

A Comparative Study of Human Mortuary Practices and Cultural Change in the Upper Midwest

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ABSTRACT

Death is an important part of life and societal identity, and forms a crucial part of the archaeological record. Yet many archaeologists have failed to analyze how the burial patterns change and grow throughout prehistory. The purpose of this paper is to analyze the patterns found in mortuary practices by looking at a series of burial sites spanning the Archaic through Oneota periods in the Upper Midwest. Archaic sites include the Riverside site (Menominee County, MI), Oconto site (Oconto County, WI), and Price Site III (Richland County, WI). The Woodland sites include Rehbein I site (Richland County, WI). Oneota sites include the Tremaine site (La Crosse County, WI), Hogback site (Houston County, MN), and Wilsey site (Houston County, MN). My hypothesis is that as societies develop through time, their mortuary practices will change in terms of the interment, orientation, and type, variety, and association of grave items with specific gender, age, and status. This analysis will uncover a better understanding of prehistoric peoples in the Upper Midwest, especially seen in the social organization during particular time periods.

INTRODUCTION

Burials can reveal a lot about a person, as well as the culture they came from. Though burials themselves have been studied, not many studies of a quantitative, temporal sequence for the Upper Midwest have been conducted. These types of studies can provide the data needed to focus on how individuals, as well as groups, are buried. From this, social organization of cultures can be looked at in a variety of ways. One such study could look at the burials of individuals to determine the elites of a society. Another study could focus on how age and sex play a role in cultures; attempting to find any preferential treatment of one age group or sex from others. The latter is the primary focus of this study. However, the study will also include the temporal sequence of the Upper Midwest for a comparison of practices through time, from the Archaic through the Oneota.

This paper looks specifically at seven burial sites from the Upper Midwest region (three Archaic, one Woodland, and three Oneota) for a comparative study of mortuary practices. Using a quantitative analysis of these burial sites, similarities and differences between cultural time periods were uncovered and allowed for an understanding of how these societies valued their dead. By looking at the patterns found within each site and comparatively to the rest, changes in practices throughout time will be observed, as well as the similarities between them. From the information gained from this study, a better understanding of social organization can be achieved. Specifically, this study will give insight on how each society is structured, in at least its most basic form. Also, a general knowledge of the existence of a separation between class, age, and sex will be detected.

BACKGROUND

Throughout the prehistory of North America, cultures change and evolve. These culture traditions include Paleo-Indian, Archaic, Woodland, and Oneota (Figure 1). The earliest known culture is the Paleo-Indian; a nomadic, big game hunting people that lived in small groups during the Ice Age. This culture is thought to span from the Pleistocene to the early Holocene and is split into the Early and Late periods. Early Paleo-Indians are characterized by fluted point technology, the best known ones include the Clovis and Folsom. Late Paleo-Indians are characterized by Cody or Plano cultures that used lance-shaped points (Mason 1997).

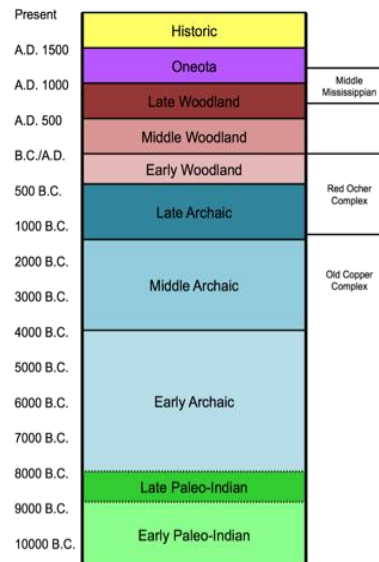


Figure 1. Shows a timeline of cultural traditions in the Upper Midwest.

The Archaic Tradition spanned between 8,000 and 500 B.C. and is often defined by four main characteristics. First, people during this time survived primarily by hunting and gathering. This culture followed the end of the ice age, when large game such as mammoths and mastodons had gone extinct and subsistence turned to white-tailed deer, elk, and occasionally bison. Second, the Archaic Tradition lacks in the manufacturing of pottery. However, the tradition does have chipped stone tools that are key identifiers of the tradition, which is the third characteristic. Finally, people of the Archaic buried their dead within natural areas and did not construct mounds (Stoltman 1997:114,119). Past research suggests that society was organized in an egalitarian, or classless, way (Theler and Boszhardt 2003:85). Archaic peoples are thought to have lived in small groupings, possibly only including the nuclear or extended family. These groupings were widely scattered and very mobile, which would have suited their hunting and gathering lifestyle well (Stoltman 1997:119). Prehistoric peoples of this time also participated in trade, which is evident through the exotic materials found in sites (Theler and Boszhardt 2003:89).

To expand further, the Archaic Tradition is split into three stages: Early, Middle, and Late. The Early Archaic was during the beginning of the rapid climate changes that were caused by the retreating of the glacial ice sheets that had once covered the region. By 3000 B.C. it is thought that the Middle Archaic stage was starting. Characterized by a large side-notched projectile point/knife, this stage also sees the beginnings of long-distance trade and a wide usage of copper. Lastly, a change in projectile point style from side-notched to corner-notched and small stemmed is characteristic of the Late Archaic. Also at this time there was a substantial decline in prehistoric peoples' use of copper to in utilitarian tools (Stoltman 1997).

