THE OBERSCLAKE #1 SITE: AN APPLICATION OF HEIDEGGERRIAN MATERIALITY TO ARCHAEOLOGICAL ANALYSIS

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Most sites in a traditional sense represent domestic or activity loci from which the exploitation of the surrounding environment took place. Using *site* to structure recovery limits data collection to a small fraction of the total area occupied by any past cultural system and systematically excludes nearly all direct evidence of the actual articulation between people and their environment (Dunnell and Dancey 1983:271-272).

The above quote from Robert Dunnell and William Dancey illustrates a problem facing many archaeologists. Although the goal of archaeology is to understand past human behavior, we are often handicapped in our pursuit of that goal by the way in which we organize our data sets. By drawing boundaries around a site, we force ourselves to regard a place in which human activity has left material traces as a self-contained unit.

Although Dunnell and Dancey (1983) provide suggestions for alternative approaches, their recommended methods are useful largely in regional studies, or studies in which one has free access to large areas of land (see also Sullivan et al. 2007). For most archaeologists, the site will continue to form the base unit of archaeological fieldwork. This is especially true in cultural resource management, where the unit of the site is codified in regulations prescribing methods for dealing with historic resources.
Faced with retaining the site as a unit, we must look for other ways to extend our analysis. This is one of the goals of the landscape approach. Of course, landscape, which Gosden and Head (1994) labeled a “usefully ambiguous concept”, means different things to different people (cf. Anscheutz et al. 2001; Ashmore 2002; Gosden and Head 1994). Landscape approaches might include such goals as documenting settlement systems and patterns of movement and migration (cf. Crumley 1994; Drennan 1998; Lovis et al. 2006; Peterson and Drennan 2005; Wandsnider 1998). As Anscheutz et al. (2001:158) point out, in many of these analyses, landscape becomes synonymous with the natural environment, an unchanging, or slowly changing, backdrop against which people move and to which they adapt.

More recent approaches see the landscape as an active component of human life. Gosden and Head (1994:114), for example, state that “landscape is more than the stage setting for human action. Landscapes are both created and creating.” Landscapes are a component of human life to which humans react, even as their actions result in modifications to it. So whereas previous landscape approaches attempted to look at how people engage with their surroundings, these newer approaches attempt to look at human-landscape interaction as an ever changing component of life.

Both types of approaches can move archaeological analysis beyond a single discreet site, however, the concept of the site is generally retained. This
limits these studies to analyses of self-contained units interacting with one
another, and with vast spaces of inaction between them. Thus, the problem of
excluding “nearly all direct evidence of the actual articulation between people and
their environment” (Dunnell and Dancey 1983:271-272) persists.

As much as we might like to look at the totality of human-landscape
interaction, most archaeologists must continue to excavate individual, artificially
bounded sites. While it remains a goal to incorporate these sites into region
landscapes and patterns of human action, it is often not possible to fully
understand, based on these discreet nodes of human activity, how past people
experienced the landscape in which they lived. What follows is an attempt to do
so using the phenomenological hermeneutics of Martin Heidegger as applied to
the Oberschlake #1 site, a small archaeological site from the Ohio Valley.

The Oberschlake #1 Site

The Oberschlake #1 Site (33CT648) was located in Clermont County,
Ohio, just west of the town of Bethel (Figure 1), along a moderately sloping ridge
which overlooks a perennial stream called Poplar Creek to the north and west. To
the northeast of the site, the ridge rises an additional 4 m to 5 m and flattens out
into a broad upland plain (Schwarz et al. 2005:7). The ridge is surrounded on the
north, west, and south sides by Poplar Creek and Guest Run, which meet just
south of the site. Poplar Creek joins the Little Miami River approximately 20 km north of the site. Additional archaeological sites were located both on the adjacent upland plain ridge, and on the floodplain on the opposite side of Poplar Creek. These sites were identified during an archaeological reconnaissance conducted in advance of a road realignment project (Sewell 2004), and it is likely that additional, undocumented sites exist in the immediate vicinity.

