

## FORUM

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### Historical Archaeology in the Next Millenium: A Forum

#### ABSTRACT

Historical archaeologists should focus their future research efforts on a set of central problems surrounding the emergence of the modern world. Such problems include environmental change, technological change, ethnogenesis, and distinctive patterns of social interaction. Professionalism is an additional issue discussed.

#### Introduction

As the next millennium approaches, the question of where historical archaeology is going as a profession seems timely. This is a personal view of some of the issues and challenges faced by historical archaeologists today that have implications for the future. Some of the issues and challenges are scholarly. Is there, for example, a fundamental research agenda that unifies the discipline? Others are directed at the culture and social structure of the professional community. How, for example, do the practitioners of the discipline pass on the culture of historical archaeology to others? Finally, public policy challenges historical archaeology in critical ways. What are the most effective ways of building constituencies for the discipline? How should historical archaeologists interpret the past to the public? What are the most effective ways of managing the historical sites that not only comprise the data base of the discipline but also the means to convey the past to the public? This work explores the first two of these—the research agenda and the professional community—leaving public policy to another forum.

#### Research Agenda

Whether historical archaeologists see themselves as telling good stories about the past or doing Science or something in between, they all

hold in common an interest in the phenomenon of the modern world and share the same sources of information. Are there more specific research interests that serve or could serve as unifying threads to this common interest and data base? In my view, the archaeological record of the modern world, when used together with documents and oral testimony, is particularly well-positioned to answer questions about the recent past in four fundamental problem areas or domains: environmental change, the evolution of technology, ethnogenesis, and “others knowing others.” All of these domains are inherently interdisciplinary and are best approached from a comparative, holistic, and historical perspective.

#### Environmental Change in the Modern World

Dramatic and accelerating environmental change, often on a global scale, is one of the hallmarks of the modern world. Deforestation, fire, commerce and commodification, technology, capitalism, and global migration of people, among other things, play key roles in bringing about the changes (Pyre 1995; Coates 1997). Modern world landscapes document and contain information about the changes taking place at the local, regional, and global scales that an environmentally-focused historical archaeology is well positioned to study.

An environmentally-focused historical archaeology of the modern world falls somewhere between the short time span and high resolution studies of ecologists working in today's world and the long time span and low resolution studies of our archaeological colleagues interested in the more ancient past. Good documentation and interpretation of environmental change taking place within the middle range time span of the modern world provides the “missing link” between the two. The archaeological record of the modern world is an unsurpassed source of information about human-environmental interplay within a middle range time span.

Traditionally, of course, historical archaeologists ignored environmental studies, in large part

driven by the idea that modern world technology effectively removes environment as a significant factor in explaining variability and change in the human condition. Recently, however, the literature of historical archaeology reveals more interest in environmental inquiry (Landon 1995; Deagan 1996), perhaps a harbinger of historical archaeology in the next millennium. An environmentally-focused historical archaeology takes two approaches, one documenting and interpreting the historical context of environmental change, the other exploring how the modern world transforms nature into culture.

The historical contexts of environmental change consist of historical events (e.g., fires, floods, or episodes of deforestation) and processes (e.g., climatic cycles) taking place at a variety of time, space, and magnitude or intensity scales. Archaeological and documentary studies, therefore, necessarily include not only the occurrence but also the scale and boundaries of environmental events and processes. Winterhalder (1994) further shows that the historically-sensitive concepts of patchiness and grain in space, persistence and predictability in time, and organizational structure offer a way of giving "texture" to the historical contexts within which human-environmental interplay takes place.

Landscapes are the material expressions of the historical contexts of human-environmental interplay (Crumley 1994). Modern world landscapes are the cumulative expression of local and regional environmental histories that can be linked to better understand global environmental change. Joel Gunn (1994), for example, uses landscape data to show a correlation between global climatic change and environmental events in the two widely separated geographical regions of Europe and Central America.

Another approach to an environmentally-focused historical archaeology of the modern world documents and interprets the transformation of nature into culture or "systems of meaning." In this approach, landscapes are viewed as material expressions and repositories of information about ideology and environmental knowledge, whether

the goal is telling stories or doing Science (Leone 1984; Renfrew and Zubrow 1994). Modern world landscapes reflect the global migration of people carrying a great variety of cultural traditions. Consider, for example, the global distribution of fengshui landscapes associated with ethnic Chinese culture (Fan 1992; Greenwood 1993) or how the European settlers of Cape Cod transformed nature into systems of meaning (Yentsch 1988).