The transition from Archaic to Woodland occurred at different times in different places, but is thought to span between 500 B.C. and A.D. 1200 in southern Wisconsin. Woodland people were still hunters and gatherers, as well as traders. However, they began to exploit their surroundings and started to cultivate a number of desirable plants (squash, gourds, and sunflowers) (Theler and Boszhardt 2003:101). The Woodland Tradition marks the first appearance of pottery making by prehistoric peoples. Another characteristic of the time can be seen in the mortuary practices and the building of mounds for the dead. Like the Archaic Tradition, the Woodland Tradition is divided into early, middle, and late stages. The Early Woodland saw the start and increased use in the cultivation of plants. In the Middle Woodland, pottery was being decorated with the use of pressing tools (such as cords or notched bone). The Middle Woodland was also when conical, or circular, mounds were beginning to be constructed for the dead (Stevenson et al. 1997). Within some areas during the Middle Woodland was an elaborate influence of the Hopewell culture. This particular culture came from Illinois and southern Ohio, but had its influence on other areas reached across central and eastern United States. The Hopewell mound burials are usually conical like most during the Middle Woodland, but these often contained elaborate grave goods that are associated with individuals. Some of these artifacts include copper ornaments, breastplates, silver objects, and even exotic items like obsidian, and marine shells (Stevenson et al. 1997; Theler and Boszhardt 2003). By the Late Woodland period, mound shapes weren't only conical, but linear and effigy (animal-shaped) as well. The widespread trade of exotic goods, like copper,

obsidian, flint, and marine shell, started to dwindle at this stage and pottery. Finally, there was a shift in hunting tools at this time to bows and arrows and the manufacturing of pottery was becoming more elaborate (Theler and Boszhardt 2003).

Last is the Oneota cultural tradition, spanning A.D. 1150-1650. These are farming people that utilized ridged fields for growing corn, beans, and squash. The Oneota are thought to have been semi-sedentary, living in village-like communities. Artifacts that are characteristic of the Oneota tradition include: shell tempered pottery, scapula hoes, sheet-copper pendants, celts, and catlinite disk pipes (O’Gorman 1996:29-33; Theler and Boszhardt 2003:162-206). Oneota burials were rarely in mounds, but in cemeteries or within the villages. Archaeologists are not sure precisely how the Oneota tradition developed from the Woodland, but there are suggestions that influences from Mississippian cultures further to the south might have played a role. In any case, Oneota’s material remains are very distinctive (Overstreet 1997; Theler and Boszhardt 2003; Theler and Boszhardt 2006).

MORTUARY STUDIES

Archaeologists have developed a number of theories behind mortuary practices, with two main branches—normative/culture history and processual. The normative/cultural approach was a previous theory used by archaeologists until the 1960’s (Pleger 1998). Using this approach, the traits associated with mortuary data (grave items, body position, etc.) were thought to have spread to different areas from one particular culture. The mortuary practices were seen only as ideology (Binford 1971). Knowing the origin of these practices would allow the researcher to construct a chronology based on space and time. Robert Hertz was one of the first archaeologists to note the mortuary treatment of individuals. He used this to analyze if differential treatment was based on the individual’s status within the society. Hertz felt that death was seen as one of the many rites of passage made by prehistoric peoples; much like birth, puberty, and marriage (Binford 1971). Unlike Hertz, A.L. Kroeber saw mortuary practices as unstable entities in a culture and was therefore separate from the “core cultural features” (Binford 1971:10). In result, Kroeber believed that variability in mortuary practices could be caused by a variety of outside changes, like environment, belief, and the relationship of an individual to the society.

In the processual view, archaeologists began to take a more comparative look at burial patterns. By taking this standpoint, it became possible to see the changes within social organization and complexity (Pleger 1998:26). Within this same concept, Binford makes the suggestion that mortuary practices are more inter-linked with social organization than previously thought in the culture-history approach. Thus, some burial practices are found to be more stable while others are more variable, there is no specific quality that makes the practice change (Binford 1971). The processual approach is the theory most often used for research of mortuary practices today and will be the basis of this project.

Burial sites from the Archaic, Woodland, and Oneota are known throughout the region. A majority of known burial sites for the Archaic date to the Late Archaic and are concentrated in the eastern part of Wisconsin. Many of the excavated sites have undergone osteological analysis, such as Reigh Site. The samples from this site have been used as a typical hunter-gatherer society. As the base for comparison, studies have been conducted on the increased use of maize in the region over time (Thurston Myster and O’Connell 1997).

Woodland sites date mainly from the Middle and Late Woodland time periods, though there are some documented burial sites from the Early Woodland. Middle Woodland sites in southern Wisconsin show influences of the Hopewell culture, as seen in the Trempealeau site and Cyrus Thomas Mound Group. There are also sites in the Middle Woodland that don’t have this influence, such as the Rehbein I site, Richter site, and Altern site. The Middle Woodland is divided into phases, or distinct cultural patterns. These include the Trempealeau, Waukesha, and Red Cedar Hopewell (all Hopewell influenced) and the North Bay and Nokomis phases (non-Hopewell-influenced) (Thurston Myster and O’Connell 1997).