The reconnaissance included shovel testing and the partial excavation of a feature at the Oberschlake #1 Site. Charcoal samples from this feature produced Late Archaic dates (Beta # 191925: conventional radiocarbon age of 3920±50 B.P.; Beta # 196896: conventional radiocarbon age of 4190±120 B.P.).

Subsequent testing of the site was guided by the results of geophysical survey, which consisted of a magnetic gradient survey conducted in 14-20-m-by-20-m blocks, encompassing a
total of 5,600 m². The magnetic survey located 57 magnetic anomalies, which were ranked according to the likelihood that the anomaly corresponded to a subsurface feature (Z-score). Ground-truthing activities included test pit excavations at seven of these magnetic anomalies, which confirmed five to be one or more prehistoric features. Five features were partially excavated (Schwartz et al. 2005).

Figure 2. Map of the Oberschlake #1 Site showing the locations of magnetic anomalies.
Because there were no diagnostic artifacts to support a Late Woodland occupation, this date was, at the time, believed to be anomalous, or representative of an inconsequential occupation. The research design that guided the later excavations was prepared to document the function of the Oberschlake #1 Site so that its place within a broader Late Archaic settlement system could be inferred.

Late Archaic period research throughout the Eastern Woodlands is based largely on the concept of the seasonal fission and fusion of social groups in response to spatial and temporal variability in resource availability (Boisvert 1986:1). This idea has a long history, beginning with the early research of Parker (1923) and Ritchie (1932a, 1932b) at the Lamoka Lake site in New York State. Over time, the idea has been adapted to the Eastern Woodlands generally (Willey 1968) and to the Late/Terminal Archaic in the Ohio Valley specifically (Janzen 1977; Stafford 1994; Vickery 1976, 1978, 1980; Winters 1969). The basic model involves large social groups (e.g., macrobands) that aggregated near abundant resources during part of the year, while smaller groups (e.g., microbands) split off from the larger group to exploit resource patches that were unevenly distributed across the landscape and through the seasons (Stafford 1994). In the Central Ohio Valley, this notion is perhaps best expressed in Vickery’s (1976, 1980) and Janzen’s (1977) models of Late/Terminal Archaic settlement and subsistence in the Ohio Valley region.
The small sites are interpreted as representing special purpose resource extraction sites, however, the resources being extracted and season during which that extraction is taking place are rarely documented. The lack of information concerning specific site function represents the primary difficulty in placing small sites within this larger settlement pattern. It is clear that the Late Archaic settlement pattern included large and small sites. The goal of the research at the Oberschlake #1 Site was to provide information concerning seasonality, plants and/or animals being exploited, and whether the site was a generalized habitation site, or a site utilized for a specific, short-term purpose, such as processing nuts.

In order to address these goals, field work focused on investigating the magnetic anomalies identified during the testing phase of the work. A pan scraper was used to remove the plow zone on that portion of the landform that contained the anomalies. In many cases, a single magnetic anomaly corresponded to multiple subsurface features. These features were identified, recorded, and excavated. Flotation samples were taken from each feature excavated for the purposes of recovering paleobotanical remains.

Field crews excavated 106 features at the site (Figure 3), including ten post molds, eight probable midden remnants, a fire-cracked rock cluster, and two possible tree throws. Post molds were widely distributed and formed no identifiable pattern. The remaining eighty-five features excavated were some variation on a round or oval pit or basin, measuring between 50 and 150 cm in
diameter. Many of these basin-type features had clay or fire-hardened earthen liners.

Figure 3. Feature locations at the Oberschlake #1 Site.

