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Honoring Ambiguity/Problematizing Certitude

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Abstract In this paper I argue that the practice of archaeology over-emphasizes and over-rewards unambiguous certainty in our interpretations, even though our conclusions are usually drawn from necessarily partial, underdetermined and complex evidence. I argue that full or partial erasure of ambiguity from our data and from our interpretive assertions does not serve the long-term interests of the discipline; that a feminist practice aimed at more nuanced understandings of the past and open to more subtle, multivalenced notions of reality, must accept ambiguity as a central feature of archaeological interpretation. After I review familiar strategies that are used to obscure troubling areas of uncertainty in archaeology, I urge feminist practice to resist employing these "mechanisms of closure" in our work. It is only by openly recognizing and preserving the ambiguity that resides in messy data arrangements today that we stand any hope of fuller and richer understandings in the future.

Keywords Feminist practice · Theory · Epistemology · Ambiguity

Imagine that
the job were
so delicate
that you could
seldom—almost
never—remember
it. Impossible
work, really.
Like placing

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pebbles exactly
where they were
already. The steadiness it
takes...and
to what end?
It's so easy
to forget again.
-Kay Ryan, *The New Yorker* (January 31, 2000)

Reading my colleagues' work, I am often troubled by their clear assertions of knowledge gained from their research undertakings while at the same time I am puzzled that there is so little discussion about the uncertainty that accompanies archaeological research at every step. Even when our reports are qualified by degrees of probability and tempered by calls for more data, it is *certainty* that fills the literature and characterizes how archaeological results are reported in our grant proposals, conference papers, journal articles, and in the popular press: "...two distinct technological traditions shaped the initial Archaic record (Sassaman 1996:64); "...as many as 14 mm of compact bone were removed from the anterior face [of this tool]" (Dumbar and Webb 1996:333); "The four radiocarbon ages listed at the end of table 5.4 are unacceptable based on stratigraphic and/or other evidence and are not considered further..." (Meltzer 2006:136), as a few arbitrarily chosen examples. Why is there so little discussion devoted to the other matter that matters so much: that every phase and feature of archaeological research requires archaeologists to make difficult or even impossible interpretive decisions on the basis of incomplete, unfamiliar, indeterminate or bewilderingly complex evidence? Most often, the confusion, uncertainty and ambiguity are left out of our conclusions, overlooked, ignored, forgotten or erased.

I introduce this topic—ambiguity—as a fundamental feminist concern, one that has underlain feminist archaeology from its inception although it has been slow to be named. Feminist practice has generally aligned itself on the side of greater reflexivity in knowledge production, encouraging self-awareness both about how we reach conclusions and about the broader relations between knowledge and knowledge-makers (for a recent example, see Sandlin and Bey 2006). Many feminists have embraced the "situated-ness" of knowledge (Haraway 1988; Conkey 2005); many have argued for attending to relational understandings, for "complicating" causation, and for using multiple lines of evidence as constitutive of past realities. Most generally, feminist archaeology has invested heavily in questioning the authority of science and other universalizing epistemic structures (Harding 1998), bearing down on the constructedness of paradigmatic knowledge (Gero 1996; Wylie 2000, 2006). Thus the archaeological discussion that follows emerges out of a large literature related to feminist critique/s of science and a healthy, satisfying tradition of preserving interpretative space.

Perhaps a feminist reluctance to assert certitude seems misplaced in archaeology since new knowledge is notoriously difficult to guarantee and a high degree of uncertainty surrounds every phase of archaeological work. Would feminists be right to question these hard-won facts; would this be fair or productive? In fact, what I argue here is that it is precisely *because* the achieving of unambiguous facts is so

difficult in archaeology that non-ambiguous knowledge is highly valued—probably over valued—in our discipline. The production of unambiguous facts about the past is one of the fundamental organizing objectives in today's archaeological practice and, building from unambiguous facts, we must arrive at unambiguous causes for events, unambiguous outcomes of events, unambiguous reconstructions of life ways etc. However implicit and idealized these goals of certitude, they partially define and uphold practice and policy in archaeology and underwrite the disciplinary reward system; archaeologists who can put forward unequivocal data and make uncontested claims are in an excellent position to advance the importance of their sites and their interpretive positions more emphatically, enjoy greater success in getting grants and having results published, be interviewed more often and promoted more quickly and supported more generously. The firmer our interpretative conclusions about the past (that is, the more we have unambiguously "determined"), the better archaeologists we are reckoned to be.