The Late Woodland is also divided into phases, including the Lake phase, Clam River phase, and Effigy Mound Culture. The Clam River phase was described by McKern in 1963 and is present at the sites of Clam Lake Mound and Spencer Lake Mound. The Effigy Mound Culture is present in eastern Minnesota, eastern Iowa, northern Illinois, and the southern half of Wisconsin. Though at first it was centered around mound excavation, the culture is also seen in non-burial sites. The excavation of many of these sites resulted in a focus in obtaining information on internment, primary/secondary burials, number of individuals in the mound, age, and sex. Studies on the Late Woodland burial sites cover a wide range of topics. For example, the Kletzien and Nitschke sites were used to study the skull deformation of some individuals of the time. Another study included the Raisbeck and Nitschke site, along with two non-Woodland sites, for a comparison in the impact of contact with the Middle Mississippian culture in the south (Thurston Myster and O’Connell 1997).

To finish the discussion on known burial sites and past studies conducted is the Oneota culture; concentrated in southern Wisconsin. Like the Woodland Tradition, the Oneota contains phases, such as the Brice Prairie, Valley

View, Pammel Creek, Koshkonong, and Lake Winnebago phases. The Brice Prairie, Valley View, and Pammel Creek phases are from the western part of Wisconsin. Brice Prairie phase has little information about the mortuary practices with the exception of a few scattered burials. The Pammel Creek phase is found to be a cemetery in association with a village, as well as post-molds that suggest longhouses near or over the burials (Boszhardt 1994). The Koshkonong phase is concentrated near the Rock River drainage in southeastern Wisconsin. The Lake Winnebago phase is concentrated by the Fox River and Lake Winnebago waterway. This particular phase is poorly understood, but it is known to have large villages with associated cemeteries. The Karow Cemetery site, Nile Roeder site, and MacDonald site include a few burial sites from this phase (Thurston Myster and O'Connell 1997).

METHODOLOGY

A variety of sites from the Upper Midwest region were collected with complete raw data of burials. Sites were chosen based on two criteria. First, sites were picked for their general location to each other. The sites for this study are found within Wisconsin, Minnesota, and Michigan. This was due to the fact that these sites would have similar environments to live in throughout time. Major warfare areas and extreme elitist sites, such as the Hopewell culture (i.e. Nicholls Mound) were removed from this study because such a difference would be too wide to compare properly. The second criterion for this study was how sites were described in reports. It was very important to have a site that had the burials reported separately as well as in detail. This allowed for artifacts to be associated with individuals in the database, which made looking at the treatment of the dead possible. This particular criterion made finding a Woodland burial site difficult because many are mound burials and not described well in reports. The sites used in this study include the Tremaine site (47Lc95), Hogback site (21Hu1), Wilsey site (21Hu4), Riverside site (20Me01), Oconto site (47Oc45), Price Site III (47Ri4), and Rehbein I site (47Ri81). This resulted in a total of 406 burials that were included in the study: 248 Archaic, 29 Woodland, and 129 Oneota.

Raw data was collected from the sites above and entered into an Excel spreadsheet. The spreadsheet included the categories of age, sex, interment, orientation, covering, sign of violence, presence of red ochre, and all associated artifacts. Once completed, the Excel spreadsheet was imported to Access to create a database for manipulation and analysis. Exploration of the database was conducted to find patterns between age, sex, etc. and associated artifacts, interment, etc. Initial patterns were then compared between sites and time periods for a broader understanding of differences in social organization. Expected results consisted of patterns within burials that are similar within time periods and show changes throughout time.

Since this study was completed as a blind study, only when the comparison between sites and time periods were complete was a further comparison with literature conducted. This comparison between patterns identified through the study of the burials and what is thought to be known about the social organization of the Woodland, Archaic, and Oneota traditions will better our understanding of mortuary practices and techniques in studying them.

THE ARCHAEOLOGICAL SITES

This study compares burials between cultural traditions. Specifically, raw data was collected from Archaic, Woodland, and Oneota sites. For comparison, three Archaic burial sites, one Woodland mound site, and three Oneota cemetery sites were examined (Figure 2).

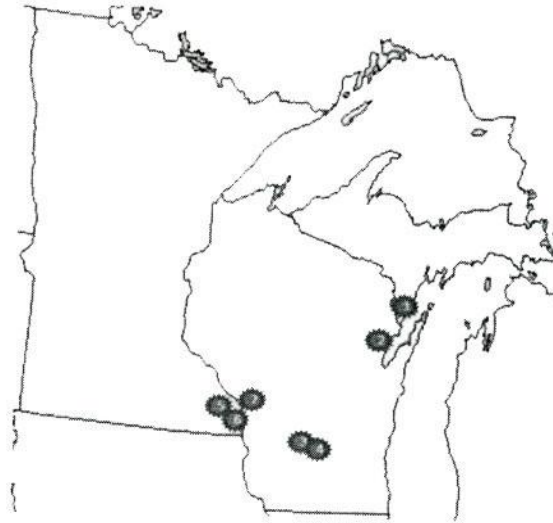


Figure 2. 1-Riverside site (20Me01), 2- Oconto Site (47Oc45), 3-Price Site III (47Ri4), 4-Rehbein I site (47Ri81), 5- Hogback site (21Hu1), 6- Wilsey site (21Hu4), 7- Tremaine site (47Lc95).