A total of 2916 chipped stone artifacts were recovered from these features, including debitage (97 percent), projectile points (2 percent), and other bifacial tools (2 percent). Cores and retouched flakes comprise less than 1 percent respectively. Projectile points include forms considered diagnostic of the Early Archaic, Late Archaic, Middle Woodland, Late Woodland, and Late Prehistoric periods. Fifteen ground/pecked/battered stone artifacts were also recovered, including five pitted stones, four hammerstones/battered cobbles, a three-quarter grooved axe, a bell pestle, and two unidentified implements. A total of 131
ceramic sherds were recovered. Unfortunately, only eleven of these were large enough (>4 cm²) to allow any formal analysis. These eleven appear to be consistent with known Late Woodland types in the region. Faunal remains were limited to four bone fragments, of which two were identified as white-tail deer (*Odocoileus virginianus*). Finally, 3405 fragments of fire-cracked rock massing 159.65 kg were recovered. This represents 51 percent of the overall assemblage.

The artifact assemblage from the Oberschlake #1 Site is indicates a narrow range of activities. The ratio of finished tools to debitage is high, and the debitage is characteristic of late stage bifacial reduction and edge modification. These factors suggest that tools were maintained at the site, but few, if any, tools were manufactured there. Usewear analysis on the formal tools indicates that they were used for hunting, hide-processing, and wood-working, however, the presence of these artifacts at the site does not necessarily indicate that these activities occurred there. The three-quarter grooved axe also suggests that some type of woodworking might have occurred at the site, however, the most common groundstone artifacts are the pitted stones. Such pits form on stones as a result of their use as anvils for cracking nutshells (Talalay et al. 1984). This activity is confirmed by the paleobotanical evidence.

Botanical remains identified included two bramble (*Rubus* sp.) seeds, two fragments of squash (*Cucurbita* sp.) rind, 2700 fragments of unidentified wood charcoal massing a total of 47.20 g, and 3371 fragments of nutshell, massing a
total of 52.22 g. Of the nutshell fragments that could be identified, 88 percent are hickory (*Carya* sp., n=241), 8 percent are black walnut (*Juglans nigra*; n=23), and 3 percent (n=10) are identified as members of the family Juglandaceae. The overwhelming presence of hickory nutshells indicates that these were the focus of the activity at the site.

Although this type of data was precisely what is needed to place the site into the Late Archaic settlement pattern that was discussed above, temporally diagnostic projectile points indicate that the site was used in other time periods as well. This was confirmed by the radiocarbon assays that were conducted on 35 samples collected from 24 different features (Figure 4). With the exception of small gaps from 3800 BP to 3200 BP, from 2900 BP to 2150 BP, and from 1300 BP to 750 BP, radiocarbon dates show that the site was utilized consistently from 4750 BP to 500 BP. The presence of Early Archaic projectile points potentially extends this time frame to some time prior to 7500 B.P.

Although the data allowed for the site to be placed into a Late Archaic settlement pattern, the site was used both before and after this time period. The Early Archaic occupation is represented only by projectile points recovered from the surface, however, features are known to date from the Late Archaic through the Late Prehistoric periods. The question, then, is how to incorporate this small nut-processing site into the variety of settlement patterns that were presumably employed during the varying time periods.
Figure 4. Radiocarbon dates from the Oberschlake #1 site.

Of Settlement Patterns and Hickory Nuts

Nutmast began to form an important component of the diet during the Middle and Late Archaic periods (Gremillion 1994:104). Middle Archaic subsistence patterns are generally thought to correspond to Binford’s (1980) “forager” pattern. According to Binford (1980:5), groups that employ a foraging strategy make seasonal residential moves between “patches” of resources. The seasonal residential base is located near one of these patches, and foragers range
out from the base collecting resources on an “encounter” basis (Binford 1980:5). Typically, food is not stored, and daily gathering trips are necessary. In contrast to foragers, collectors store food during at least some season of the year and are have “logistically organized food-procurement parties” (Binford 1980:10). These parties leave the residential camp to procure specific resources at specific, known locations. These resources are processed in the field, and the produce returned to the residential camp. The fission-fusion pattern that developed during the Late Archaic period is an example of this.

