why fine china tea sets traveled around with the wives who owned them.

An excellent insight into the archaeology of music in 18th century Annapolis, Maryland is provided by a trio led by Mark Leone, making the point, as Deetz has that music is a code of a cultural concept of order. As such it is an artifact that illuminates hierarchical gradations of ability not necessarily economic or ethnic. No.11 is one of the more creative chapters in the book.

Part V, "Books, Food, and Summer Rain" begins with a nifty brief introduction linking Deetz the inveterate reader, appreciative and analytical student of the only animal that cooks, to Deetz the archaeologist. Then, in Chapter 12 Faith Harrington proceeds to the cultural landscape of New England fisheries, where fisherfolk enjoyed a varied diet beyond fish. In Chapter 13, Joanne Bowen has an in-depth look at urban household faunal remains, showing how assumptions of economic and ethnic patterns in butchering and meat consumption can be dead wrong when tested against 18th and 19th century Massachusetts examples, where Afro-American and comfortable Anglo-American consumption as quite similar—because each was limited to what the market offered. Chapter 14 finds Yentsch discoursing on Black and Amerindian fishing and "Southern Myth". She presents a rhapsody of African and American historical references to slave and aboriginal fishing, with a maximum of recorded data and a minimum of the so far scanty archaeological contents. She concludes that the Anglo masters were quick to avail themselves of slave and aboriginal fishing techniques that worked, catching fish being the human passion it has customarily been through the ages.

Part VI, "Myth, Legend, and Folk History" leads off with William Simmons considering in Chapter 15 "Large Things Remembered: Southern New England Indian Legends of Colonial Encounters" which ferret out historical glimpse of what the aborigines saw when the Europeans appeared, and how legends joined myths. In Chapter 16 Kathleen Bragdon pursued further the collective memory and dynamics of change, showing how the Pilgrim myth ended up being penetrated by archaeological and historical revision under Deetz' perceptive eye. Chapter 17 "Haunted by the Pilgrims", finds James Baker offering a neat analysis of the origin and power of the Pilgrim myth as propounded in the 19th century, with its Thanksgiving dinner trappings and festival by the first Plymouth Plantation, as contrasted with the archaeological/historical soundness of the Deetz revision by means of "living history" demonstration, beginning in the 1970s. However archaeological overkill in bucking the myth all the way ended in a certain slipping back into it on popular demand, showing that old myths neither die nor completely fade away—they are re-defined.

Part VII, "Recapturing Mind". In Chapter 18, Carmel Schrire, working under Deetz' aegis in a 17th century Cape outpost where the Dutch mistook both ecology and the Hottentots and blundered along despite their problems, finds all testified in the archives and verified in the archaeological record. Martin Hall follows suit in the next chapter, "Small Things and the Mobile, Conflictual Fusion and Power, Fear, and Desire", going a bit overboard about the hierarchy of privy seats in William Byrd's Tidewater, Virginia, Westover mansion—an arrangement governed, he says, by the imperium of place, when the reader may note that the 5 seats are arranged about a fireplace for the comfort of the occupants in the chilly Virginia winters—depending, no doubt, on who got there first. (Archaeologists don't always grab the gold ring on the research carousel.) But useful archaeological evidence is linked to historical food accounts for the South African scene which Hall sees rife with hierarchal inferences from material culture.

Perhaps the most interesting chapters are the last two. In Chapter 20, Rhys Isaac treats "Imagination and Material Culture: The Enlightenment on a Mid-18th-century Virginia Plantation", in which he examined the urge by plantation innovator Landon Carter to revolutionize the efficiency of his enterprise by devising time and labor saving strategies and mechanical devices. The leap for mankind from a chick incubating device to the supreme elaboration of a space station is noted for the philosophically inclined. So archaeology anticipates the future of human cultural elaboration—an extension of the mode presented in Deetz' studies of the archaeology of early American life. In a shrewd look at "Divining the Future: The Toys of Star Wars", the final Chapter 21, Daniel W. Ingersoll *et al* bring the myth of the computer age up-to-date, with a look at the adult and juvenile children of the final decade of the 20th century and their baggage of bloodless mayhem and boundless powers. The future prepares the archaeology of the past, as it always has.

This is a good book and a worthy tribute to Jim Deetz. It is, however, an implicit warning to all authors of potentially expensive books to secure grant money for subventing publication costs before dealing with a publisher. Books like this are aimed mainly for libraries (This one has a nice plastic library binding—no dust jacket), since few other buyers are going to plunk down \$87.00, including postage, for an ordered copy, there being virtually no bookstores that will stock it.