The rush to embrace concrete knowledge products is hardly surprising, given the context in which we live and work: the high degree of specialization in all walks of life and the tendency to embrace and not question power or authority. Suchman's (2007) or, earlier, Jasanoff's (1996) notions of the usually unacknowledged "co-production" of knowledge with the social order are directly pertinent to archaeological truth-finding: that science and the social order are produced in tandem in a "seamless integration" of rules and rule boundaries, values, priorities and specifications of social relations. In archaeology, the strategies that bolster, protect and reward *certitude* reflexively feed into and feed from a wider socio-political world where hierarchical authority is asserted by the able and the powerful; where certitude, action, determination and leadership are honored as a package of traits that make democracies strong; and where class relations follow between ranks of the more or less certain, more or less capable and more or less powerful.

I propose that the related topics of certitude and ambiguity are central to developing an explicitly feminist practice because they so directly address the culture—and the gender—of archaeological practice. I will examine how ambiguity/uncertainty/unwieldy complexity are regularly tamed, ignored, erased and redefined in our efforts to construct ever more certain conclusions. That these practices contradict the long-term archaeological interests of accumulating accurate information about the past should become clear in the course of this article. At the same time, the acceptance and preservation of ambiguous archaeological evidence strengthens one of the kingpins of a feminist practice of archaeology: to work towards an archaeology that *interrogates* the past instead of advancing conclusions as exclusively and exhaustively final and "right" (Conkey 2003, 2005; Conkey and Gero 1991, 1997; Geller and Stockett 2006; Gero 1993; Kus 2006; Meskell 2000; Spector 1993; Wylie 2006). I will urge that we resist imposing meanings on our subjects: modern, disciplinary, uniform and universalist, and move instead towards honoring (instead of erasing) the evidence that will not yield to closure. Toward these ends, I begin by examining how the *status quo* rule-bound archaeological practice eradicates ambiguity in favor of a construction of certitude: In service to whom? To what ends? And at what costs?

Let me start with two obvious points. First: I am not espousing a nihilist archaeology that deconstructs all data to unknowable, ambiguous and unrelated

observations. Archaeologists who would understand and reconstruct the past from its material remains can and have learned much from the richness of material evidence, often by employing established conventions and sometimes ingenious tools of research. Feminist practice is not well served by dismissing or devaluing significant and hard-won knowledge even as we inspect how our discipline has confronted ambiguity.

My second point is to acknowledge that the shape and scope of the archaeological ambiguity under inspection here ultimately remains under-specified and in places overly general. This is because I want to emphasize the breadth, depth and fundamental importance of this issue that I feel is at play at so many levels and in so many aspects of archaeological work, but also because the task of understanding and untangling these many levels is more than I can take on by myself. Rather, I see my observations here as a first step in an important conversation that feminists can lead, inspecting how ambiguity affects archaeological reasoning and knowledge outcomes under a variety of instances, and to assess how ambiguity is being used, denied, promoted or otherwise recognized.

With these points in mind, I now take up questions of [some] sources of ambiguity in archaeological research, both ontological and epistemological, and then consider broadly how contemporary archaeological practice routinely deals with these, in its rush to conclude.[1]

Sources of Ambiguity in Archaeological Research: The Truly Mysterious Past

The ambiguities we confront in archaeology—the many different interpretive problems that undermine firm facts—occur as overlapping and intertwined issues, at different scales and in different shapes, and here I can only introduce a few general and arbitrarily selected points of illustration. I will focus on three non-exhaustive sources of ambiguity: (a) under-determination of conclusions; (b) interpretive complexity; and (3) indeterminacy. Each of these sources of ambiguity may intercede at different levels of abstraction and generalization, from our empirical considerations of actual data, to the more interpretive "making sense of the past" where ambiguity is more consciously recognized and where we more regularly admit to speculating. I begin with some ontological issues that surround inspecting and understanding data.

Archaeological Ambiguity: Evidence as Underdetermining Interpretation

In many areas of "making sense of the data," the evidence proves to be inadequate to support the interpretive claims that archaeologists want to build on it: the evidence

[1] Clearly, issues surrounding uncertainty and ambiguity are neither restricted to archaeology nor distributed homogeneously throughout archaeology. British archaeology may suffer less from the exaggerated certitude we recognize in North America, related, perhaps, to North America's greater pretensions to archaeology as a rigorous science. Community and indigenous archaeologies are similarly tempered by a deliberate attention to alternative sensibilities and sources of knowledge. At the same time, I am reminded of a vibrant literature from computer science on such issues as representational authorship and accuracy (cf. for example Ryan 1996, and Gillings 2000).

does not fully secure or determine a unique interpretive or explanatory conclusion and is therefore considered, quite literally, "underdetermining." Underdetermined conclusions suffer from an absence of deciding factors that allow us to draw one specific and irrefutable determination, or sometimes even to choose among plausible alternative explanations.