To begin with, the Oconto site (47Oc45) is an Archaic burial site located on western limits of Oconto, Wisconsin approximately 150 yards north of the Oconto River. Remains were discovered by Donald Baldwin in June of 1952 in an abandoned gravel quarry. Excavations were conducted later in that same year and further remains and artifacts were recovered by Robert Ritzenthaler and Warren Wittry (Ritzenthaler and Wittry 1952). A minimum of 53 individuals was thought to have been recovered, as well as a variety of grave goods (Pleger 1998). However, due to the disturbance of the activities of the gravel quarry, it is believed that 200 individuals could have been buried at this site at one time (Ritzenthaler and Wittry 1952). Presently the collections of human remains and grave items are being stored at the Oconto Beyer Home Museum and the Milwaukee Public Museum.

The Riverside site (20Me01) in Menominee, Michigan is an Archaic Tradition site near the Menominee River. Though the site had been known in the community since around the 1900s, professional excavations began in 1956 and 1957 lead by Albert Spaulding. Later excavations were lead by Robert Hruska from 1961 through 1963. The site is found in conjunction with the Riverside Cemetery and had been believed to be a Native American burial ground by the community due to the number of artifacts found at the site by locals. The site dates back to a range of 1000-400 B.C. (Hruska 1967).

Both the Oconto and Riverside sites were used in Dr. Thomas Pleger's doctoral dissertation. Pleger found that the Oconto was the earlier of the two sites and had an absence of prestige items. Certain individuals at the site were moderately emphasized with artifacts, but only slightly. A majority of the material used to make the artifacts was from local resources coming from areas no further than 100km from the Oconto site. Pleger concluded that the people of the Oconto site were "in essence egalitarian" (Pleger 1998:113). The Riverside site status was evident in burials that contained non-subsistence and non-utilitarian artifacts. Also, some of these artifacts were made from raw materials that came from extensive trade. At the Riverside site, Pleger found that females and children were favored over other individuals. Females were associated with copper artifacts over males at a ratio of eleven to one and exotic bifaces at a ratio of eight to one. Thus, Pleger concluded a shift of burial treatment over time, where the Riverside site (later in the Archaic period) showed more of a preferential treatment when burying individuals.

The Price Site III (47Ri4) was also included in this study. The site is one of three found in Richland County near the Wisconsin River on the property of William Price. Price Site III consisted of an Archaic burial ground, while Price I and II were village sites (Freeman 1966:35). Excavations took place during the summers of 1960 and 1961 due to the relocation of the right-of-way of State Highway 60. The Wisconsin Highway Salvage program supported these excavations. A total of 130 individuals were recovered from the Price III site (Freeman 1966:35-36).

The Rehbein I site (47Ri81) is a Woodland site located on a ridge above the Kickapoo River valley in Richland County, Wisconsin. It is made up of a mound grouping of nine mounds, seven of which are conical (or round) and two are linear (or elliptical). Though the site has been known by the locals long before, it was first reported to the Wisconsin Historical Society in 1915 by W.R. Ames. Due to the fact that the site was in the public mind, the

mounds were the target of vandalism and looting as early as the 1890's, often by railroad workers. In 1975, archaeological testing was conducted on the mounds and surrounding areas in response to the plans for a right-of-way to be constructed through the site. Following this testing, in 1977, the Wisconsin Historical Society conducted full excavations on six of the nine mounds at the site because they would have otherwise been destroyed by the right-of-way construction. These mounds were later reconstructed by the three mounds undisturbed by the project. The remains recovered from the excavation were re-interred to the appropriate mounds per the request of the Great Lakes Inter-Tribal Council (Mead 1979).

The first Oneota site included in this study is the Hogback site (21Hu1) located by the Riceford Creek in Houston County, Minnesota near Yucatan. The site was discovered in 1942 due to road construction. The first excavations were conducted in 1947 as a test of the area. It resulted in the uncovering of one burial and several artifacts. Later excavations were conducted 1953 as an extension of the 1947 testing and resulted in the uncovering of twenty-two burials. Both excavations were lead by Lloyd Wilford, University of Minnesota (Wilford and Brink 1974).

Within the same region of Minnesota, the Wilsey site (21Hu4) was excavated in 1942 and 1947. Like the Hogback site, it is located near Yucatan in Houston County (Wilford 1942:1). The property owner, Charles Wilsey, had found the human remains when relocating a fence post along the newly constructed road. Lloyd Wilford also conducted these excavations. A total of 12 burials were uncovered in the digs, along with scattered bones (Wilford 1942; Wilford 1947).

The final Oneota site that was examined was the Tremaine site (47Lc95). This site is one of several within the Tremaine archaeological complex. The Tremaine site is located within the Mississippi River Valley on the Onalaska terrace in La Crosse County, WI. It does contain other cultural traditions, but the majority of the material is Oneota of the Pammel Creek phase. Excavations were conducted between 1986 and 1991 as a result of the USH 53 Expressway Project. Fifty-seven burials were present on the site, as well as seven longhouse structures. An interesting aspect of this site is that each of the longhouse structures contained burials within them (O'Gorman 1996:58-80; O'Gorman 1995).

RESULTS

Seven sites were included in this study totaling to 406 burials. Three Archaic sites were among those included, making up 248 of the burials. One Woodland site (29 burials) and three Oneota (129 burials) were also included within the study. As expected, there are significant differences between the mortuary practices of the three time periods. The differential treatment found as a result of this study was based on the use of a variety of artifacts in the burials. One such difference can be seen in the use of red ochre (Figure 4). Within this study the Archaic and Oneota time periods showed that females are found more often with red ochre than males. Within the Archaic sites studied 17 females out of 52 total (33%) were found to contain red ochre in their grave, while only 7 out of 62 males (11%) were found with it.

