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Temporal Insanity: Woodland Archaeology and the Construction of Valid Chronologies

Erin C. Dempsey

Abstract: This paper will bring to light the problems existing in the current, working chronology employed in Woodland Period archaeology and determine how, possibly, these problems can be alleviated. I assert that creating new chronologies that speak to specific research questions and doing away with a static and unchanging culture-historical perspective in Woodland Period archaeology will help archaeologists better investigate how people lived and interacted during this time and, more importantly, how they facilitated and experienced cultural change in the Eastern Woodlands of North America. By lifting the framework culture history has superimposed on the archaeology of Woodland peoples (i.e. Adena, Hopewell, Fort Ancient, and early Late Woodland), it may be possible to see cultural patterns that were previously truncated, altered, or overshadowed. I hope that this new treatment of chronology as an indicator of change through time will help archaeologists achieve a greater understanding of cultural patterns in the Woodland Period and place activities such as earthwork and mound construction, ritual, and habitation in a broader context than culture history currently allows.

Introduction

After looking deeper and deeper into the literature on Woodland Period archaeology in the eastern part of the Midwest, it has become increasingly clear that archaeologists in this region have differing ideas of how archaeological time, the division of time into cultural units for the investigation of past peoples, is manifested. In other words, archaeologists are constantly and sometimes inconsistently using various versions of archaeological time to create working chronologies on which to base the interpretation of archaeological remains. While this is not an incorrect way to conduct

archaeology and is, in fact, the culture-historical way of conducting archaeology, the division of time into chronological units, as it currently stands, does not succeed in accounting for variability and change among and between groups of people in the past. As it is applied in a part of North America, among others, where the diversity of prehistoric peoples is to be celebrated and is often the catalyst for archaeological investigation, the current chronology has failed to effectively capture cultural fluidity (Stoltman 1978; Charles 1992). This failure is due, at least in part, to archaeologists' use of similar chronological terminology that is dissimilarly defined, and is compounded when archaeologists use chronologies that cannot answer their specific research questions.

The following discourse can be separated into three sections. To begin, I will offer a working definition of what time is, in the archaeological sense. This section will provide the background on why archaeologists need to divide history into manageable and succinct temporal units and how this affects archaeology. Then, I will assess chronology and the creation of chronological units in order to understand what chronology allows us to do and, conversely, what it does not allow us to do. Finally, as a case study, I will define the current chronological conception of Woodland Period archaeology and examine the use and misuse of chronological units in this stage in the prehistoric past. Though I fully acknowledge that it is problematic to deconstruct chronology within the chronological unit of the "Woodland Period," I assert that there are certain levels of chronology that are relevant in archaeological discourse; it is my belief that the Woodland Period is one of these. Because it is the chronological units within the Woodland Period that are most disorganized and these are the units I wish to critique, my usage of "Woodland Period" serves to place readers in a specific part of the archaeological past.

It is my hope that this examination will shed light on why problems exist in Woodland Period chronology and how, possibly, these problems can be alleviated. This particular realm of archaeology is extremely dynamic and this is what draws researchers to study Woodland Period peoples and their cultural attributes. However, it is exactly this dynamism that allows archaeologists to so readily confuse chronological units. To this end, I assert that creating new chronologies that speak to specific research questions without adhering to a culture-historical perspective in Woodland Period archaeology will help archaeologists better investigate how this group of people lived and how they facilitated and experienced cultural change in the Eastern Woodlands. Additionally, facilitating communication by users of these

different chronologies is key in this endeavor. By lifting the framework culture history has superimposed on the archaeology of Woodland peoples (i.e. Adena, Hopewell, Fort Ancient, and early Late Woodland), it may be possible to see cultural patterns that were previously truncated, altered, or overshadowed. I hope that this new treatment of chronology as an indicator of change through time will help archaeologists achieve a greater understanding of cultural patterns in the Woodland Period and place activities such as earthwork and mound construction, ritual, and habitation in a broader context than culture history currently allows.

Time, Chronology, and Archaeological Concerns

Time

Time is of fundamental importance in archaeology. Because time is what creates history and is the construct under which history is understood, it is also the lens through which the people and cultures archaeologists wish to study are understood. In this view, time is an ever-present issue in archaeological investigation by the very nature that it is the builder of the past and the archaeological record and therefore, constructs how archaeologists perceive these things.