Underdetermining evidence is not unique to archaeology; it occurs widely in science (and in life!) where there are always variables not under control or not locally visible; all knowledge can be said to be probabilistic. In science, procedures can sometimes be expanded to clarify underdetermined results, while in archaeology we can compare evidence to known historic or ethnographic instances, or use analogies or logic or imagination to further delineate determinations. But our underdetermined conclusions, as in other endeavors, have the potential to introduce ambiguity at every level of archaeological understanding, from large explanatory frameworks, to characterizations of specific archaeological "cultures," to chronological and classificatory relationships, to generalizations such as population estimates. Exact chronological relationships among data, for instance, are notoriously underdetermined, especially in the significant and intimate relations represented on occupation floors or in middens: how certain can we be that artifacts found in close spatial proximity were actually used simultaneously or even in the same occupational episode, as opposed to representing reuse or redeposition over time, within a delimited structural space (a house, a cave)? Temporal problems are compounded by not always being able to ascertain the rate of in-filling of a site, perhaps intentionally by prehistoric peoples burying an earlier occupation, or naturally, by the actions of wind, rain and erosion. The fact that ancient peoples themselves discovered and recycled objects, redepositing them in seemingly incongruous contexts, represents another class of interpretive difficulties since such artifacts may mistakenly be associated with earlier events. Open-ended interpretive possibilities in these and countless other forms confront the archaeologist as a matter of course in daily routines,[2] and regularly the ambiguity is removed from the underdetermined instance by the archaeologist justifying a single most plausible interpretation (or the one that occurs to her as most plausible), and building it into further assumptions as though no other options existed.

Archaeological Ambiguity: Data Sets as Interpretively Complex

Issues of underdetermined data are sometimes compounded by *interpretive complexity*, where archaeologists confront multiple interpretive factors or variables, each better or less well understood (and each more or less underdetermined), all simultaneously relevant to a given interpretive problem. *Interpretive* c*omplexity* involves multiple interdependent parts of a problem, the several related pieces of evidence that must each be well understood, but it also refers to how these parts might be interacting, compounded by the fact that we don't always know the nature or degree of the relationship between parts.

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[2] Issues of underdetermined conclusions raise the closely related problem of *equifinality*: that equally satisfactory interpretations can be drawn from the same observations.

A classic problem of evidential complexity is the estimation of ancient population size, based on the number of presumed coterminous residential units or on amount of floor space or on the number of grinding stones or on some other artifactual distribution (cf. Lightfoot 1994 for the American Southwest; Laughlin 1980; Liapunova 1996 for the Aleutian Islands; Emerson 1991, 1997; Milner 1986; Pauketat 2002; Young and Fowler 2000 for Cahokia). Here, an insuperably large number of interacting variables link artifact frequencies to estimates of numbers of residents or to numbers of producers and consumers. Not only are factors such as the rates of replacement for used artifacts, the spatial requirements for particular cultural behaviors, the differential preservation of artifact classes etc. all under-determined, but how these different factors interrelate is also complex and determined to greater or lesser extents by local factors. The interdependence of complex data makes many evidential encounters ambiguous because we ultimately may not be able to factor the total number of relevant variables into our interpretive accounts; they simply overwhelm practical action or decision-making. At the same time, we may not recognize all the factors that are conditioning what we see, especially when we are trying to explain circumstances in the past that are unfamiliar to us and do not easily correlate with contemporary analogs, or which are shaped by logics and sensibilities entirely alien to twenty-first century middle-class academics.

The issue of evidential complexity also creates difficulties in technical field practice. For instance complex stratigraphy may occur as many discontinuous and poorly defined levels and lenses that overlap and grade into one another across the profile of a single excavation unit, sometimes bearing little resemblance to the profiles of adjoining units and failing to conform to an overall depositional sequence that can be generalized across the entire site. Here complexity arises not so much from the difficulties of determining fully discrete elements (which is largely a matter of indeterminacy, below), but rather from the sheer number of discrete depositional episodes, each demanding its own explanatory history, each varying in many dimensions, and all being interrelated in ways that sometimes cannot be fully ascertained.

Archaeologists react to evidential complexity in different fashions, at times producing vastly simplified (Mickey Mouse) research questions, often introducing mechanisms that reduce complexity (see "Mechanisms of Closure" below), sometimes dismissing the chaos with a few well-practiced lines like: "As at many stratified middens, artifacts and faunal remains were occasionally recovered from seemingly inappropriate contexts" (Bourque 1995:24) or "Lazygut Island is not a coherent site, simply scattered artifacts found on the seafloor" (Bourque 1995:293). Seldom is the response to lay out the full confusion and poorly understood complexity in an honest open manner, even when the summary words convey that some portions of a site remained downright confusing or that absolutely no pattern could be observed in a distribution analysis.