During the Early and Middle Woodland periods, people lived in semi-sedentary hamlets located near gardens and other primary resource zones (Railey 1991; Dancey and Pacheco 1997). Nutmasts, especially hickory nuts, continued to be an important dietary resource, although the now widespread use of ceramics, is likely to have changed the way in which nuts were processed (Wymer 1997). The Late Woodland and Late Prehistoric periods were times of settled village life, during which native domestics such as maygrass (*Phalaris caroliniana*), chenopods (*Chenopodium* spp.), sunflower (*Helianthus annua*) and squash, and later, maize (*Zea maize*), beans (*Phaseolus vulgaris*), and squash, constituted the dietary staples (Seeman and Dancey 2000; Pollack and Henderson 2000). Nuts remained an important resource during the Late Woodland, but declined in significance during the late prehistoric period.
Hickory nuts are generally gathered after they begin to fall to the ground, usually about the first week of October (Talalay et al. 1984:344-345). Once they fall to the ground, humans must compete with squirrels, deer, and other animals for the nuts, however, they may be available as late as the end of November (Talalay et al. 984:345). Of course, these are generalized dates, and the ripening of the mast may vary depending upon weather conditions.

Ethnographic accounts and experiments (Talalay et al. 1984) suggest that the most common method for processing hickory nuts was to smash the nuts using a nutting stone and hammerstone, or with a mortar and pestle, and to place the smashed nuts into boiling water. After a time, the nut shells sink to the bottom of the container, while the nut meats and oil rise to the top. The nut meats are removed, dried, and ground into meal. The oil is skimmed off the surface, and stored for later use. Finally, the process turns the water used into “nut milk”, which is also consumed. This entire process could be accomplished in a ceramic container or in a pit lined with clay, skin, or otherwise made watertight. In the latter case, the water would be brought to a boil using heated stones. This method seems to have predominated during all periods at the Oberschlake #1 Site, as is evidence by the lack of ceramics and the abundance of pit and basin features and fire-cracked rock.

The use of the Oberschlake #1 Site over the course of 4000 years is notable because of the changes that occurred in the subsistence strategies of
people over this span. Of course, the Oberschlake #1 Site was not the location of annual nut processing activities. If this were the case, there would be thousands of features, rather than 106. So, how can we explain the persistent, but not consistent, use of this location over such an extended period of time? In order to answer this question, we must look beyond the limits of the Oberschlake #1 Site itself, despite our lack of physical data.

Heideggerian Materiality

One popular landscape-based approach to archaeology is known as the “dwelling” perspective. The idea was first fully described by Heidegger in an essay called “Building Dwelling Thinking”, published in a 1971 collection titled Poetry, Language, Thought. Heidegger’s original idea was later combined with elements of practice theory, resulting in the variation of this idea that authors such as Tim Ingold (2000), Chris Gosden (1994), Julian Thomas (1998), and Christopher Tilley (994) have incorporated into their analyses. This variation was summarized succinctly by Tim Ingold (2000:186):

What it means is that the forms people build, whether in the imagination or on the ground, arise within the current of their involved activity, in the specific relational contexts of their practical engagement with their surroundings.
For Heidegger, as well as for other authors such as Basso (1996), dwelling extends beyond the built environment, and includes any place to which meaning has been given. The concept of dwelling arises from Heidegger’s conception of human engagement with the world. Heidegger’s description of this is long and full of neologisms, however, I will attempt to explain it briefly.

Where Ingold uses the phrase “relational contexts of their practical engagement with their surroundings” in the quote above, Heidegger would use the phrase “being-in-the-world”. Being-in-the-world means existing within the world in the spatial sense, but it also means being amongst or amidst. Cartesian space is not a part of the “world”, because the world is composed of a set of concernful relations that a person [Dasein] has with other entities. Spatiality, however, is accessible in the world as the closeness-farness of entities in relation to a person. Spatiality, then, is determined by a person’s concernful relations with the entities that exist in the world, and is, therefore, an experience rather than a thing.