### The Evolution of Technology in the Modern World

The recent publication of Robert MaC. Adams (1996) *Paths of Fire* highlights the second research focus of historical archaeology in the new millennium. Adams, whose research specialty is ancient Mesopotamian civilization, develops a model of long term technological change. His model follows the evolutionary concept of "punctuated equilibrium," portraying the evolution of technology as a series of disruptive and discontinuous pulses or episodes of rapid change. Such pulses include language as the first communications revolution, the agricultural revolution, the Mesopotamian urban revolution followed by such mini-pulses as the introduction of iron metallurgy and an information revolution marked by the invention of coinage and the alphabet, the Medieval mechanical revolution, the 17th-century scientific revolution, the British industrial revolution, and the American industrial revolution, among others. Adams stresses their rapidly increasing occurrence in the modern world and what that implies for the future. He conceptualizes such revolutions as context-dependent "sociotechnical systems," following the approach first developed by historian of technology Thomas Hughes (1983) in his now-classic study *Networks of Power*, to stress the importance of the historical, social, and cultural context within which technologies are embedded.

The accelerating evolution of sociotechnical systems in the modern world points to the importance of a technologically-focused historical ar-

chaeology. More so than in any other time period, the material expression of technology dominates the archaeological record of the modern world. Technology's impact on everyday lives dramatically increased over the last 500 years and continues to accelerate toward the next millennium. Yet, as with the environment, historical archaeologists generally neglect the technology of the modern world as a fundamental research interest. To be sure, material culture studies play an important analytical role in the discipline. Historical archaeologists, however, generally leave the comparative, holistic, and historical study of long term technological change in the modern world to others.

A technologically-focused historical archaeology documents and interprets variability and change in the sociotechnical systems of the modern world. Toward this end, Pfaffenberger's (1992) discussion of sociotechnical systems in cross-cultural perspective helps operationalize the concept for archaeological study. He defines the sociotechnical system as "the distinctive technological activity that stems from the linkage of techniques and material culture to the social coordination of labor" (Pfaffenberger 1992:497). Technique, in turn, is "a system of material resources, tools, operational sequences and skills, verbal and nonverbal knowledge, and specific modes of work coordination that come into play in the fabrication of material artifacts" (Pfaffenberger 1992:497). The beliefs, attitudes, and values making up the work culture also play an important part in the sociotechnical system. Ritual, for example, is the behavior associated with the ideological context of technology and that often has a material expression, making it directly accessible to archaeological study. Stephen Lansing's (1991) study of the impact of Dutch colonization upon the traditional rice irrigation technology in Bali illustrates the critical role of ritual in the evolution of a sociotechnical system. Lansing argues that the elaborate ritual practices of the Balinese water temples, ignored by the Dutch during their occupation of Bali, play a critical role in the maintenance of labor

organization, scheduling, and task specialization among the rice farmers. The arrangement of water temples over the landscape thus becomes an essential component of the Balinese rice irrigation sociotechnical system. In Lansing's (1991:127) view, the water temples "establish symbolic connections between productive groups and the components of the natural landscape that they seek to control."

The historical context of sociotechnical systems consist of historical events (e.g., innovations or technology transfers) and historical processes such as economic cycles, for example Paynter's (1988) discussion of technological responses to business cycles, Krondratieff cycles, and logistic trends. Landscape archaeology is an important means of documenting the historical context of sociotechnical systems. Landscapes are the cumulative expression of sociotechnical systems over time, leaving traces not only of historical events and processes but also of changing spatial boundaries and organizational structures.

More than anything else, however, a technologically-focused historical archaeology studies how the evolution of sociotechnical systems is affected by the application of technology at specific places and the local conditions under which it is applied. The local application of the industrial technology of the "Green Revolution" on a global scale, for example, resulted in a wide variety of unforeseen and sometimes disastrous consequences. Specific and local applications of technology often result in the evolution of derivative sociotechnical systems called "appropriate technologies." The widespread use of the *arrastra*, a low cost and low power ore milling machine, in the American West by small-scale miners during the Great Depression is one example.

### Ethnogenesis and Other New Social Formations

The archaeology of ethnogenesis and other new social formations defines another topic on a research agenda for the next millennium. In con-

trast to the social and cultural homogenization long predicted to be the consequence of globalization, the modern world continues to be diversifying at an increasing rate. New ethnic and other culturally-defined social groups often emerge as new places are incorporated into expanding world-systems. In New Mexico, for example, Hall (1989:210) argues that the expansion of the American state transformed indigenous Hispanic groups into "an enclaved ethnic group with a distinctive culture and a distinct class position within a larger structure." Similarly, Deagan (1983) shows that in Florida the common practice of miscegenation between Spanish soldiers and indigenous Timucua Indians explains the emergence of the Mestizo as an ethnic group.