Archaeological Ambiguity: Evidence as Indeterminate

Much archaeological data is indeterminate because it is incomplete, where if we only had *more* data, or more *complete* data, the issues we want to understand would be clarified. In these considerations, we admit to the obvious and much bewailed poor preservation of archaeological evidence (artifacts or artifact classes, ecofacts,

architectural features, etc.), recognizing that only some 5% of a prehistoric material inventory can be expected to be preserved in the archaeological "record" under most circumstances (Adavasio *et al.* 2007:178), and that the decay, deterioration and destruction of data reduce what any social scientist can say about the past, especially in comparison, say, with the evidence available in contemporary and "ethnographic" social settings. Specific pieces of material evidence may be differentially preserved, so that we arbitrarily recover some parts but not others of the whole we would study: pieces of an ancient technology may be missing their defining characteristics, or single representatives are all that survive of a larger, more inclusive and diverse class of objects, precluding accurate generalizations. Poor preservation often results in entire inventories of critical materials being missing from archaeological sites (fibers, skins, thatch, netting, basketry etc.), or entire landscapes may have vanished by the drowning of Pleistocene shorelines or the disappearance of northern winter sea-ice villages, forcing us to fill in the blanks as best we can...but also misconstruing critical, life-determining technologies (did Paleoindians use boat craft? was string technology common in the Upper Paleolithic?), and allowing us to draw faulty conclusions with great certitude.

Indeterminate data are also implied in, and compounded by, the poor preservation and/or resolution of non-artifactual data: sometimes it proves impossible to determine the precise boundaries of walls or pits, or even to decide whether we are observing a deliberately fashioned occupational feature as opposed to a something more casual. The spatial limits of activities or occupations are often no longer clear, blurred, erased or eradicated by environmental, social or historic activities that were subsequently introduced. Where trees or other vegetation have grown down through occupation levels, or animals have burrowed, or subsequent occupations have modified the terrain, the firm knowledge of some aspects of cultural behaviors is forever compromised, just as the leaching of soils may erase differences in soil color caused by different episodes of occupation, leaving an entire site without significantly differentiated soil strata to tie one part of a site to other parts. Or we may not be able to tell, despite our inspections of soil particle sizes and erosional patterns, whether the association between two elements is the result of natural or cultural depositional forces: were proximate objects used, or discarded, here together? or was one folded up next to the other by bioturbation, the lateral or vertical heavings of soil by frost, or by slumpage, or by other environmental forces?

Archaeologists continuously confront data that are indeterminate for our purposes, many times without acknowledging it, sometimes relying on interpretive conventions of practice and/or peppering our publications with phrases like "seemingly contemporaneous" or "an apparent serving vessel" or "associated artifacts" or "more data will be needed to resolve this..."

Epistemological Sources of Ambiguity

In addition to ontological sources of ambiguity, where the ambiguity lies within the archaeological evidence itself, there are also *epistemological* issues that contribute resistance to certitude, issues that arise from what researchers themselves bring to knowledge-making. At the most mundane level, issues of consistency or intra-

disciplinary variation in how archaeologists (all archaeologists, any archaeologist) read evidence, arise to caution our certitude in knowledge constructions. The use of excavation forms (Gero n.d.), for instance, explicitly acknowledges this problem at the intra- and inter-practitioner scale, and tries to correct for it by standardizing observations, while at the same time we choose to ignore what we know to be true: that our assessments of what is significant, what to record, our assigning of data to specific categories, our willingness or ability to make distinctions on any given day, these all vary tremendously from day to day, from mood to mood, from one knowledge state to another, even by a single investigator. In another context (Gero 1996) I have detailed gendered inconsistencies in field practice that make a coherent and apolitical reconstruction of the past doubtful; certainly the literature on the (in) stability of the self in the early twenty-first century makes it a strange notion that any archaeologist can be consistent in their pronouncements or interpretations over time.

Compounding the foundation of intra-subject inconstancy is a host of epistemological considerations that I will review briefly in three large, inclusive categories: reductionist starting principles, limitations of knowledge or judgment, and community values. Much has been written already about the last of these, the biases that archaeologists bring to their research from the world and from the moment in which they write, factors that must confound any sense of certitude we try to hold in our interpretive frame. In archaeology especially, very pronounced values are introduced at the level of genealogies of training, our mentors and our specific university's traditions of research, such that regional prehistories are often assembled from strikingly different research traditions and practices. Distinct paradigmatic schools also exist in different archaeological regions, making traditions and practices of Old World archaeology markedly different from New World, and Mayan archaeology different from Andean archaeology in the questions asked, the conventions followed, the degree of ambiguity tolerated, etc. (Canuto 1991). These variations make it all the more improbable that archaeologists everywhere, schooled and pointed in different directions, should know things in the same way, use technical terms or metaphors in similar positions, adopt the same standards of evidential proof, or build interpretive arguments by similar rules.

