Journal of Anthropological Archaeology 38 (2015) 2–7

Contents lists available at ScienceDirect

Journal of Anthropological Archaeology

journal homepage: www.elsevier.com/locate/jaa

"I'm the Oldest New Archaeologist in Town": The intellectual evolution of Lewis R. Binford

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ARTICLE INFO

Article history:
Available online 7 February 2015

Keywords:
Lewis Binford
Contributions to archaeology
Future research programs

ABSTRACT

Lewis R. Binford was a hugely significant figure in the archaeology of the 20th century. His prolific publications invigorated the role of anthropology in archaeology, and pioneered the development of processualism, scientific archaeology, middle range theory, ethnoarchaeology, hunter–gatherer studies, and the use of global scales of analysis in constructing conceptual frameworks for understanding the organization and evolution of cultural systems. In this issue, two of Binford's most important contributions – middle range research and the construction of frames of reference – are brought into new relevance with case studies that span time from the Middle Pleistocene to modern-day traditional communities, and global regions from the sub-arctic and temperate to the desert and the tropics. The concluding article considers in detail what makes a truly influential archaeologist in today's society.

1. Binford's first fifty years

Lewis R. Binford was the most significant archaeologist in the last century in America, and arguably in the world (Meltzer, 2011; Kelly, 2015). He firmly placed science in the practice of archaeology, revolutionized how we think about theory and method, and ignited fundamental debates about the evolution of early humans and the origins of agriculture and complex societies. For 50 years, Binford's insistence on asking, "What do archaeologists do? and why we do it?" was at the heart of his broad and enduring influence. Binford's prolific publications included 20 books, 61 journal articles, and 38 chapters in edited volumes (according to his Curriculum Vitae). His writings were catalysts for processualism, middle range theory, ethnoarchaeology, zooarchaeology, site formational processes, hunter–gatherer studies, and global scales of analysis.

Binford's career evolved over four main phases: his initial assault on culture-historical archaeology in the 1960s; his ethnoarchaeological work among the Nunamiut of north Alaska; the application of those lessons to archaeological processes and human evolution; and a magisterial analysis of foraging peoples to develop a comprehensive predictive framework for the biggest problems in cultural evolution. Lew Binford's omnivorous interests, provocative assertions, and zest for a fight gave rise to some of the most interesting debates in the history of archaeology.

Years after his passing, Binford's ideas about epistemology resonate in the work of his students and in the lessons they pass on to their own students. This special issue of the Journal of Anthropological Archaeology sets forth articles that illustrate the reach and utility of Binford's contributions and his philosophy of maintaining an active posture for learning throughout one's entire life. Below, we briefly discuss Binford's education and the contexts in which he developed two of his most important concepts: middle range research and constructing frames of reference (*sensu* Binford, 2001), which are the focus of the papers presented here.

Although Binford's ideas were influenced by key thinkers of the day (e.g., Walter Taylor, Leslie White, and many others) this chapter focuses on Binford's contributions *per se*. For more detailed and comprehensive treatments of Binford's life, intellectual heritage, and accomplishments, also see Gamble (2011), Kelly (2011), Meltzer (2011), O'Connell (2011), Paddayya (2011), Rajendran (2011), Straus et al. (2011), and Wilford (2011).

2. Early life, 'Archaeology as Anthropology', and the growth of middle range research

Lew Binford spent much of his childhood roaming the woods, lakes, and rivers of Virginia. His early absorption in natural world nourished a later interest in the natural theater that is the setting for the human story. Binford's military service in post-World War II

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http://dx.doi.org/10.1016/j.jaa.2014.09.001
0278-4165/

Okinawa included immersion in Japanese and Ryukyuan languages, movement about the Okinawan countryside, exposure to new foods, skills, and traditions, and exposure to applied anthropology as a means to revitalize war-torn societies. This experience sparked his warm and enduring interest in the world's traditional cultures and peoples (see Figs. 1.1 and 1.2).