According to Heidegger, concernful relations can be of one of two types. Something is either present-at-hand” [Vorhanden], or it is “ready-to-hand” ” [Zuhanden].

“Presence-at-hand” refers to the kind of Being that a thing has when one considers it without reference to its possible uses, but as a thing in itself, as a scientist might consider an object. According to Heidegger, the subject-object relationship that a person has with something that is “present-at-hand” is not the
normal way in which a person experiences the world. Rather, in going about ones daily activities, one makes use of various equipment (*das Zeug*). Equipment is always a collective noun, and is used to refer to things that are used in association with other things for the accomplishment of a task. As a result, equipment is considered in the context of what it is “in-order-to”, the task for which it is employed. Heidegger uses the example of a hammer.

In dealings such as this, where something is put to use, our concern subordinates itself to the “in-order-to” which is constitutive for the equipment we are employing at the time; the less we just stare at the hammer-Thing, and the more we seize hold of it and use it, the more primordial does our relationship with it become…This kind of Being which equipment possesses…we call “*readiness-to-hand*” [*Zuhandeineheit*]…Dealings with equipment subordinate themselves to the manifold assignment of the ‘in-order-to’ (Heidegger 1962:98).

In the case of the hammer, the “in-order-to” is primarily hammering, although it could be any task to which the hammer is applied. Furthermore, “[t]he work to be produced, as the ‘*towards-which*’ of such things as the hammer, the plane, the needle, likewise has the kind of Being that belongs to equipment” (Heidegger 1962:99). We can extend this type of analysis to archaeological questions by considering objects in the same way that their producers and users experienced them, as equipment. Because equipment, and the work that it does,
has the type of being that is called “ready-to-hand”, it is not typically experienced in terms other than how it relates to the “towards-which” or “in-order-to” of the task at hand. The presence of these objects is evidence of the concernful relations that people have with them, and the tasks to which they are put.

It is not enough, however, to understand how those how engaged in these concernful relations might have understood them. It is also necessary to understand the spatiality of these things. If an archaeological site consists of the material remnants of activities that occurred as a part of the concernful relations of a person with equipment ready-at-hand, then the spatiality of the distribution of this equipment must also be understood as a set of concernful relations. This is in direct contrast to the non-circumspective perspective of the all seeing cartographic eye that archaeologists have traditionally employed.

When space is discovered non-circumspectively by just looking at it, the environmental regions get neutralized into pure dimensions. Places—and indeed the whole circumspectively oriented totality of places belonging to equipment ready-to-hand—get reduced to a multiplicity of positions for random things. The spatiality of what is ready-to-hand within the world loses its involvement character, and so does the ready-at-hand. The world loses its specific aroundness; the environment becomes the world of Nature. The ‘world’, as a totality of equipment ready-to-hand, becomes spatialized [verräumlicht] to a context of extended Things which are just
present-at-hand and no more. The homogenous space of Nature shows itself only when the entities we encounter are discovered in such a way that the worldly character of the ready-to-hand gets specifically deprived of its worldhood (Heidegger 1963:147).

Stated another way, when we examine the components of the site as things in space (non-circumspectively), we lose the social and behavioral context of these things, and thus reduce them to objects, rather than seeing them as evidence of the concernful relations that produced them. They are reduced to objects devoid of social meaning (objects present-at-hand). Likewise, when we examine a site (the totality of places belonging to equipment ready-at-hand in this environmental region) as a discreet entity, devoid of concernful relations beyond its boundary, we reduce the site as a whole to an object present-at-hand, devoid of its social importance.

Using a Heidggerian conception of materiality, it becomes possible to extend our analysis beyond the boundaries of the site because space, as we conceptualize it, does not exist in the day-to-day interactions with people and things. Rather, space is experienced as nearness and farness in a social or practical sense.
Discussion

In the case of the Oberschlake #1 Site, there is little evidence that any activities other than the processing of nuts occurred at the site at all. Because there is no evidence for generalized domestic activity, we can safely assume that people visited this location to engage in this specific activity. We know that stone tools were repaired and probably used, and we might assume that conversations were had, and perhaps that meals were eaten, however, these things took place as activities that were ancillary to nut processing. The “in-order-to” in this case is to process hickory and related nuts. It was in-order-to obtain the products of the hickory and other nuts that people engaged in concernful relations with equipment ready-at-hand at the Oberschlake #1 Site.