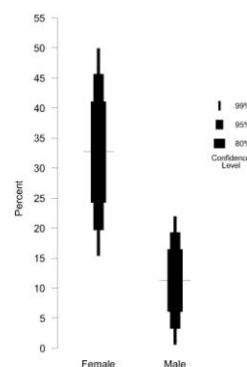


Figure 3. Shows the chi-square significance of red ochre being used in more female burials than male.

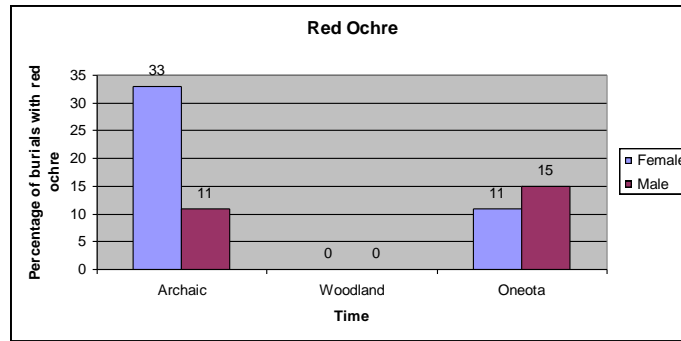


Figure 4. Shows the use of red ochre within burials based on an individual's sex.

To further support the significance of the pattern a chi-square test was conducted. In result, the difference in the Archaic period between males and females was found to be at least 99% significant (Figure 3). In contrast, the Oneota period did not show any significance in this favoring of females over males. This can be seen in the drop of the use of red ochre in burials between the Archaic (29%) and Oneota (11%) (Figure 5).

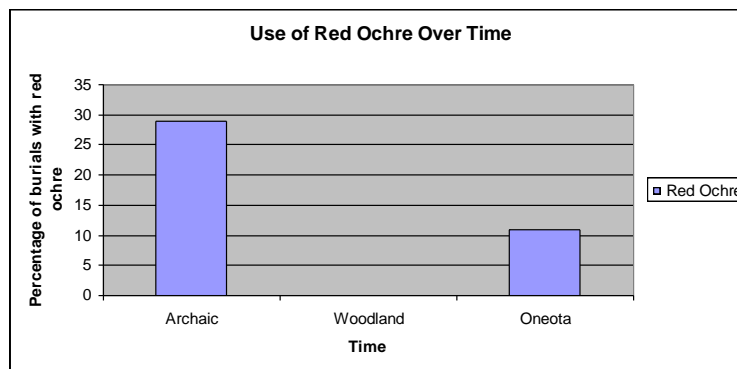


Figure 5. Shows the use of red ochre in burials over time.

Another difference can be seen in Figure 6, where burial coverings are taken into consideration. Burial coverings in this study included limestone and sandstone slabs, granite slabs, bark, and rocks. These were either placed above or below the individual. In the Archaic there appears to be a favoring of males over females with burial coverings. Only 31% of females in the Archaic are being buried with a covering of some kind, while 52% of the male burials are found with coverings. Again the Oneota showed no significance in this pattern as seen by the 4% difference between males and females.

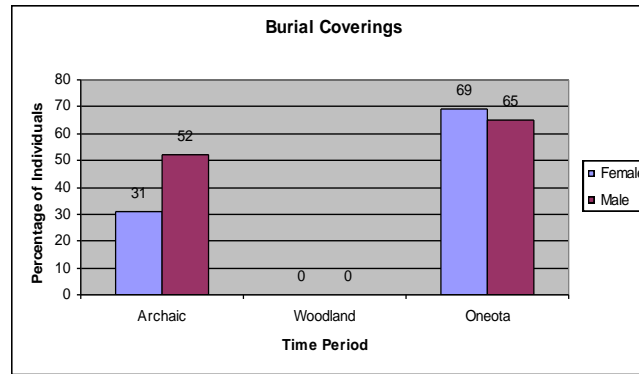


Figure 6. Indicates the use of burial coverings based on sex.

An additional difference can be seen in the use of beads in relation to sex within the Archaic and Oneota. First, in the Archaic only females are found with beads, with copper beads being in 4% more of female burials than shell beads. In the Oneota, males are found twice as often with copper tubes as females. Also 5% of male burials were found with shell beads while beads of this material weren't present in female burials at all. In contrast, copper beads are even with 5% of burials, in both males and females, showing their presence in burials (Figure 7).

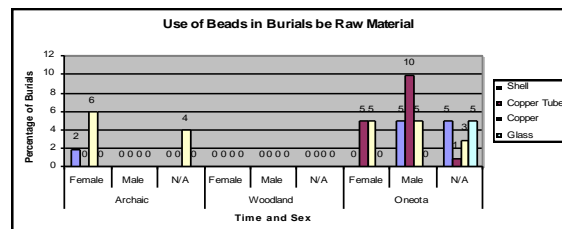


Figure 7. Shows the use of beads in burials based on raw material and an individual's sex.