To recognize and assess the presence of time in the archaeological record is difficult for archaeologists to do, so much so that they often put it aside for fear it is too abstract a notion or that such a concession will alter their perceptions and interpretations of the record and add unwanted nuisance to such examinations. A lack of recognition of the effect time has on archaeological interpretation has caused many archaeologists to fall short in their quest to reconstruct the past. As Bradley (1991:209) states, “without a clearer conception of time itself, it may be difficult to make the transition from chronological studies to interpretation.”

Recently though, some researchers have begun to recognize that acknowledging the presence of time and utilizing a time perspectivism approach in archaeology can shed light on many problems in archaeological research (for time perspectivism see Bailey 1981, 1983, 1987, 2007; Murray 1999 and for considerations about time see Binford 1981; Lucas 2005; Schiffer 1985). Bringing the notion of time, and different conceptions of it, into the working consciousness of an archaeologist allows for interpretation on various time scales, which then allows for insight into activities and lifeways that cannot be seen at some time scales (Bailey 2007). By simply

considering time, archaeologists can significantly alter what information is gleaned from the archaeological record and how research is conducted.

It is vital to draw a distinction between scientific time and archaeological time. Scientific time, as it is conceived by physicists, is “relative, elastic, and deformed by mass and speed” (Ramenofsky 1998:77). Archaeological time is the division of the past into cultural units that follow one another chronologically. These cultural units are identified through the interpretation of the archaeological record: type-fossil artifacts are assigned to each cultural unit and, using the law of superposition which states that what is lowest stratigraphically is older than what is closer to the ground surface, each unit is given a place in the chronology of the past. Thus, archaeological time is understood through dividing the past into temporal units on a rather arbitrary basis via the archaeological record. Such a conception of time allows archaeologists to assign events, people, and artifacts to certain segments of the past for the purpose of expediently and efficiently drawing conclusions about relations among and between these things. In this way, archaeologists transform scientific time into a usable concept, a product of archaeology (Ramenofsky 1998). This also makes archaeological time a projection of current temporal units onto the past, where once no such divisions existed. As such, this reification of archaeological time is problematic and full of inconsistencies. It is in the failure to recognize the difference between scientific and archaeological time that archaeological interpretations are confused; the assumption that scientific time is the same as the archaeological time that has been created to order the past, present, and future, is naïve and nonviable¹.

Chronology

Like time, chronology is of fundamental importance in archaeology as

Chronologies are the archaeological units that slice up time, making the concept into usable, archaeological products...without a reliable chronology, the past is chaotic: there is no way of relating or ordering people, events, and cultures into

¹ From this point on, a reference to “time” is a reference to “archaeological time” unless otherwise noted.

the coherent narrative the prehistorian seeks to construct [Ramenofsky 1998:74].

Since it is not possible to study continuous change through time, chronology divides time into comparable units (Smith 1992). It is difficult to dismiss the benefit of organization that chronology brings to the archaeological record. The debate, instead, lies in how useful chronologies, as they have currently been constructed, are to archaeological interpretation and the answering of archaeological research questions. As Ramenofsky (1998:75) argues convincingly, “[c]hronological units are task-specific tools and, conceivably, there are as many chronologies as there are research questions.” Archaeologists use chronologies to explain cultural phenomena such as technological, ideational, symbolic, religious, and habitational change through time as well as to make distinctions between groups of people they perceive as being different from one another or who possess and exhibit varying artifactual forms, either qualitatively or quantitatively, that others do not.

Culture history is the framework under which chronology was constructed in North American archaeology (see Trigger 2006). Regardless of how much fit or how good a fit occurs between a chronology and the research goals that chronology wishes to apply itself, culture-historical designations are presupposed to be correct determinations of cultural sequences through both calendrical and archaeological time. While the validity of how culture-historical chronologies are applied is increasingly being questioned and examined by archaeologists, one cannot deny that having a culture-historical base of knowledge from which to draw basic inferences from the archaeological record is a useful and even necessary starting point for any investigation. Take, for example, the theoretical and practical problems encountered in doing archaeology on the continent of Australia, where no culture-historical past is available for archaeologists to utilize (Holdaway et al., in press). That said, it is equally important that archaeologists not let the culture-historical background of a given region determine how they carry out archaeological research and interpretation for the rest of time. As Ramenofsky (1998) points out, archaeologists cannot assume that the units that describe culture history are reified and “discovered” reconstructions of the past. Instead, this background should serve only as a sounding board and general guideline for archaeological research.

