

Between Dirt and Discussion

Methods, Methodology, and Interpretation
in Historical Archaeology

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Methods, Methodology, and Interpretation in Historical Archaeology

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PREFACE

This volume originated with a session entitled “Methodology in Historical Archaeology: Current Research and Critical Perspectives” organized for the 2004 meetings of the Society for Historical Archaeology in Saint Louis, Missouri. We would like to thank the original participants in that session, many of whom graciously elaborated their papers as chapters for this volume. Adrian Praetzellis and Fraser Neiman were thoughtful discussants in the session and we thank them for their insightful comments, which prompted some of our thinking on the need for a critical revisiting of methodology within historical archaeology. We all use methods, of course, but few of us question the “whys” and “hows” often enough.

We hope that the readers of this volume glean a sense of the same renewed appreciation for complexities and potentialities of materials and materiality that we have in working on the book and thinking through the issue of methodology and its curious status within the institutional structures of archaeology. Indeed, we offer no definitive answers, but hopefully a renewed perspective on “materiality,” both as the “stuff” we excavate and the archaeological record we generate and revisit as we weave structures of narrative about the past.

We also owe a debt of gratitude to many individuals for intellectual influence as well as institutional and moral support during the preparation of this volume.

Steve Archer would like to thank the entire staff of Colonial Williamsburg’s Department of Archaeological Research, but particularly Marley Brown, Andy Edwards, and Joanne Bowen for continuous support of my own work, and for supporting methodological innovation and experimentation generally at Colonial Williamsburg. Jim Bowers and Tony Herrmann are terrific volunteers whose enthusiastic dedication to the Environmental Archaeology labs at Colonial Williamsburg greatly helped in

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Chapter 1

INTRODUCTION

Considering methods and methodology in historical archaeology

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“There is no right way of digging, but there are plenty of wrong ways.”

-Sir Mortimer Wheeler (1954:2)

In trying to address the historical roots and current trends concerning methods and methodology in historical archaeology, we were quickly struck by a lack of discussion in either the literature or even colloquially amongst practitioners of the discipline. Historical archaeology has been dominated by theoretical debates (e.g., Funari et al., 1999; Leone, 1995; Leone et al., 1987; McGuire and Wurst, 2002; Wilkie and Bartoy, 2000) and debates concerning disciplinary identity (e.g., Cotter, 1978 [1958]; Fontana, 1965; Griffin, 1978 [1958]; Harrington, 1955; Noël Hume, 1969; Schuyler, 1970) with little attention to the actual methods and methodology through which we create the data upon which interpretations are built. Theoretical debates endlessly probe the prevailing philosophical concepts that guide how we conceptualize the machinations of the lived past and the relationship of said past to the interpretive present (e.g., Binford, 1988a, 1988b; Hodder, 1985,

1986, 1991). Yet, few discussions specifically focus on the ways in which we generate “data” from “dirt.”

In the current social climate of archaeology, it seems preposterous to even conceive of a heated panel discussion at a professional conference concerning basic analytic and field methods and methodology. The passionate debates over typology by Ford and Spaulding (Ford, 1952, 1954a, 1954b, 1954c; Spaulding, 1953a, 1953b, 1954a, 1954b) or the rabid pursuit of ideal, elucidating sampling strategies by Watson, LeBlanc, and Redman (1971, 1984) and Redman (1974) are treated as the growing pains of a developing discipline (now, presumably, happily resolved) and are summarily relegated to historical moments to be read in a course on the history of archaeology. Yet, all of the routine and comparatively facile steps through which we generate data provide the essential support for our “grander” meta-narratives of past human life. In the age of phenomenology, object-subject discourse, and deconstruction, these steps have become the mundane, unquestioned, and “boring” mechanics of archaeology. We uncritically use familiar techniques learned in field schools or early in a career that have simply become the unavoidable means to an end, replicated with little alteration from project to project, a convenient toolkit that produces reliable and predictable results. However, we should remember the old aphorism: “When the only tool you have is a hammer, every problem looks like a nail.”