But the ambiguity we confront can also have other sources such as the limitations of our own conceptual realms: asking the wrong questions, or asking questions at the wrong scale, either because we can simply not understand what we are seeing, or because we cannot recognize important implications of what we are looking at, perhaps because the data are incomplete but also perhaps because they are linked or relevant to conditions or instances that are unfamiliar to us or fall outside our logical systems. We may not know how typical our findings are of larger social arrangements because our sample is too small; we may generalize about a characteristic way of life, when we are in fact examining a unique instance. We might be posing the wrong archaeological questions to specific data, not adequately matching data with our inquiries—e.g., examine agricultural practices at a site where much of the consumed food was grown elsewhere and traded in. One's data could be ambiguous for answering one question but could provide reasonable closure for another inquiry if we could or would think in alternative interrogatory modes. This problem has arisen often in relation to engendering the past, where we try to wring interpretations of gendered existences from sets of artifacts that were in their time

not specifically made, used or discarded by discretely gendered groups or by gendered groups that behaved differently from ones we are familiar with. Related to these sources of ambiguity is the asking of archaeological questions at the wrong scale of inquiry, the epistemological counterpart of the issue where data under-determine conclusions: “big claim” conclusions about how individuals gained power or exchanged information cannot be wrested unequivocally from simple factoids, and unambiguous specifics cannot sustain generalizations of behavior or actions supposedly undertaken by much larger numbers of individuals. How can we have the “correct” interpretive thoughts at just the right moment, uninfluenced by what we’ve just been reading, by the previous project we worked on, or by the community values of which we are a part?

Finally, we confront the fundamental epistemological issue involved with our theoretical ideas of what “original” conditions represent; I call these ‘reductionist starting principles’ as an admission that in our clamor for unambiguous results we have been forced to use simplifying assumptions about the pasts we are reconstructing. For instance, we are forced to use simplifying assumptions about time and simultaneity, about what is to count as “contemporaneous” in archaeological time. The “flat” time that we reconstruct as an archaeological moment has little to do with life that is lived as continuous and fluid, always stringing together events over space. The very goal of reconstructing “life” in the past is already compromised by conflating an unspecified amount of time into a single descriptive moment (a house “occupation” or a ceramic “period”) or when we reconstruct spatial units such as a village and assume all the houses were simultaneously occupied, or activity areas and assume people never moved their locations of production over tens or hundreds of years.

Continuing this line of inquiry, we can ask: what notions of social reality underpin an idea that archaeology can arrive at unambiguous results in its research? “Populations” of people are often conceived of as motivated for all time by similar values and responding in similar ways to timeless stimuli. We have come to settle for definitions and descriptions of social realities in the past that are dead and flat and that bear little resemblance to the complex, complicated, shifting and nuanced realities that are written of in today’s anthropological and other social accounts.

The case can be made from another angle. We can recognize that research on contemporary social systems—where ethnographers and other observers of social life presumably (ideally) have access to “all” the data, and problems of indeterminacy and underdetermination are minimized because research subjects are fully observable, recordable and open to questioning in different and complementary modes—that resolutions to many questions posed in these settings are *also* ambiguous! That is, social realities are complex and multi-causal and inter-determinant and multivocal, changing from each person’s perspective. What we must ultimately confront and contend with is the discrepancy between the social realities that we inhabit in our daily worlds and know as familiar at many levels, and the flattened, disarticulated, unidimensional and, yes, unambiguous social realities that we accept and depict and reproduce and justify in our archaeological reconstructions. What do we think that we’re describing in the reductionist, over-simplifying descriptions that we offer about the past? Is it simply a methodological

turn that we have taken to reduce past human developments to a pared-down cardboard set in which interchangeable actors walk off and on, motivated by a single need or desire to take specific unencumbered actions? Is this a disciplinary-wide, taken-for-granted wink at a social reality that we know could not possibly have existed in these simplistic terms but is the best we think we can manage? Or do we believe that prehistoric human societies effectively lacked the same degree of complexity that we exhibit today?