With the pervasiveness of the culture-historical perspective in mind, it is important to define the chronological/temporal units that are

generally employed by archaeologists. In 1958, Willey and Phillips identified common temporal units used to divide the archaeological record into the usable archaeological products for which Ramenofsky (1998) calls. By doing this, archaeologists successfully divided the past into units that could then be related to one another across time and space:

[T]he archaeologist is on firmer footing with the concept of an archaeological unit as a provisionally defined segment of the total continuum, whose ultimate validation will depend on the degree to which its internal spatial and temporal dimensions can be shown to coincide with significant variations in the nature and rate of cultural change in that continuum [Willey and Phillips 1958:16-17].

These units include but are not limited to cultural components, phases, horizons, traditions, and periods as well as geographic localities, regions, and areas (for definitions, see Willey and Phillips 1958:11-43). These authors arrive at the above designations by taking into account formal traits, geographical distribution, and the time duration of archaeological material. They note that “[t]hese three ingredients are present, though not always explicit, in all unit concepts but may differ significantly in the part they play in the formulation” (Willey and Phillips 1958:17). In other words, these units are not equally applicable to all aspects of the archaeological record; there is room for adjustment of these units to better serve research needs. This is, of course, a necessary concession as every archaeological site is different from the one before and the one after. However, this is also part of the problem of chronology: the creation of many different kinds of chronologies with many different unit designations allows archaeologists to continually create their own versions of the past instead of forcing them to use a framework of similar language and simply create variation within that language.

A key problem in the construction of chronology is the scale of measurement through which it is defined. Both interval and ordinal scales of measurement are used in archaeological investigations (Ramenofsky 1998). Ordinal scales refer to time designations that are created through relative dating techniques such as the comparison of artifacts to assess cultural diffusion or the dating of a feature because of its stratigraphical location. This type of dating utilizes the beginning, middle, and end view of the past and requires the temporal placement

of two events in order to create a chronology (Ramenofsky 1998:79; see also Stoltman 1978 for a discussion on temporal dimensions in prehistoric archaeology). In culture history, such chronologies were constructed by seriating artifact forms. Interval scales, on the other hand, refer to those that are defined by absolute methods such as radiocarbon dating and the assignment of a particular artifact to a particular time or cultural period. Because there is no absolute zero in this type of scale and because “numbers create the divisions between units in interval scale chronologies...the resulting units are typically finer-grained than ordinal scale [chronologies]” (Ramenofsky 1998:80). It is this factor that allows interval scale chronologies to be easily manipulated by archaeologists; the scale used for viewing the past can always be changed and the chronology is based on how far apart the individual units are from one another. The same cannot be said of ordinal scale chronologies where the chronology is defined in terms of how its parts relate in order and duration. However, Ramenofsky (1998:80) notes that for the most part, while archaeologists are concerned with interval scale data because “the gain in exactness afforded by interval-scale temporal units is both attractive and desirable...we have confused the exactness of interval scale measurements with the assessment of accuracy and validity.” Archaeologists assume that using an interval scale to divide the past is viable because the accuracy of the result masks the bias that creates such divisions (Arnold 2008). Figure 1 illustrates Ramenofsky’s point: moving components of the archaeological record from an ordinal (Early, Middle, and Late) scale to interval scales creates more temporal divisions. While ordinal divisions of time do not change and are not malleable, interval divisions of time turn the archaeological record into a sort of telescope, where resolution depends upon the amount of focus or zoom being utilized. Interval time divisions can easily be switched from years to centuries to millennia and back.