There is also preferential treatment in which certain sexes are being buried with artifacts at all. As seen in Figure 8, the Archaic shows a slight preference for burying artifacts with females. Here 13 of 52 females (21%) and 7 of 62 males (13%) are found with at least one artifact. On the contrary, within the Oneota, 19 of 36 females (53%) and 17 of 20 males (85%) are associated with at least one artifact. This shows a greater preference for burying males with artifacts since a majority of the Oneota male population in the study is found with artifacts and only half of the Oneota females. The three artifacts found at the Woodland site could not be associated with a specific sex.

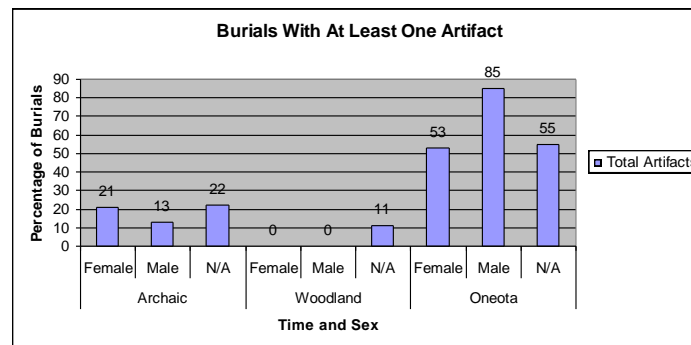


Figure 8. Shows the percentage of individuals buried with at least one artifact based on sex.

For this study, age was also taken into consideration while looking at patterns throughout time. Age was recorded as stated in the original site reports. These were then divided into the subgroups of infant (0-1 years), child (2-10 years), adolescent (11-19 years), and adult (20 years and older). Patterning of any difference or similarity in treatment of age was allowed through this part of the study. Few age differentiations were found within and between the sites in this study. One difference found was the preference of burying hunting implements with adolescents in the Oneota, compared to the Archaic period. Sixteen Oneota adolescents out of 30 were buried with artifacts of this type (points, knives, scrapers, etc.), while only five out of 24 Archaic adolescents did (Figure 9). Other than that difference, cultures throughout time did not appear to have a preferential treatment of age as seen in artifact types within burials.

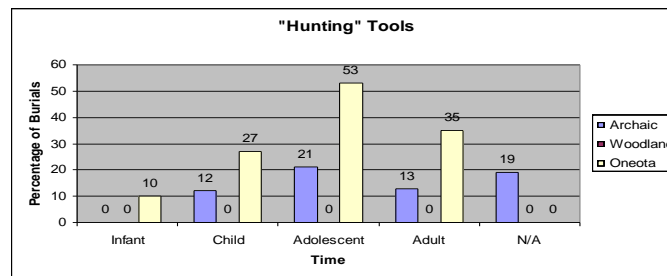


Figure 9. Shows the use of "hunting" tools within burials based on age.

There are patterns present in the dataset that reflect what is already known about these cultural periods. For example, the Oneota period was found to use clam/mussel shells in their burials more often than the Archaic and Woodland periods. Though all three cultures utilized mussel shells as a source of food, the use of shells in pottery and in burials is seen more often in the Oneota Tradition, as seen in Figure 10.

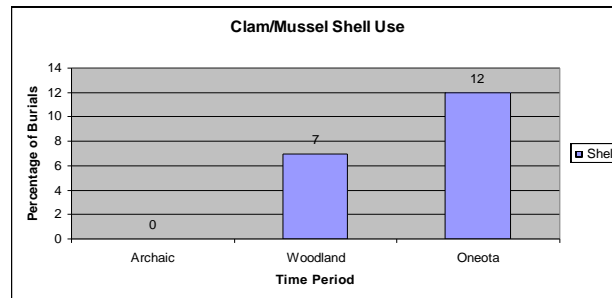


Figure 10. Shows the use of shell in burials over time.

Thus, the significance plays more of a supporting role of what is already known. This same concept is seen in Figure 11, where the Oneota and Woodland burials are found with pottery, while the Archaic is not.

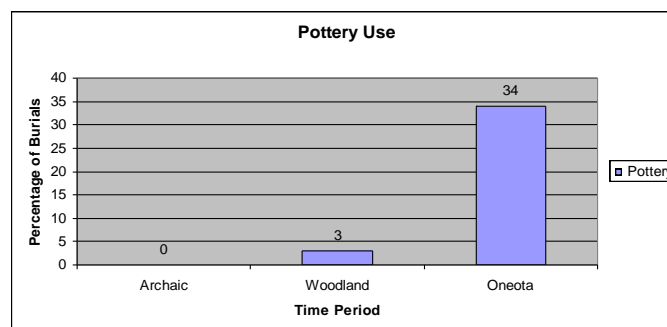


Figure 11. Shows the use of pottery in burials over time.

This is due to the fact that pottery was not being made until the Woodland time period. Therefore, the Archaic time's lack of pottery within their burials is to be expected. What wasn't expected was the greater use of pottery in burials in the Oneota Tradition compared to its use in the Woodland. As seen in the figure, 30% of Oneota burials contained pottery while only 3% of Woodland burials had pottery present. This may show that Woodland individuals associated with their own pottery held a more significant role in society, or that there was a greater surplus of pottery during the Oneota time period that allowed its use in burials.