Contemporary Archaeological Practice *vis-à-vis* Ambiguity

To foster a feminist practice for dealing with ambiguity we begin by recognizing that the firm facts archaeologists strive for depend on using appropriate "mechanisms of closure" (Jasanoff 1996:396). In this section, I point to a series of conventionalized practices that are routinely employed to stabilize evidence and interpretation in order to produce a knowledge product that is unassailable and unambiguous.[3] These go beyond the conventions of practice that produce order in field activities to make evidence more stable (e.g., conventions attached to taking field photographs, mapping soil stain features, pedestaling artifacts, etc.; Gero 1996). Now I want to consider what I perceive of as more inclusive "strategies," widely employed by archaeologists not only to offer closure to potentially ambiguous data sets, but also to build larger, stable, certain and unequivocal knowledge products (prehistory) beyond the individual instance of ambiguity. I tentatively suggest six such strategies.

1. The first strategy is a broad and inclusive set of practices that I call *cleaning the data*; all the "cleaning" practices reduce ambiguity by dampening the variance within data and making data sets seem homogeneous. Most generally, cleaning the data involves using a set of semantically broad but conceptually limiting categories into which all evidence is accommodated. Archaeologists "clean their data" all the time by simply classifying objects: pottery types, house forms, stages of production etc. (Costin 2007:144–145) so that items with an unspecified amount of variation are accommodated by the same lexical terms ("band"/"tribe"/"chiefdom"). Once the data are grouped semantically (classified), individual pieces of evidence are stabilized by the assumption that evidential classes contain homogeneous materials and, more significantly, that homogeneous meanings hold across different times and contexts. Once a data class is defined as an entity (a "kitchen area" or a "deteriorating environment" or "European-made object"), items can be inventoried, compared by size, mapped in space, and read as carrying the same meanings (or functions, or causal implications) in comparable contexts. A related form of cleaning data (dampening variance) is to pose dichotomous binary options (A *vs* not A), effectively removing all nonconforming data from consideration. Cleaning data

[3] Many of these ambiguity-reducing strategies are also in use in other science disciplines but I am concerned here specifically with their applications in archaeology.

may also involve concentrating on central tendencies and eliminating or ignoring gradients or outliers; often we draw arbitrary boundaries around what we will consider relevant to a problem as a strategy for reducing complexity. Examples of devices that help clean the data include using Munsell color charts; drawing trowel lines on profiles or feature outlines to assist in illustration; assigning sites to ecological zones and coloring each zone distinctively on a projected slide; drawing isotherms of median artifact densities; clustering data into evolutionary stages or periods.

2. *Machining data* is a second ambiguity-limiting strategy that involves describing or characterizing data by means of impersonal, often high-tech machines, or otherwise observing or measuring data not in a cultural context but rather against some universal standard, to give an unambiguous reading on specific variables (density, refractivity, chemical composition, etc.) which then forms the basis of the analysis. These practices eliminate intra- and inter-subject variation in interpretation and reduce ambiguity...while also removing cultural significance.
3. *Pushing the data* is what I call the practice of sequentially building an interpretive assertion by first drawing tentative conclusions, then using one's own tentative conclusions as an authority to firm up these conclusions in a later stage of the interpretation until, in the final summing up, one pronounces one's findings as a secure and unambiguous conclusion. So, "it is possible that..." later in the text becomes "most likely, this was..." and concludes: "as shown previously, it appears that...."
4. *Stretching the data* means finding the general in the specific, or generalizing to make sweeping claims from specific cases. A plausible functional or causal relationship in a local context is said to hold widely or to stand for a larger class of interpretations where the same relationship would hold. "Stretching the data" is undertaken at all levels of archaeological practice: in abstracting and generalizing stratigraphy to larger regional areas in the form of "A" and "B" horizons, or in erecting typologies for regions from single sites, or creating semantic categories for variable features. More significantly, "stretching the data" can include associating one feature in a local context with a large, widely recognized process, thus "demonstrating" the wider process at the local site.
5. *Going small* is an ambiguity-reducing strategy that consists of posing a tightly focused, empirically defined research question that is itself unambiguous and that can purportedly be answered with field data in a straight forward manner (Were these temples roofed?) in preference to "ambiguous" questions that relate to the human condition (How did sociopolitical relations change over the period of temple construction?). Thus, while a lot of other data may be collected relating to matters outside the stated project goal, the messy issues of underdetermined or over interpreted data are publicly avoided. Moreover, the epistemic assumption can always be put forward that knowledge accumulates in a stepwise fashion and these are important first steps towards larger knowledge products.
6. *Providing visual focus* is what I call the use of redundant visual templates as central displays, through which both data and interpretative reconstructions are structured. Some displays include the "Time/Space regional integration chart," or the "Generalized profile drawing." Another form of *visual focus* is the

consistent use of the fluted point to stand for Paleo-Indian sites and their placement in time, or using the Venus of Willendorf to illustrate any article about the Upper Paleolithic, or pairing an image of the Calendar Stone for any Aztec information. Visual attention is focused so specifically on a central data image as an accompaniment to the data construal, verifying the authenticity of the cultural reconstruction, that the ambiguity of outlying and competing interpretations is obliterated and ignored.