As Ramenofsky (1998) implores, the degree of temporal resolution required by a chronology should be dictated by the nature of the research goals. She asserts that while resolution and accuracy are important aspects of chronology, it is the validity of a chronology that drives its selection. Validity, in this sense, is the degree of fit between temporal units (or chronologies and research goals (Ramenofsky 1998:75). Thus, the key to determining which chronology to use lies in assessing research questions and subsequently how well a given chronology allows for answering those questions. It is important to note, however, that this does not suggest that chronologies are arbitrary. In fact, quite the opposite is true. The idea that chronologies should be

built according to research goals provides more variability and flexibility among chronologies because they do not have to adhere to any one kind of chronological framework. The key to making this work is the facilitation of explicit communication among archaeologists about how chronologies are constructed and what the terminology used indicates.

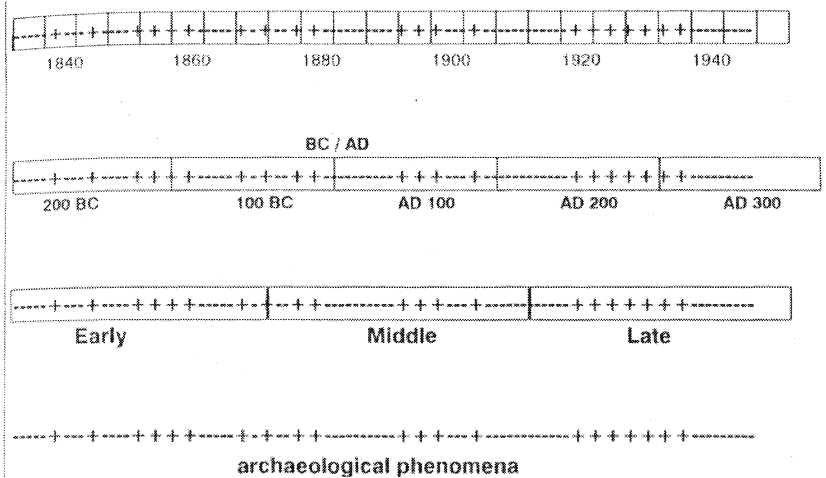


Figure 1. The division of the archaeological units into ordinal and interval time scales (Ramenofsky 1998:80).

The Concern for Archaeology

The use of chronology in archaeology is problematic. This is likely due to the imposition of a rigid chronological framework on the archaeological record and the interpretation of that record by proponents of culture history, as well as the failure to effectively communicate what chronologies mean, how they are constructed, and for what purpose(s) they are created. Culture history, as discussed above, has somewhat arbitrarily determined the temporal dimensions through which the past is to be perceived thereby forcing the archaeological record and the people who created it into this constructed dimension. I will reiterate that culture history has done nothing wrong in this sense; in fact culture history and its framework have made it easy to understand the generalized history of North America so that all people who study the continent's past with vested interest have a general understanding of how things were prior to the

present time. This said, the problem with culture history's chronology lies in the fact that archaeologists do not force themselves out of this chronological framework, often (if not always) to the detriment of the people and artifacts they study. During the period in archaeology when culture history was being conducted, research questions focused on understanding how culture(s) changed through time, systematically. Archaeologists of this era wanted to know when one group originated, changed, or ceased, when technologies changed, when ideas diffused, what religious or symbolic rituals belonged to which group, and so on and so forth. However, as the field of archaeology has evolved, so too have the research questions being considered. Research questions are currently shifting to those of a more ethereal nature than they were before. Now, archaeologists recognize (or should recognize) that culture and cultural traits are fluid. In this light, research questions have begun to incorporate this fluidity by examining, among many other things, mobility patterns, social or cultural interactions, trade networks, trait diffusion, political catchments, identity, resistance, and the overlap of geographic locations of various cultural groups. The current perception of how people lived in the past is changing, and with this realization, so must the chronological framework under which archaeologists study those people.

Partly, this is an issue of how chronologies are created. Archaeologists tend to conflate or fail to make explicit the difference between relative and absolute dating and which technique is appropriate for which research questions. Both relative and absolute temporal units are at work in chronologies and as archaeologists use, construct, and/or compare these chronologies, often they do not recognize that these different temporal units exist and thus, confuse them. For example, while the Woodland Period is relatively dated to Early, Middle, and Late Woodland traditions or phases based on cultural traits, these phases are also dated absolutely via radiocarbon dating of occupations to roughly 1500 B.C. - A.D. 100, A.D. 100 - 500, and A.D. 500 - 1000 (Burks 2005:41). These relative and absolute temporal units are then used interchangeably by archaeologists who do not recognize their inherent differences. This is commonly caused by inappropriate validations and assessments of chronologies. It appears that the main temporal problem in archaeology, then, is the failure of archaeologists to "address the conceptual coherence between research goals and unit concepts" (Ramenofsky 1998:75).