In addition to new ethnic groups, historical archaeology is well-positioned to shed light on the emergence of new social groups organized on cultural principles other than ethnicity. Community social formations are typical. In *Class and Community in Frontier Colorado*, for example, historical sociologist Richard Hogan (1990) takes this approach in developing a model of community formation in frontier Colorado. The model portrays economic and political institutions "as unstable coalitions representing the short-term interests of various classes that possess both the economic resources and the political organization required to defend their control of a local political economy" (Hogan 1990:208). Hogan combines boosterism and conflict interpretations of the development of frontier communities in the American West. The boosterism perspective focuses upon the self-interested role of local boosters such as merchants and land speculators. It does not, however, consider the formation of local industrial classes. In contrast, conflict theorists argue that conflicts among local and regional groups play the pivotal role in explaining the evolution of frontier communities. The approach, however, often exaggerates the extent to which conflict and exploitation explains class relations. In many cases, in fact, self-interested classes such as laborers, merchants, and real estate speculators

worked together in the formation of local governments to control industrial production.

Of all the changes brought about by the industrialization of the American West, however, none was quite as dramatic as the creation of a distinctive social class of waged workers. Schwantes (1987) developed the concept of a "waged workers frontier" to describe the group, which Emmons (1994:449) further clarifies:

There were transient workers everywhere in industrial America, but they were a far more conspicuous part of the western work force than the eastern. All westerners were, or recently had been, transient. The work force was no exception; it consisted of thousands of 'industrial cowboys' riding (the rails in this case) from one mining town or lumber camp to another. Western industry also was disproportionately resource extractive and corporate. As a result, there was an abundance of unskilled jobs and few if any organizations-worker or government-powerful enough to contest the corporations' use of disposable, transient workers to fill them. Whatever the sources of the division, the waged workers' frontier (the proletarian West) was riven, as few if any non-western places were, by differences within the working class.

Dubofsky (1985:16), in fact, contends that, in comparison to those in other regions, the waged workers in the American West "proved to be the most radical, militant, and class conscious of working people." As in ethnogenesis and community formation, historical archaeology is well positioned to interpret western waged workers as a new class-based social group that emerged during the industrialization of the American West.

#### "Others Knowing Others"

The modern world is marked by accelerating global population movements and more effective technologies of transportation and communication, all bringing about increasing contact with others. How "others know others," therefore, is a critical issue in the study of the modern world (Fowler and Hardesty 1994). Historical archaeology is well-positioned to explore such encounters and their consequences.

First and foremost, the places with archaeological remains of the modern world offer glimpses of how "others know others." European global expansion, for example, created a large number of European immigrant colonies situated among indigenous peoples. The archaeological remains of colonies such as Wolstenholme Towne, Jamestown, or Saint Augustine offer glimpses into how the immigrants and indigenous peoples viewed one another, how both dealt with the exotic. Related to such colonies are industrial places such as immigrant workers settlements in and around company towns that introduce views of the exotic both to the immigrant workers and to indigenous peoples. Another place playing an important role in our understanding of "others knowing others" is the displaced persons resettlement camps around missions and forts, concentration camps, and internment camps such as the Japanese-American relocation centers during World War Two. Perhaps the best known recent example of such a place is Fort Mose, a slave refugee camp in Florida (Landers 1992). The existence of the camp in itself defines a multidimensional cultural perspective on how African slaves in America, English immigrants in America, and Spanish immigrants in America viewed one another. Battlefields and other places of conflict give yet another perspective on "others knowing others." Fox's (1993) study of the Custer battlefield, for example, shows how archaeological remains can be used to interpret how the warring parties viewed and responded to one another during the short but famous conflict. Finally, transportation corridors and trails, frontiers, and cultural landscapes are places where "others know others."

In addition to places, the archaeological record of the modern world includes the material expression of the logistics of "others knowing others," that is, the means by which people encounter and experience one another. Certainly the technology of transportation and telecommunication plays an important role. The archaeological remains of railroads, ships and boats, long distance trails, overland road systems, canals, tele-

graph and telephone systems, and air transportation, for example, all hold in common the material expression of the means by which people encounter one another. Yet very little if any archaeological research on these sites includes the topic of their consequences for "others knowing others." In addition to technology, the commodification of labor plays another key role in determining the way in which people encounter and experience one another. The material expression of the commodification of labor include archaeological sites associated with forced labor and wage labor, both of which play enormous roles not only in defining the Other but also in determining the conditions under which "others know others." Archaeological studies of slavery, for example, focus upon the material expression of an "Other" defined by forced labor, as do prison work camps. The emergence of wage labor as a commodity also defines an "Other" with historical roots that may be as early as ancient Mesopotamia (Frank and Gills 1993) or as late as the Industrial Revolution (Wolf 1982). The archaeological remains of the Other defined by wage labor include the sites of company towns, satellite settlements of company towns, construction work camps, lumber camps, boardinghouses, textile mill towns, and railroad section camps.