Feminist Attention to Ambiguity

Feminists have good reason to be suspicious of many of the unambiguous, unequivocal pronouncements that archaeologists are pushed to make from their studies. Both the data we encounter and our conventions of practice suggest that only rarely will we be able to reach definitive conclusions in our inspections of evidence in the field or on the level of interpretive theorizing.[4] And where we find the use of mechanisms and strategies of closure to stabilize facts, we distrust the great distance between the conclusions that we accept for archaeological findings and conclusions that we would find satisfactory for other social studies.

But issues of ambiguity are also feminist issues because they are issues of power, and our practices of certainty tend to be a masculinist style of working, disadvantaging (some) women who reject its exaggerated confidence (or who are forced to learn it in their professional apprenticeships). What drives archaeologists to deliver results with a trumped-up aura of certitude and authority is the promise of more authority and more power insofar as such a scholar effectively shows he can deliver a knowledge product, and/or demonstrates that his theoretical commitments are more capable of producing insights than a competing position.[5] There is little corresponding reward in present disciplinary practice for being modest in one's claims, linking the limits of what one can say to an understanding of the ambiguity of evidence. Whether women are less suited to push beyond their misgivings and offer unambiguous conclusions is hardly the point; by all counts, this is a problematic situation of special relevance to feminists who have positioned themselves to resist conventions and practices of power.

Moreover, it is feminists in archaeology, not uniquely but also not quietly, who have argued for less rigid and singular knowledge outcomes from archaeological data. Ambiguity opens up new interpretive space for our speculations and

[4] The ambiguity we confront when we are making sense of data is guided by a large archaeological literature covered under the topic of "inference". Archaeologists are aware of and attentive to the leaps of faith involved in inference, and the stabilization of interpretation at this level is not ignored. In fact, ethnoarchaeology, experimental archaeology, the study of formation processes, the direct historical method and the application of analogies are all methods developed to deal with archaeological inference. Nevertheless, the argument I am making—that archaeologists regularly overstate their confidence in their inferred meanings—still holds.

[5] Motivations for asserting certitude and authority clearly differ in different scholarly contexts. Presentations to the public, for instance, demand their own voice of clarity and disciplinary authority (archaeology can deliver!), while presentations to granting agencies must sound confident because money will be given to people and projects that are seen as having the greatest chance of definitive success.

imaginings; ambiguity preserves options against such time when clarity may be better achieved. Although feminists of the last two decades hardly represent a uniform voice for directions of change, a number of themes have emerged in feminist archaeology that support a recognition and preservation of ambiguity in archaeology: the call for multivocality and a pluralism of voices in the telling of the past (e.g., Spector 1993; Wilkie 2003); feminist archaeologists' critiques of science (Wylie 1992, 1997); the advancement of standpoint theory (Gero and Loring 2005; Harding 1986; Hekman 1997; Wylie 2000, 2003); community and indigenous archaeologies (Barker and Dumont 2006; Lippert 1997; Smith and Ward 2000; Smith and Wobst 2005; Smith 2004) and, most recently, the adoption of research insectionalities (Conkey 2005; Franklin 2004). Taken together, this powerful coalition of feminist-lead and feminist endorsed scholarship in archaeology has positioned the discipline for moderating the certitude with which we sometimes feel we must speak.

In other disciplines feminist strategies for recognizing and opening up ambiguity have been explored, starting with Moira Gatens' (1991:193, originally published 1983) point that the very desire for objectivity is itself a subjective value. Within mainstream philosophy of science, objectivity has been taken up as historically situated (Daston 1994) and value laden (Megill 1994), while social studies of knowledge examine certitude as a socio-historical construction (Shapin 1994). Feminist epistemologies (Code 1991; Harding 1998; Schiebinger 1999) contribute critiques of a universalist science as rational, a-cultural, unified and authoritative, reminding us to pick our knowledge systems carefully, deciding whether we want to get to the moon, or to protect a fragile and easily destroyed knowledge base. It is logical that making room for ambiguity is a next feminist argument.