In Heideggerian terms, the “equipment” used to process the nuts might include nutting stones, hammer stones, ceramic containers, and heated rocks used for boiling water. We have almost no evidence, however, that ceramic vessels were used at the site. Rather, water was heated in pits dug into the ground. It is reasonable, then, to consider these pits to be a part of the “equipment” of nut processing. Furthermore, the pits required preparation, that is to say that they needed digging. The ground of the site itself is, therefore, “equipment” in these terms. All of these things are equipment used for the purposes of processing nuts.
We could conclude, therefore, that the Oberschlake #1 Site had certain characteristics that made it useful in nut processing. Very likely it is proximal to a grove of nut trees. It is proximal to water and to a source of stones for use in boiling. The soil conditions were adequate for excavating boiling pits. These characteristics give the Oberschlake #1 Site the same type of being as equipment ready-to-hand, that is that the people engaging in the activities of their daily lives considered the site to be a place only in terms of how it related to the “in-order-to”, processing nuts.

Understanding the social proximity of the Oberschlake #1 Site to other equipment (water, stones, nut trees) does not, of course, tell us where these other things were located. However, there are a couple of important things that it can tell us. The people who used the site for processing nuts were not concerned, primarily, with the terrace on which the site is located. Whatever the settlement and subsistence system was at the time, whether it was mobile foraging, logistical collecting, semi-sedentary gardening and collecting, or settled village life, people moved from some place to the grove of nut trees. Their presence on this particular landform was incidental.

Presumably, no one would argue that the people wandered aimlessly around the landscape year after year, and happened to encounter this grove of trees in October or early November. So, although the use of this landform might be incidental, there is a remarkable temporal continuity to this practice. For at
least 4000 years people came to this place, this grove of trees, at this time, October or November. Their movements were certainly scheduled, and were conducted in a way that brought them to this place at this time. This at least suggests some cultural continuity during this time.

The attentive reader will no doubt be thinking that 4000 years of repeated use of the site would have resulted in more than 106 features, and that there are breaks of hundreds of years in the radiocarbon dates from the sites. One might argue that if each and every feature were dated, that these gaps would be filled in, however, this is necessary only if the analysis is limited to this site. The place to which people were going was not the Oberschlake #1 Site, but the grove of trees. The site itself, is simply equipment.

As a result of this analysis, we can assume that there are other locations which served as equipment for processing nuts. Some of these might be comparable to the Oberschlake #1 Site in terms of size and complexity. Others might have been used many fewer times, and may be archaeologically invisible. It is possible, too, that in some years nuts were taken from the grove unprocessed, and processed at the habitation site. Nevertheless, this analysis has allowed us to identify the place that was of importance to the people whose activities created the Oberchlake #1 Site, even if we cannot locate it in “space”.
Conclusion

The research project described here was limited in its scope by the notion of *site*. An archaeological site was identified through survey, and subsequent research was conducted on that site to determine how the site fit into a regional settlement pattern, a pattern composed of other sites. Although we were able to identify the specific function of the site under investigation, and could even place it within the regional settlement pattern, the analysis remained incomplete. This is because our focus, as archaeologists, was on the site. However, an application of Heideggerian hermeneutics allowed us to extend our understanding of the actions that occurred at the site beyond its artificially created boundaries. We were, in a sense, able to reason our way out of the box that we created for ourselves by drawing a boundary around our area of inquiry. By adapting a Heideggerian materiality, we were able to circumspectively analyze past human actions, and by looking at them from inside, were able to extend our understanding to places on the landscape that were outside of our self-imposed limits.
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