Another difference seen throughout time is the interment, or positioning, of individuals in burials (Figure 12). The Archaic period is seen to have more flexed and cremated burials than the other time periods. A 99% significance level is found for Archaic burials over Woodland and Oneota in flexed burials. It is also found to have the same significance over the other time periods for cremated burials. Cremation burials are represented in both the Archaic and Woodland periods, but not within the Oneota. The Oneota period is most commonly found to have extended burials and shows this through a 99% significance level over the other time periods. Extended burials represent 60% of burials within the Oneota period in this study.

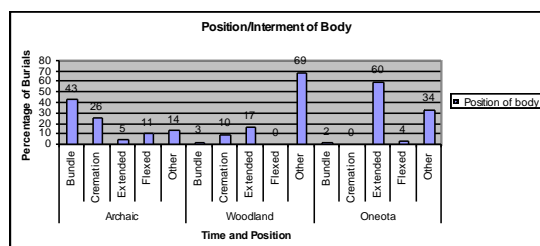


Figure 12. Indicates the percentage of burials by interment/positioning over time.

Finally, the Woodland period had few artifacts associated with specific individuals, which offered interesting insight into their mortuary practices. However, they are unique in that they bury their dead within earthen mounds. The Rehbein I site did include two mound structures that contained a sole individual, but the other four mounds contained many individuals. Neither of the single individuals was found with an associated artifact, but that could have been due to vandalism and looting. Only two individuals of the other multi-person mounds were found with associated artifacts. Of the two individuals, one adult was found with a clamshell and a pottery vessel. The other individual was a child that was associated with a clamshell. The remaining artifacts were either found grouped in a specific area of the mound or not associated with a particular individual. However, no certainty can be placed on these results due to the fact that only one Woodland site was included within this study. As discussed previously, there are Woodland burial sites that have elaborate artifacts associated with individuals, both in mounds and in group burials. An example of such a site would be Nicholls Mound in Trempealeau County, Wisconsin. Many of the burials uncovered during the excavation appeared to be elite, and contained copper artifacts (McKern 1931).

Perhaps the most intriguing difference between the time periods was not expected to be seen in the study. There is a difference in the presence of flakes within burials throughout time (Figure 13).

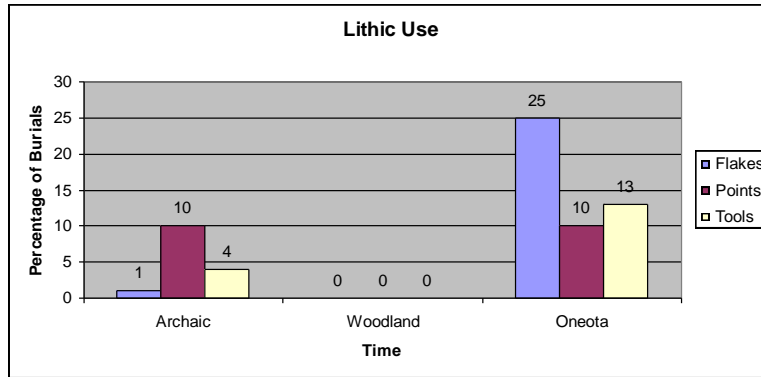


Figure 13. Shows the use of lithics in burials over time.

Out of the 248 Archaic burials, only three burials have flakes present, resulting in 1% of the burials. The Woodland burials have no presence of flakes in them at all. The Oneota, however, have 32 out of 129 burials with flakes present, resulting in 25% of the burials. A chi-square test showed an overwhelming 99% significance of this difference in the appearance of flakes within burials, as seen in Figure 14. Otherwise no other significant differences were found while comparing the time periods as a whole.

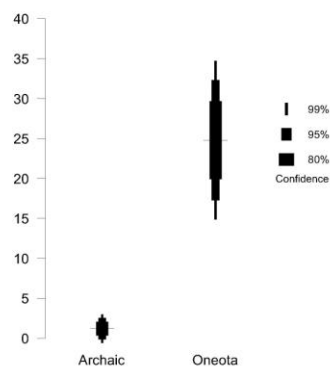


Figure 14. Shows the significance of the increase in flake use in burials over time.

Some similarities can be seen within age, sex, and cultural time periods. For instance, beads (including all raw materials) aren't buried with a specific age group (Figure 15). This relatively even distribution of beads can be seen within the Archaic and Oneota, while the Woodland had no associated beads. A difference of 4% between Archaic children and adults is the greatest found at the time, while in the Oneota a greatest difference of 5% is seen between infants/children and adolescents/adults.

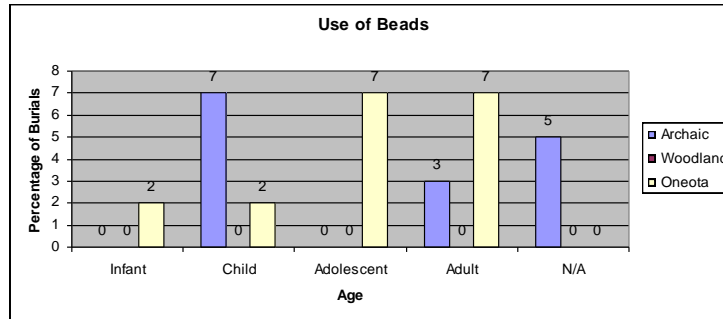


Figure 15. Shows the use of bead of any material in burials based on an individual's age.