This volume was conceived to revisit the notions that guide our core understanding of data generation in historical archaeology. We believe that innovation in archaeology comes not simply from new theoretical concepts applied to “end product” evidence, but rather through a reinvigoration of critical attention paid to the entire archaeological process. Archaeological discussions often begin as if “data” were established *de facto* and somehow independent of the research designs and analytical choices that produce them. Our intention is to cast a critical eye at the fundamental question in archaeological knowledge production: How do we create the data that we interpret?

One of the enduring legacies of the post-processual critique, is the general disciplinary agreement that archaeological “data” do not exist independently in the ground (Patrik, 1985; Wylie, 1986). Data are the result of the archaeologists’ choices in research design, materials collected, attributes of such material deemed significant, accepted professional standards of recording, specialists’ analytical methods, and so forth. Any individual data set could be “parsed,” ignored, or amplified in the creation of the evidentiary “skeleton” on which we hang interpretation. Yet, only when such research choices are radically outside the conventional norms are these

aspects of the archaeological process considered worthy of debate, or even note.

The archaeological process is described in most texts, and enshrined in our pedagogical practices (for a classic introductory example, see Sharer and Ashmore, 2003: 156) as an idealized model: 1) Formulation of a research question; 2) Development of a research design; 3) Excavation; 4) Analysis; and, 5) Publication. While this structure fits an archetypal concept of how “archaeology is done,” it is actually something of a fabrication. Archaeologists are usually positioned somewhere within the process rather than at the idealized, blank-slate beginning. The archaeological process is really a continuum in which archaeologists are continually working outward, backward, and forward to new ends. More often than not, archaeologists are faced with sites or collections that have been partially or wholly excavated by one or many other archaeologists. Most of the contributors to this volume start from “within” the process. It is precisely this lack of a controlled linear research sequence that has led us to question our traditional assumptions about the relationship between material, data, and interpretation.

In this volume, we intend to draw a distinction between *methods* and *methodology*. *Methods*, at their core, are “the way we do the things we do.” These are the “hows” of data generation. In this sense, the “Harris Matrix” (Harris, 1979) could be seen simply as an innovation in *method*. It is a novel and useful means of recording and representing the stratigraphic dimensions of archaeological sites, improving by expansion the limitations of traditional profile drawings. Indeed, *methods* do draw critical attention in historical archaeology, albeit in a proscribed domain of discourse and usually prior to publication. Only rarely in the years that have passed since the early enthusiasm of processual archaeology (e.g., Watson, LeBlanc, and Redman, 1971, 1984; Flannery, 1976; South 1977; Binford, 1981) are substantive critiques of methods voiced in print. For the processual archaeologists, method was a clear epistemological issue; today, the linkage between method and knowledge is strangely muted, while issues of agency, identity, and political aspects of archaeological knowledge production are (quite properly) fertile ground for discussion. In our experience, discussions of methods in the twenty-first century are confined to impromptu on-site debates or other types of discussions at varying levels of formality. Essentially, methods are viewed in binary form: they either support or do not support the research aims or conclusions of the researcher. Because data are seen as “theory-laden,” somehow we have missed an opportunity to refine our material inferences, through method, to be laden with *better* theory.

In contrast, *methodology* is the study and critical evaluation of methods; the means of linking method with theory; the “whys” of data creation. The “Harris Matrix,” as an innovative recording method, was developed from a

critique of traditional methods of interpreting and representing archaeological stratigraphy. While the “Harris Matrix” did not fundamentally modify the initial theoretical aim behind its creation, namely, the primacy of understanding the temporal sequence of a series of deposits, Harris (1979) did make a significant contribution to methodology in his recognition of previously unrecorded surfaces and interfaces within a deposit. The definition of surfaces and interfaces changed how archaeologists interpret and represent archaeological stratigraphy; engaging with, in essence, a new correlative theory of the materiality of the ground. It is testament to the current lack of debate about methods and methodology that while many archaeologists have adopted the use of the “Harris Matrix” as a recording system, few archaeologists are conversant with the most innovative methodological concepts that underlie its creation. Many archaeologists use the “Harris Matrix” as a slightly modified, albeit written, version of the traditional soil profile. However, as Harris demonstrates in this volume (Chapter 7), the primary contribution of his system was meant to be methodological and not merely methodical.