Woodland Chronology as a Case Study

The chronology of the Woodland Period that is most widely used was created in the early to middle 20th century by McKern (1939) and expanded upon by Deuel (1935), and Griffin (1943) (Stoltman 1978:707; Mason 1970). Two other chronologies exist for this period, one proposed by Willey (1966) based on mound-building and one by Stoltman (1978) based on a “pan-Eastern temporal model” (Stoltman 1978:711), though these are not often utilized. The McKern chronology was based, mostly, on the formal attributes of different types of ceramics, a fact that Mason (1970:805) finds problematic. Mason (1970:805) also points out that each chronological unit within this framework is used in several different ways: a cultural typology, a map of historical continuity and descent, the name of an interval of time, and a step in an evolutionary sequence. Rarely though, Mason (1970:807) says, “are the foregoing discriminations made explicit. Rather, the sense of the terminology is implicit in the way it is used.” Additionally, Struever (1965:211), in his discussion of Middle Woodland culture history, addressed how difficult it is to create a chronology that attempts to “incorporate a number of formally and structurally diverse complexes into a single cultural designation.” While he meant this to speak directly to identifying Hopewell expressions across the Eastern Woodlands and Great Lakes regions, it can be applied to the chronology of the Woodland Period as a whole.

The Woodland Period, as noted earlier, lasted from approximately 1500 B.C. to A.D. 1000 and encompassed three major traditions or phases punctuated by various cultural horizons (see Applegate 2005). The Early Woodland tradition lasted from approximately 1500 B.C. until A.D. 100. The latter part of this tradition is known by the presence of a mound-building culture known as the Adena who lived throughout the Ohio River Valley.

The Middle Woodland tradition lasted from approximately A.D. 100-500. During this tradition, the Hopewell, also a mound- and earthwork-building culture, flourished throughout the Eastern Woodlands from a “Hopewellian core” in the Ohio River Valley, of south-central Ohio. This group of people displayed elaborate ceremonialism, mortuary rituals, and symbolism. They built massive earthen monuments to honor their dead, to observe astronomical and cosmological events such as the winter and spring solstices and summer and autumnal equinoxes, and to serve as general cultural landmarks. The Hopewell had an impressive presence in the region at

this time, influencing other cultures in far-reaching corners of eastern North America.

The Late Woodland tradition lasted from A.D. 500-1000 and is marked by the decline of the distinctly-Hopewellian mortuary ceremonialism and the presence of the Fort Ancient culture in the Ohio River Valley. Early Late Woodland groups were present in the Eastern Woodlands, south into what is now Florida. The Fort Ancient people did engage in some mound- and earthwork-building although not to the degree to which earlier groups had and their burials occurred in cemetery rather than mound settings (Charles 1992). This was a dynamic period that saw the introduction of bow-and-arrow technology and the furthering of agricultural production. The people living during this time were generally part of distinct, geographically separate groups who did not participate in trade on the scale that earlier Woodland cultures had.

This particular chronology was created to explain why and where archaeological remains attributed to certain groups of people were found. Archaeologists wanted to know who was living where and when, what cultural materials those people had, and how that cultural material reflected their lives, specifically, the ceremonial/religious aspects of their lives. The key to understanding this chronology is to recognize the desire on the part of archaeologists to inform interpretation of the ceremonialism exhibited in the archaeological record. It was research questions of this nature that guided the establishment of the Woodland Period chronology that archaeologists employ with “insufficient attention to the unfortunate fact that that system has been made to serve, concurrently, several diverse needs with little explicit realization of that fact” (Mason 1970:804). Currently, because this chronology is so ingrained in the [culture of] the archaeology of this region, it is nearly impossible and practically frowned upon to diverge from this chronological framework. As Jarrod Burks (2005) notes, it is virtually impossible to talk about Woodland Period archaeology without falling back on its historically employed chronological terminology.