Ramifications of Honoring Ambiguity

Having reviewed the theoretical and feminist bases for protecting and preserving ambiguities as a valuable rather than a necessarily painful aspect of archaeology, we can move towards defining how, in practice, to attain these goals. Obviously, setting a broad (feminist) goal like taking ambiguity seriously will ramify differently in different archaeological communities. For deeply empiricist practitioners, I suspect that any new "pro ambiguity" rules would be integrated into pre-existing practice without significant overhaul of larger disciplinary arrangements. Areas designated as ambiguous can be delimited, and the extent of ambiguity firmly ascertained. "Facts" can be secured as they will, but there would be significantly more detailing and describing of unresolved areas of evidence or interpretation to replace such place holders as calls for more data, creation of generalizing categories, semantic squirming, as in the exaggerated qualification of interpretation, the use of "perhaps could represent" or "may be seen as" or "possibly relates to," or even simply skipping over indeterminate data.

However since privileging certitude constitutes a central foundational area of archaeological practice, it will be rather more challenging to unseat this "virtue" than it is to merely accommodate it with longer descriptions of ambiguous quandaries. What specific actions can a feminist archaeology put forward to increase the

discipline's tolerance for ambiguity, taking into account that in some contexts certitude may be productive and should be preserved? Do we publicly question the messiness-hiding nomenclature of typologies, the arguments and semantic categories that tidily summarize the results of large research projects and leave no questions unanswered, no data unconfigured? Do we insinuate in our reviews and appraisals of archaeological practice that we distrust results that don't include problematic or even unanswerable areas of interpretation? At the same time, feminists must work in directions that honor ambiguity and that demonstrate concretely where and how ambiguous data can become meaningful, especially in conforming to the preservationist value system we espouse. Where future archaeological research will surely be increasingly based on extracting information from previously excavated and recorded evidence rather than from primary fieldwork, the preservation of ambiguous circumstances and ambiguous data will become particularly important.

In conclusion then, if archaeological results are allowed to be, or even expected to be ambiguous, a feminist archaeology will demand a broader restructuring of disciplinary practice. Some ramifications might include the following:

(a) Different questions might be posed and different models constructed, for understanding archaeological evidence. Replacing ideas of simple causation and uni-function would be more complex integrations of possibilities, where the multi-leveled and internally contradictory social lives that we live today are also recognized as having existed in the past. As many interpretations as allowed by data will be laid out, and multiple interpretive scenarios drawn.
(b) The crucial importance of bringing more minds/eyes to interpretations of archaeological data will be recognized. Research will more often be undertaken in non-hierarchical (or less hierarchical?) teams since multiple views will be seen as more powerful than the single unopposed view, and paired or multiple standpoints (not necessarily in agreement with one another) will emerge from the "same" data instead of the privileged single view of an unchecked supervisory individual.
(c) It would also be critical that the chains of decision making in knowledge construction become public and visible, showing where/why some data are ultimately deemed ambiguous (or, alternatively, determinant) and others not. While rules of inference are discussed often enough in the archaeological literature, there is little detailing of specific epistemological steps that have led to specific context-bound conclusions. That is, the history of not only each interpretation, but also each refusal to interpret should be discussed, rather than blurring the fact-making histories into a timeless and seamless authority of fact.
(d) Rewards for good work would accrue to researchers who successfully preserve the subtleties of contradictory evidence, who are able to retain for the project records alternative possible readings of data that can ultimately be matched against different interpretive possibilities. Today, the weighing of alternative interpretations is usually maintained no longer than the duration of a conversation among field crew assembled around a feature or stain or partial artifact, usually until the dig director comes to settle the dispute. Encouraged to embrace ambiguity, researchers would not try to resolve issues at once but would display/preserve evidence more carefully and construe it more self-consciously,

trying to show a range of implications that could follow from data, or multiple interpretations that are allowed by data, instead of playing advocate for one unopposed position for which all alternative claims have been systematically erased! If ambiguity were honored, then field notes would regularly point out different possible readings of the evidence, taking pride in being able to make different, sometimes mutually exclusive, arguments based on intimate readings of minute details, pleased at being able to keep options open instead of closing them down. Support for any one position would take more careful account of neighboring data, whereas today's knowledge claims too often make it appear as though each project stands alone as a fortress of certitude in a field of ignorance.

(e) We could expect less competition among researchers to reach premature conclusions, as well as less posturing and argument through assertion. If ambiguity were honored, and a nuanced knowledge product valued, there would be less pressure to dig quickly in many places, less changing venues each year or two in order to put one's mark in as many sites or valleys as possible, or to be able to "compare" sites along a single axis of comparability. Researchers might remain with a single site for a lifetime, sorting through its complexities and contradictions, putting greater effort into analyses and allowing interpretations to change, publishing detailed accounts of ambiguous circumstances! We might even avoid the terrible problem of today's mountains of unpublished data, held even (or especially) by many of the most renown contemporary archaeologists who lose no prestige for having accumulated quantities of field data in their lifetimes that they can't possibly expect to publish, upheld by a value system that places positive knowledge products above equivocal data.

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