### The Professional Community

Another view of historical archaeology comes from its organization and practice. Consider an assertion, an adage, and a metaphor. The assertion is that most future jobs in archaeology will continue to be in cultural resource management (CRM). The adage, which is attributed to Benjamin Franklin, is "if we do not hang together then surely we shall all hang separately." The metaphor is the archaeological profession as a community. As a community, the archaeological profession has both a culture and a social structure. The culture is "professionalism," a common set of values, attitudes, and beliefs, an ideology, that give to the community a sense of

common mission or purpose, ethics, commitment, and loyalty. Until the advent of CRM archaeology, the culture was transmitted during a long period of mentoring in the universities. During the last 25 years, CRM archaeology has thrown a wrench into the process of enculturation by: (1) making large numbers of jobs available to people who have not completed the mentoring needed to instill the culture of archaeological professionalism; (2) creating a new mission for archaeology; and (3) changing the social structure of the community in a way that works against commitment and loyalty to the profession. Indeed, the historical archaeology community is becoming class-structured, with a large emerging "underclass" of archaeological technicians and mid-level managers who are poorly paid, highly mobile, and have not stayed long enough in educational apprenticeships to be completely enculturated and socialized. Archaeology then becomes merely a job and not a profession. Yet it is precisely this underclass that does the vast majority of day-to-day archaeological research.

Much of the rift between academe and CRM that continues to divide archaeology begins with a poorly developed culture, sense of professional responsibility, and loyalty to the larger archaeological community. Archaeologists properly instilled with a strong dose of professionalism and commitment to the archaeological community will conduct high quality research whether they are working in the halls of academe or in CRM and whether they are professors, principal investigators, crew chiefs, or entry-level archaeological technicians.

Archaeological codes of ethics should be as self-evident to practicing archaeologists as the Hippocratic Oath is to physicians and are only as good as their sense of personal responsibility to the profession. What this suggests is the enhanced development of the archaeological equivalent of what sociologist Amitai Etzioni (1993), calls "communitarianism," an approach that draws together the disparate ranks of archaeological politicians and practitioners from all theoretical positions with a new sense of personal responsi-

bility for the profession and for the rapidly diminishing database upon which it stands. Communitarianism demands a strong sense of professional mission, commitment, and ethical conduct that overrides the self-serving interests not only of individual archaeologists working in academe or in CRM but also of archaeological special interest groups.

The university plays the key role in developing educational programs that instill a strong sense of professional responsibility in its undergraduate, graduate, and post-graduate students. The multiple missions of universities suggest some ways to intensify the sense of belonging to the archaeological community. First of all, universities play the pivotal role in preparing archaeologists for the profession by developing and implementing educational programs at the undergraduate, graduate, and post-graduate levels. Universities, therefore, should develop and implement professionalism courses focusing upon the mission, commitment, and ethics of the archaeological community at all three levels. Another place for professionalism courses is in post-graduate educational programs for archaeologists working in government agencies and private industry and returning, often after several years, to the classroom. CRM companies and government agencies have the responsibility of establishing mentoring programs to further enculturate practicing archaeologists. Archaeologists at all levels should become more involved in public outreach programs to convey to the general public what they are doing and why they are doing it. CRM agencies should mandate lifelong learning programs by requiring archaeological practitioners to take post-graduate courses on a regular schedule, much as do K-12 public school teachers.

## Conclusions

All of these comments paint a picture of what historical archaeology is all about as the next millennium approaches. The picture is a personal one. Other practitioners of the discipline undoubtedly have quite different views of its fun-

damental research or its organization and practice or both. Whether or not historical archaeology should have a unified research agenda, for example, is one possible controversial issue. Perhaps postmodern thinkers see research anarchy as the wave of the future, an historical archaeology of shreds and patches with everybody doing their own thing. Perhaps historical archaeologists view themselves as a herd of cats rather than as an organized community, more along the lines of a constantly changing network of individuals with very different life histories and career interests pursuing their own goals. Isn't this what a forum is all about?

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