For all the pains the editors took with the volume, and they were many and worthy, the few errors appear in the sections most familiar to them. Cotter taught the first official course in historical archaeology at Pennsylvania in 1960, not 1958, and Ross Montgomery was a Los Angeles architect who specialized in Spanish colonial church structure conservation—not a historian, when he wrote Franciscan Awatovi with J.O. Brew and Watson Smith. Brew did his own historical research of Awatovi, Montgomery knew the Spanish aspect.

And where Pinky Harrington appears in the bibliographical references, he's John instead of Jean. Nothing to get pick a bout, lord knows, in a 3-pound book.

And I found my mind broadened. Carmel Schrire says "skinflint" was originally someone who retouched worn gunflints for reuse. I didn't know that. I'll bet you didn't either. (Webster's Unabridged doesn't).

The Origin of Modern Humans and the Impact of Chronometric Dating, edited by M. J. Aitken, C. B. Stringer, and P. A. Mellars, Princeton University Press, Princeton. 1993. Illustrations, bibliography, 248 pages. \$39.50 (Cloth)

by

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The origin of humans, whether at the "point" of divergence from other primates, from other hominid species, or within the last several hundred thousand years, are very active and contested areas of paleoanthropological research. The Aitken *et al.* volume presents 14 papers and an overview of the evidence for and against the emergence of modern humans with a focus on the dating evidence. The papers were originally presented in a 1987 symposium in England and were previously published in two special journal issues.

Two different arguments exist concerning the emergence of modern humans. The *multiregional evolution* model suggests that modern humans arose in several places due to parallel, in-place evolution with regular interbreeding to maintain a similar pattern of evolutionary development. Modern human populations are thus derived from local populations that existed in the same region for upwards of 1,000,000 years. The *out-of-Africa* (sub-Saharan) model suggests that modern humans arose no more than 200,000 years ago in Africa and then spread out from their African origin to populate the Old World and much more recently, the New World. Contact between Neanderthals and modern humans occurred in places such as the Middle East and Europe.

The need for reliable dating techniques is critical for assessing the validity of either of these models. Radiocarbon dating commonly used in archaeology to establish time ranges for human use of a site and region, is not useful for the full time range, 30,000 to 200,000, years ago within which modern humans arose. The search for and use of dating methods that are precise and accurate within this time range are the themes common to all the chapters of the book.

The book is logically, but not in actuality, divided into three parts. The first part presents absolute dating evidence for the origins of modern humans (Schwarcz; Aitken and Valladas; Schwarcz and Grün; Miller *et al.*). The presentations are quite detailed about the methods used to obtain the dates discussed. The second part discusses recent work using human DNA (Mountain *et al.*; Stoneking *et al.*). The concluding part discusses archaeological and/or skeletal evidence for the origins of modern humans (Deacon; Hublin; Bar-Yosef; Clark; Stringer; Mellars, Brown; Smith).

In part one Schwarcz describes how calcite formations, formed through the slow movement of water such as stalagmites and travertines, are useful for determining the human occupation of a site through examination of the ratio of several isotopes of uranium contained in the calcite deposits. A new technique, thermal ionization mass spectrometry (TIMS), can count individual atoms of uranium isotopes instead of counting the decay particles emitted by these isotopes. The TIMS is an order of magnitude more precise than counting decay particles and can be performed on very small samples. Places with geologic deposits formed by running water and used by humans during the last several hundred thousand years occur in Europe, Asia, and Africa. Uranium series dating of these places can provide highly precise chronological information not available through the use of other dating methods.

Aitken and Valladas's chapter summarizes the use of thermoluminescence dating on burnt flint from the site of Qafzeh, Israel; Schwarcz and Grün discuss electron spin resonance on human tooth enamel; and Miller *et al.* discuss the application of amino acid racemization to ostrich egg shells. Miller's *et al.* chapter suffers from too much detail about the chemical analyses performed and presumes a very specialized knowledge that, most likely, is not possessed by the majority of readers.

In part two Mountain *et al.* and Stoneking *et al.* present evidence derived from different sources of DNA to support the *out-of-Africa* model. Mountain *et al.* combine nuclear DNA polymorphism with non-genetic information such as archaeology and paleoanthropology to discuss genetic distances between eight human populations. Separation of these populations begins with a split between Africans and non-Africans. The DNA evidence by itself provides no way to date the split: using archaeological evidence, Mountain *et al.* suggest a separation at 100,000 years ago; however, they do not present the archaeological evidence to support their separation date.