To further highlight the distinction between methods and methodology, we would like to offer a hypothetical example with respect to stratigraphy. A *methodological* innovation with respect to stratigraphy would perhaps involve the re-evaluation of individual stratigraphic deposits for new information in addition to, and perhaps decoupled from, the temporal sequence of their deposition. For example, chemical, environmental, or microstructural aspects of deposition may provide additional data potential, research questions, or interpretations beyond a mere temporal sequence. In a given circumstance, the differences in microstructure between two deposits may be more significant and informative than the temporal sequence (e.g., Archer, Bartoy, and Pearson, Chapter 5). Yet, our disciplinary tradition always gives primacy to sequence. If a temporal relationship between two deposits cannot be determined stratigraphically (a common occurrence), those two deposits are immediately demoted to a lower status of interpretive significance without exploring alternate potentials. This is an example of a “tyranny of the status quo,” an inertia in archaeological thinking that is difficult to overcome.

We believe that archaeologists must undertake meaningful and substantive discussions of methods and methodology, working towards increased transparency of the analytical processes and decisions that underlie our explanations and interpretations. Methods and methodology must be evaluated in any discussion of the archaeological process. Critical attention to methods can exceed the simplistic goals of substantiating or refuting archaeological interpretation. Indeed, methodology can *guide* archaeological

interpretation into more potentially productive avenues than the discipline has currently realized.

All archaeologists have heard familiar critiques about insufficient sample sizes, poor underlying assumptions about technical data sets, contrary competing evidence, or other interpretive problems that “invalidate” their conclusions. Unfortunately, this is often where the discussion seems to end. While we are not apologists for the use of bad data, we feel that attention paid to the process of *data creation* cannot only circumvent poor interpretation, but also assist in guiding archaeological data (by its very nature, incomplete and often statistically unstable in a “hard science” sense) to more productive questions. Essentially, it is folly to repeatedly throw “data” at theory when the data is fundamentally incapable of supporting the theory in question in any legitimate sense.

The core of a more critical and refined approach to methods should be the essential question:

“What *drives* the theoretical and interpretive aims of archaeological reportage”?

To answer this question, we have found it useful to return to the core of what makes archaeology *archaeology*, rather than history, literary criticism, or philosophy. That is, the *material evidence* of the past. We propose that theory-driven archaeology, in its worst sense, (i.e., archaeology that is crafted in order to support a particular theoretical position or interpretation of the past) leads to narrowness in interpretation, circularity in argument, and obfuscation, rather than elucidation, of the lived past. Although theoretical innovation is undoubtedly valuable, we cannot shoehorn archaeological resources, unique and nonrenewable, to the sole service of theoretical agendas. Rather, we should increase our ability to let the potentialities of the site, the collection, or the sample guide and generate research design, excavation, analysis, and theoretical interpretation.

With the increased “development” of the modern world, archaeological resources are quickly becoming, the irony duly noted, “things of the past,” in that they will no longer exist. Although present human activity continues to create new archaeological sites, the pace at which sites are being destroyed bodes ill for archaeologists of the future. We must keep in mind that each time an archaeologist begins research on a site that is not threatened, archaeology also becomes part of this problem. We do destroy carefully, or “transform” (e.g., Lucas, 2001), but such transformations are still in so many aspects, irreversible.

Due to the endangered nature of archaeological resources, it is our belief that an archaeologist’s primary ethical responsibility is to the resource’s potentials for research, not only of the present, but those not yet imagined, as opposed to the theoretical agenda of the moment. A responsible archaeology

includes a willingness to let materiality drive interpretation. With this belief, we still advocate that theory in archaeology can innovate and enhance our interpretations and understandings of the past. However, we argue that theories, be they processual, post-modern or otherwise, must be formulated and assessed for their ability to expand the potentialities of the material record of the past. We should not search out resources that can be molded to a given theory. Instead, we should search out theories that better help us to understand and interpret the often ambiguous archaeological record.

In advocating a willingness to allow materiality to drive interpretation, we do not wish to create a false distinction between “theory-driven” and “data-driven” archaeology. In practice, theory and data are situated in a recursive relationship. However, given that most archaeologists are trained within an anthropological tradition, the theoretical agenda often will assume the lead even in cases where methodology suggests more productive interpretive potential for a resource. In essence, we are arguing for more inductive approaches that include a willingness to confront the institutional structures that pressure archaeologists towards the relative “safety” of social theory, where arguments are based on interpretation or philosophical positioning that have more nebulous boundaries of evidential constraint. We encourage evaluation of archaeological resources through any number of lenses, but at the same time, rigorously pursuing, through the institutional structures at our disposal, those that make the most of the core resources of our field, the material evidence of the past. In reasserting *material* and our methodological approaches to material on an equal footing with abstract theory, we can only improve the archaeological reportage that results from our labors.