Problems in Woodland Period Chronology

There are two problems with the current chronological framework in Woodland Period archaeology. First, archaeologists in this area use the chronological terminologies interchangeably, even though an ordered chronology has been established. To illustrate this problem, Burks (2005:45) uses the example of the term “Hopewell,” a

cultural horizon, being used synonymously with the term Middle Woodland, a cultural tradition. According to Willey and Phillips (1958:29-34, emphasis added), a horizon is a “ primarily *spatial* continuity represented by cultural traits and assemblages whose nature and mode of occurrence permit the assumption of a broad and rapid spread,” while a tradition is a “*temporal* continuity represented by persistent configurations in single technologies or other systems of related forms.” Currently, saying that an artifact, feature, or site is attributed to the Hopewell automatically attributes it to the Middle Woodland and vice versa. However, as many archaeologists know, this is not always the case. Declaring that a Hopewell artifact certainly came from the Middle Woodland is not necessarily true given that the dates attributed to the Hopewell are in constant flux; conversely, pronouncing that a Middle Woodland artifact is most definitely a Hopewell artifact could be false for the same reason.

Burks (2005:45) goes on to note, “[u]sing time period terminology...is problematic when all of the cultural baggage that goes along with, for example, Hopewell comes to dominate the way we think about all archaeological deposits from the Middle Woodland Period.” To alleviate this problem, Burks suggests creating a taxonomy that applies at a scale smaller than the region, for example, the river drainage. While this is a perfectly acceptable solution, it is only a temporary fix: it moves a problem that exists on a large scale to a smaller scale, creating one that exists at the level of the locality rather than the level of the region with all the same problems as before. Because of these interchangeable chronological terms, there can never be any agreement about what they mean and this is the heart of the chronology problem in Woodland Period archaeology. Ramenofsky (1998:81) comments on the debate on the peopling of the Americas which can be applied to the issues at hand: “[t]he principals in this debate are using different types of assessment and, as a result, are talking past each other. There can be no consensus in this situation.”

The second issue, mentioned earlier in this discussion, is that of the variable nature of humans and cultural change and how difficult this can be to evaluate via the current framework of chronology. Burks (2005:45) concedes, “[m]any trends seen in Woodland cultural change occurred at different rates with variable starting and ending points across the Middle Ohio Valley.” Combined with the problem of interchangeable chronological units, it becomes nearly impossible to adequately investigate Woodland Period people across space and through time. Struever (1965:222) notes, “[i]f Middle Woodland archaeology is to reach beyond the descriptive to the explanatory level

of interpretation, consideration must be given to delineating adaptations and the relevant causal relationships of factors involved in adaptive change.” Though his discussion focuses on the Middle Woodland tradition, this sentiment can be applied to Woodland Period archaeology as a whole; the chronological framework as it is currently applied does not allow for investigating cultural change that works beyond the level of typology.

Sieg and Hollinger (2005:127-128) identify additional problems with Woodland Period chronology, specifically regarding the Middle Woodland tradition and Hopewell horizon. First, these authors take issue with the fact that many of the “archaeological units” employed today (i.e. Adena, Hopewell, etc.) were defined before the implementation of a formal taxonomic system. Because of this, Hopewell, for example, was instead defined through an “expanding set of exotic goods skewed toward mortuary and ceremonial objects” (Sieg and Hollinger 2005:127). This always increasing number of artifacts displaying formal Hopewell attributes led to the identification of Hopewell sites throughout a large geographic area, and thus, leading to the belief that these traits were widely diffused. This could very well have been due to the far-reaching trade networks the Hopewell were known to have participated in or the misattribution of certain traits to the Hopewell (Mason 1970). To deal with these problems, Sieg and Hollinger assert that there should be two types of chronology: one that focuses on formal traits and another that focuses on fluid and historical patterns of the archaeological record as “this system allows...for the ‘interplay’ of time/space and the archaeological record; it is conceived in terms of integration, rather than rigid distinctions” (Sieg and Hollinger 2005:125).