These influences were evident early in his career with the founding of the 'New Archaeology', which introduced the premise that archaeology necessarily springs from and informs the larger discipline of anthropology. Binford described the analysis of material remains in the archaeological record as a means – rather than an end – for learning about the organization, processes, and narrative of cultural systems. His challenge to archaeologists was to tackle anthropology at the level of theory, developing hypotheses derived from 'what we already know' and testing them using relevant data from the field, laboratory, and museum collections.

The scientific approach may seem common enough today (and has taken its share of criticism; see below), but it is important to remember that at the time of Binford's education the archaeological enterprise was largely descriptive. In the 1950s, students were trained to excavate sites that (preferably) contained rich, well-stratified arrays of material remains, then describe the stylistic elements of formal artifact types, trace their distribution through time and space, identify readily bounded, co-occurring sets of types as archaeological "cultures," and account for changes in composition and distribution by invoking past movements of people, ideas, or both (O'Connell, 2011:2). Binford's dissertation advisor – and later intellectual sparring partner – James B. Griffin was the chief architect of this approach.

By the 1960s the archaeological world, influenced by larger intellectual and societal upheavals, was ripe for new endeavors that would transcend traditional culture history. A series of articles by Binford (1962, 1964, 1965) laid the groundwork for the "New Archaeology," now better known as processual archaeology. His argument that the accuracy of knowledge about the past could be tested using rigorous scientific methods was a radical departure from culture-historical archaeology (Meltzer, 2011). The thrust of "Archaeology IS Anthropology" was that archaeologists should be participating in anthropology at a theoretical level by building general theory, testing it in the field, and making refinements based on test results.

The New Archaeology aimed to push the limits of archaeology, taking as its goal no less than understanding the laws of human cultural behavior. Archaeologists often ask some of the broadest and most fundamental questions in anthropology, seeking to understand processes that play out over very long periods and at regional or even global scales. These broad research problems include the role of culture and technology in the adaptive success of past and recent hominins, the adoption of agriculture and other means of food production, and the growth of hierarchically organized societies toward state-level civilizations.

Fig. 1.1. With his gift for languages, Lew Binford was assigned by U.S. Army occupational forces to reconstructive duties in war-torn Okinawa and Ryukuan Islands. Photo credit: Unknown. Used by permission of Truman State University.

Fig. 1.2. Young Binford serving in the Pacific Theater, Okinawa, U.S. Army. Photo credit: Unknown. Used by permission of Truman State University.

Critical reaction to the New Archaeology was swift, and many skeptics sought to falsify any grand conclusions that aspired to be law-like generalizations. Certainly such generalizations were big targets, and it became clear that improving our ability to discern patterning in the archaeological record does not automatically reveal explanations for that patterning. The record was not as clear or unambiguous as it might appear, or as researchers might wish.

At this point Binford took an innovative and more productive direction – a quieter methodological revolution. He perceived that we could not pursue ambitious programs to build and test general anthropological theories without appropriate tools to structure our observations, tools that needed to be epistemologically robust. The result was middle range theory, which centered on methods to make inferences about the archaeological record independently of the bigger theoretical ideas being argued for or against.

The 'theory' arises from a theoretically-based understanding derived from germane aspects of another discipline unrelated to anthropology (rather like understanding optics to use telescopes to explore cosmic theory). The main point is to develop ways of making archaeological observations that can reliably draw anthropologically important inferences, based on information derived independently from those archaeological observations.

The complexity and phased nature of this task is well described by Steve Lekson: "A scientist has an insight and develops (strategy) for its evaluation or demonstration; a humanist can have an insight and go straight to press" (1996:887). For archaeologists, developing middle range theory or methodology means meeting the epistemological challenge of "How do I know what I think I know?" in order to reliably and assessably draw inferences about behavior from observations of material remains in the archaeological record.

This series of realizations launched the next important phase in Binford's career, in which he studied artifacts from the Mousterian site of Combe Grenal. Binford questioned François Bordes's premise that different stone tool assemblages in alternating stratigraphic levels represented distinct tribal groups. At that time, most literature about the Paleolithic consisted of competing explanations about differences in lithic industries, ranging from variable cognitive capacity to ethnic identity. Yet there was no sound inferential means for choosing between these competing models: the strength of an idea was predicated on the stature or reputation of whoever advocated for it.