In this volume, we have collected papers from scholars who have not followed the archetypal linear sequence of the “traditional” archaeological process. While the contributors address a range of methodological considerations, they each show the potentialities of an archaeology driven by materiality. In almost every instance, the contributors have derived their data from sources outside of the mainstream of novel academic excavations. Their data are derived from historical archives, existing collections, re-evaluations of past excavations, and testing and salvage excavations of threatened sites. As each contributor struggled with their materials, they created innovative approaches that led to opportunities to pose heretofore unasked questions that enhance our understanding of the lived past.

The contributions in this volume are necessarily but a small boat on the “endless sea” that awaits a methodologically informed historical archaeology. Within our circumscribed niche, concerned with frequently overlapping research areas (the lower Chesapeake) and materials (clay pipes aplenty!), we are attempting to show the possibilities of realignment when

method informs theory. Some authors use case studies that explore the relationship between novel methods and research issues, while others address topical and theoretical concerns about the relationship between methods and interpretation. We have included authors who use the very latest technologies of DNA recovery (Dixon, Chapter 4) and Geographic Information Systems (GIS) (Madry, Chapter 3), as well as authors who continue to grapple with improving methods that have been basic to archaeology since its inception, such as typology (Agbe-Davies, Chapter 6), interdisciplinary collaboration (Clark and Corbett, Chapter 8) and stratigraphic recording (Harris, Chapter 7). The willingness to both experiment with new methods (Archer, Bartoy, and Pearson, Chapter 5; Dixon, Chapter 4; Madry, Chapter 3; Vince and Peacey, Chapter 2) and re-evaluate traditional methods (Agbe-Davies, Chapter 6; Bartoy, Holson, and Ballard, Chapter 11; Brown and Edwards, Chapter 9; Clark and Corbett, Chapter 8; Harris, Chapter 7; Kostro, Chapter 10) is crucial to the growth of archaeology.

Our intention is not to provide definitive or authoritative statements on the “correctness” of methodological choices, but rather to increase the transparency of our analytical processes and the means to judiciously evaluate them as part of archaeological discourse. This volume represents a holistic approach to archaeological methodology “between dirt and discussion.” The contributions to this volume primarily use case studies to explore the intersections between methodology and interpretation. In this way, each chapter represents an exploration of a given method and is a small beacon in the darkness to show what serious attention to method *can* accomplish. We hope this emphasis on explanation and application will increase dialogues beyond the individual contribution and encourage future novel applications and critical reappraisals of a variety of archaeological methods. It is at this intersection between “dirt” and “discussion” that we see so much potential for a reinvigorated archaeology.

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Chapter 2

PIPEMAKERS AND THEIR WORKSHOPS

The use of geochemical analysis in the study of the clay tobacco pipe industry

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Abstract: The smoking of tobacco was introduced into the British Isles in the late sixteenth century and the production of the clay pipes in which it was smoked was initially a London monopoly. However, in less than a century, clay tobacco pipes were being produced in a network of centers spread across the whole country. These centers range from major cities down to small market towns and rural settlements. Our interest in this paper is to consider the supply of pipeclay. We describe the natural occurrence of pipeclay in the British Isles, some of the evidence for its exploitation and distribution, and the two main analytical techniques used to characterize it. Eventually, we hope to investigate the use of clay on a macro-scale, to reconstruct the routes over which pipeclay was supplied to this network, and on a micro-scale, to help reconstruct the way in which pipemakers worked. At present, however, we have shown the viability of our methodology and produced some initial results. We use as our main example the Pipe Aston Project, run by Allan Peacey in northeast Herefordshire. Finally, we discuss ways in which this study could progress.

Key words: Clay tobacco pipes; chemical analysis; Pipe Aston, Herefordshire, United Kingdom.