Even without the conflated problem of interchangeable terminology, the established chronology for the Woodland Period seems unable to account for cultural diffusion, change through time, and non-time driven factors such as population change and how population increase affected mortuary ceremonialism. Several archaeologists have devoted time and energy to answering this question (Applegate and Mainfort 2005). As of yet, it does not seem that Woodland chronology, as it is currently constructed, adequately deals with regional variation as the chronology is not divided into regional variants. Nor does this chronology begin to assess how site reuse, a phenomenon that was clearly occurring as evidenced by the presence of artifact types of varying ages and radiocarbon dates that demonstrate periods of occupation at certain times at certain sites, can and does affect the chronological parameters assigned to those sites. Figure 2

provides an excellent example of site reuse by demonstrating that several distinct groups of people utilized the earthworks located at Hopeton, Ross County, Ohio (Lynott and Mandel 2006).

Furthermore, this chronological framework cannot begin to assess how social memory and the use of landscape features (namely, earthworks and mounds) would affect the assignment of these features to a chronological period. When cultural items are used over and over by several groups of people, how does an archaeologist determine the ownership of these items by a cultural group let alone a temporal unit? The Woodland Period chronology, and others like it, makes it difficult to see and utilize overlaps in temporal and cultural units. N'omi Greber (2005) points out the cultural overlap between the Adena and Hopewell horizons. She stresses that "[t]he task of defining appropriate units of time and space to organize the overlap and diversity seen in the archaeological cultural remains in local, regional, and wider contexts" (Greber 2005:20). To further exemplify the problem, Burks (2005:51), states that "settlement nucleation may have been precipitated by changes in the Adena populations and their interactions with the peripheral Hopewell populations, rather than changes intrinsic to the core Hopewell populations." Thus, the overlapping of cultural units may have played an important role in cultural change in this area throughout time and space. The chronological framework that is used to assess this, however, does not allow for such overlap.

Also problematic is the fact that the current chronological framework does not adapt to the changing face of research in this area. Until the last 20 or 30 years, archaeology of the Woodland Period focused grossly on the acquisition of information on the ceremonial and religious aspects of these prehistoric peoples' lives, what Bradley (1991) refers to as "ritual time." As Burks (2005:44) states, "[m]ortuary ceremonialism is the primary means for defining our temporal taxonomic units in central Ohio. This is mostly due to an overemphasis on the excavation of mounds [and earthworks] in the last 150 years." The overemphasis is being rectified, though, in the light of recent investigations into Middle Woodland habitation sites throughout south-central Ohio and beyond with work by Dancey and Pacheco (1997), Dancey (1998), Pacheco (1996), Pruffer (1996, 1997), Seaman (1979), Struever and Hoart (1972), and others. The work of these authors serves to broaden the base of knowledge on Middle Woodland peoples and opens up new avenues of research. However, the chronological framework set up to deal with Woodland Period mortuary ceremonialism is not the same framework that can deal with this new area of research, yet archaeologists still use it. This is