1. THE INTRODUCTION OF TOBACCO PIPES TO ENGLAND

Before contact with the Americas in the late fifteenth century, there was no tradition of smoking in Europe. There was not even a concept of “smoking” and initially the term used was to “drink” tobacco. During the sixteenth century, however, tobacco was imported and grown in Europe and the habit of smoking in a clay pipe was well established. To understand something of the background of the use of the pipe, we should consider the social context of its spread.

The first Europeans to smoke tobacco were sailors and adventurers who had observed and then adopted smoking. Subsequently, there were probably three main forces at play: its novelty and exotic nature; the medicinal benefits of tobacco (it was noted as an appetite suppressor); and, the social status of its earliest users (courtiers).

The progress of tobacco into England, as with the rest of Europe, is shrouded in uncertainty. At best, the documents only provide cameos on which to form a judgment. English sailors under the command of Hawkins in 1565 observed the native Floridians taking smoke through a pipe consisting of a cane and earthen cup, and recorded that the French, who had already established a colony there, also practiced the smoking habit (Hakluyt, 1589:47). In the face of this experience, it seems unlikely that some of the English sailors did not experiment also. Only six years later, in 1571, attempts were being made to cultivate tobacco in England (MacInnes, 1926:75, quoting Lobelius, 1576). If Hawkins’ men brought pipes into England, they would have been of the stub-stemmed type that they observed in Florida. The pipe from Cambridge Backs illustrated by Oswald, conforming to this general type is atypical (Oswald, 1975:35). From the outset, English pipes had a bowl and stem formed as one.

After an initial expedition in 1584, Sir Walter Raleigh sponsored his second voyage to Virginia in 1585 with the intention of founding a permanent settlement. Thomas Hariot, mathematician, astronomer and tutor to Sir Walter Raleigh (Stephen and Lee, 1917:1321-1323), was a member of this expedition. In his *Briefe and true report of the new found land of Virginia*, he provides a reliable description of native tobacco culture and smoking habits (Hariot, 1588). Significantly, he writes “they use to take the fume or smoke thereof by sucking it through pipes made of claie ... We our selves during the time we were there used to suck it after their maner, as also since our returne” (Ibid.). An engraving by De Bry after a watercolor by White (the recording artist of the expedition) shows two Native Americans sitting on a mat surrounded by various foodstuffs and artifacts. Amongst these artifacts is a tobacco pipe of the angular elbow form still popular in the

second half of the seventeenth century and forming a significant part of the production of Emmanuel Drue of Swancove, Maryland, whose production site has been investigated by Luckenbach et al. (2002:46-63). Pipes of this form are likely to have been the model for subsequent British clay tobacco pipe production.

By 1598, Paul Hentzner (1598:4), a visitor to England, records the constant custom of smoking in public places and notes that:

The English – have pipes on purpose made of clay into the farther end of which they put the herb, and putting fire to it draw the smoak into their mouthe.

The first suggestion that these English pipes were modeled on American examples appeared in 1605. De l'Ecluse (1605) added a footnote to his abridged translation of Monardes' *Las Indias Occidentales*, based on Hariot's account (Mackenzie, 1957:81):

In the year 1586 ... they found that the Inhabitants did frequently use some Pipes made of clay, to draw forth the fume of Tobacco leaves set on fire; which grew amongst them in great quantity, or rather to drink it down, to preserve their health. The English returning from thence (Virginy), brought the like pipes with them, to drink the smoke of Tobacco; and since that time the use of drinking Tobacco hath so much prevailed all England over, especially amongst the Courtiers, that they have caused many such like Pipes to be made to drink Tobacco with.

In England, it seems probable that pipes were being made in quantity by 1590, a supposition supported by Oswald's statement that pipes from deposits dating to the last decade of the sixteenth century are mold made (Oswald, 1975:5). The basic form of the pipe, exclusive use of white clay and the use of a two-piece mold to produce it in enormous quantities, were established at this time and both were retained with only minor alteration into the twentieth century.

2. PIPECLAY

In England, the term "pipeclay" has become synonymous with the white-firing, Tertiary ball clays of southern England and clays with similar characteristics. As luck would have it, all English-made clay pipes, from the late sixteenth century to the nineteenth century, were made from such clays. However, in northern America and the Caribbean, this was not the case, since some were made from red-firing clays, leading to the confusing but