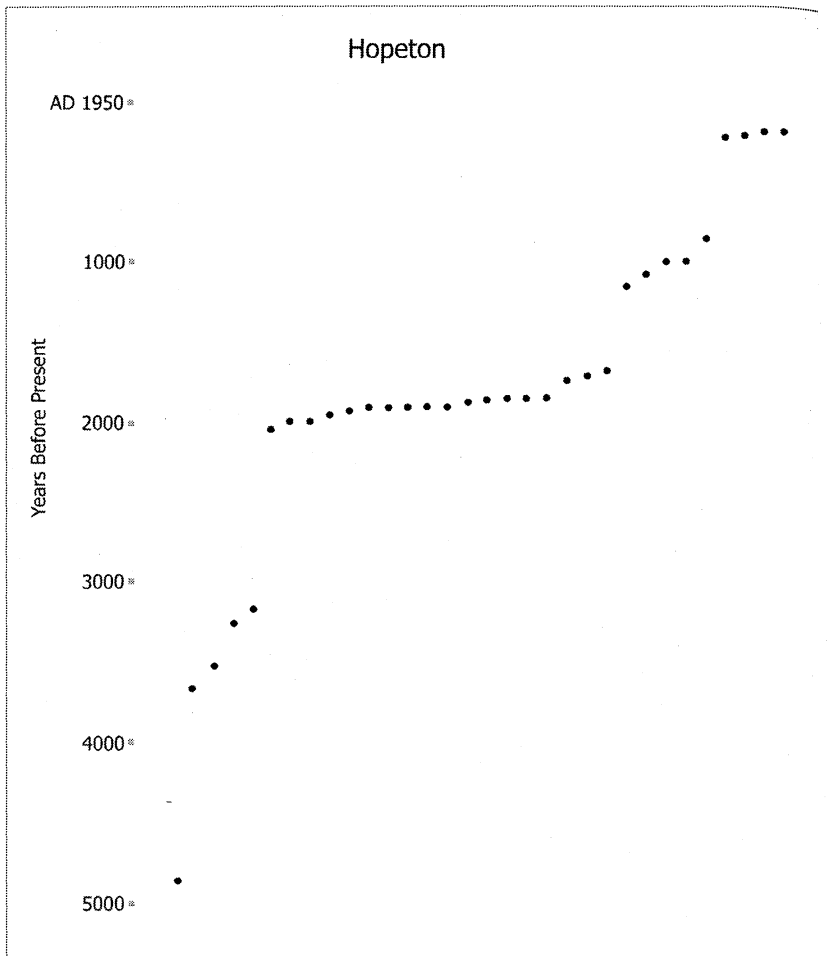


Figure 2. Distinct sets of radiocarbon dates from the Hopeton Earthworks. These dates indicate four separate occupations and period of use of this site (Lynott and Mandel 2006).

evidenced by Burks' (2005:50) assertion that "[b]ecause nucleation [settlement] has traditionally been regarded as an early Late Woodland phenomenon, we seldom, if ever, look for mechanisms of change in sites placed into the Early Woodland taxa." To restate the call Ramenofsky (1998:82-83) makes toward making chronologies match research goals:

traits used to build chronologies are temporally sensitive, and the resulting orders and the degree of temporal resolution are contingent on what we want to know...making unit construction dependent on the research goals may be the simplest way to separate natural from scientific thinking and time from chronology.

What can we do? Discussion and Conclusion

The real question remains to be asked: how can archaeologists change the current chronology and make it useful and viable in Woodland Period archaeology as it is being conducted today? First, an adjustment must be made to current and historical views on how cultures change through time and across space. In this view, it is important to remember that cultural change occurs over periods of time, whether long or short, and are often rooted farther back in time than the physical manifestations of that change as seen in the archaeological record. To this end, Sieg and Hollinger (2005:126) suggest using the idea of the Hopewell Interaction Sphere to explain the “widespread distribution of similar mortuary activities, exotic mortuary goods, and distinctive styles in the Middle Woodland period...the interactions among separate societies...resulting in what appears to be a distinctive set of phenomena.

Second, as archaeology in this area of the world continues to be conducted, it is always changing; the research questions being asked, the methodologies being implemented, and the base of information on the people who lived during the Woodland Period are constantly being reworked. As such, more chronologies need to be created in order to deal with this influx of complex and disorganized data. This is likely the only tool archaeologists have to guard against falling into the trap of manipulating data to fit into a chronology that was created many years ago, prior to the advent of modern excavation and scientific techniques for use in archaeology and prior to the gathering of all the culture-historical data that allows them to investigate cultural questions beyond those basics. As Brew (1946 as quoted by Ramenofsky 1998:84) states, “we need more rather than fewer classifications, different classifications, always new classifications to meet new needs” and I wholeheartedly agree. The key to this recommendation, however, is the constant validation of these new chronologies for “the validity of [the] concept is contingent on its success as a research device” (Butler 1965).

While I do not deny that creating additional chronologies will complicate the cross-comparison of archaeological data, I believe that as long as archaeologists are *absolutely explicit* about what their chronologies are, how they were constructed, what research questions they were designed to answer, and how the chronological units are defined, there should be no problem. It is in their reification of chronology and failure to be transparent that archaeologists get bogged down in the conflationary nature of chronology and the creation and use of chronological frameworks. As a capstone to this argument, chronologies must always be assessed and validated for their usefulness and ability to answer research questions. "Rather than assuming that time and chronology are closed issues, that we have successfully divided time for all time," every new research question warrants a revised chronological perspective of the temporal scale from which the archaeological record was constructed (Ramenofsky 1998:84).

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