The use of copper can also be seen somewhat evenly distributed in age and through time. Between the Archaic and the Oneota, the general use of copper was similar within burials. Of the Archaic, 6% of the burials contained copper artifacts. Within the Oneota, 7% of burials were found with copper. However, the Archaic made more elaborate and utilitarian artifacts of this material such as points, awls, knives and fishhooks. The Oneota used only copper beads, coils, or small fragments within their burials. As for the use of copper within the concept of age, the same treatment occurred in the Archaic sites, but not in the Oneota. As in Figure the Archaic has an even distribution of copper use in burials between the age groupings. However, a difference can be seen when looking at ornamental versus utilitarian artifacts. Ornamental copper is again evenly distributed throughout the age groups, but utilitarian copper is only found with adolescent and adult burials. Oneota burials show a slight difference where 20% of children burials contain copper, but the remaining age groups only have at most 10% of the burials. In addition, Oneota burials only contain ornamental copper artifacts. Though differences are seen between the age groups, copper use in the burials of females and males are relatively even. This includes both ornamental and utilitarian copper artifacts, as seen in Figures 16 and 17.

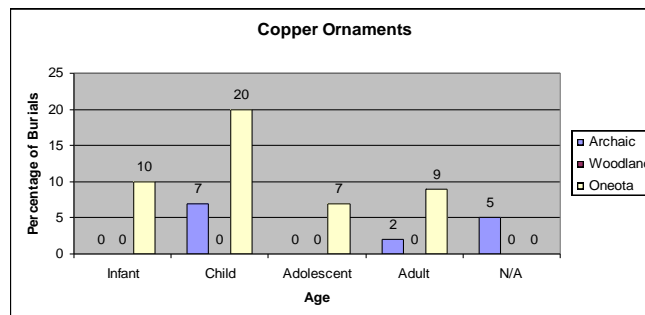


Figure 16. Shows the use of copper ornaments in burials based on age.

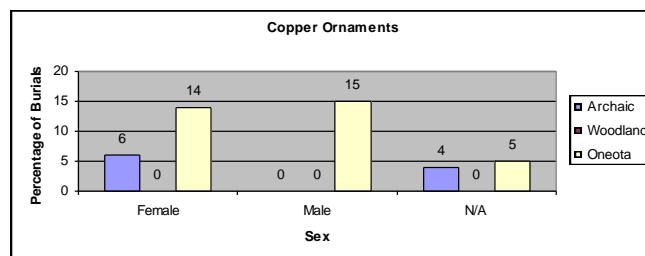


Figure 17. Shows the use of copper ornaments in burials based on an individual's sex.

Also, there is no significant difference in the use of bone (tools and non-tools) within burials. As seen in Figure 18, the Archaic has 1% of burials with both tool and non-tool bone artifacts. The Oneota has 3% of burials

containing non-tool bone artifacts and 2% of burials containing bone tool artifacts. Again the Woodland have no bone artifacts associated with an individual.

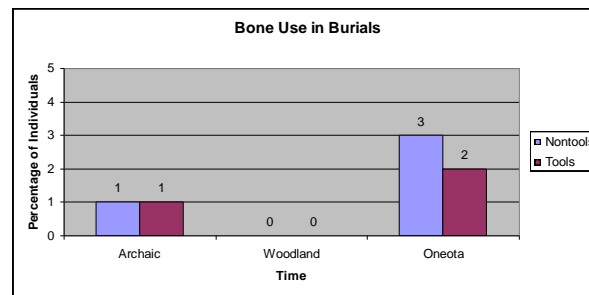


Figure 18. Shows the use of bones (tools and non-tools) in burials over time.

The use of lithics in burials is not found to be preference to an individual's sex. Figure 19 shows how tools, points, and flakes are found within male and female burials throughout time. There is little difference in treatment between males and females with this type of artifact, though some are evident. For instance, in the Oneota 30% of male burials are found with lithic tools while only 14% of female burials contain the artifact. This difference is also seen with points in Oneota burials, where 20% of males are associated with points and only 6% of females.

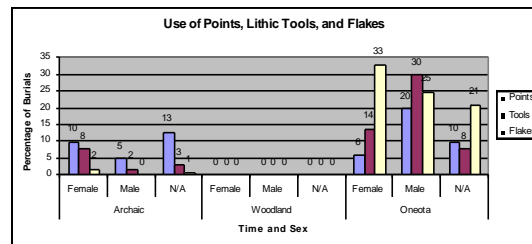


Figure 19. Indicates the use of points, lithic tools, and point in burials based on sex.

To finish the results, the appearance of four anomalies needs to be discussed. Three of the anomalies concern the use of beads, primarily the presence of a large amount of them compared to the other burials at a specific site. Burial 12 at the Hogback site is included in this group, where a child was buried with 139 beads. Burials HF17-1A and HF37-1B at the Riverside site were also found with a large amount of beads. Burial HF17-1A contained a young female with 330 beads, while burial HF37-1B contained a child with 560 beads. As stated previously, the number of beads comparatively to the other burials at the specified site is what makes each an anomaly in its own right. The final anomaly consists of a juvenile burial (HF63-1) at the Riverside site (Figure 20). This burial contained a total of 110 projectile points that were intentionally placed in a spiral formation with the body of the individual placed on top. What these anomalies mean is left to further interpretation.

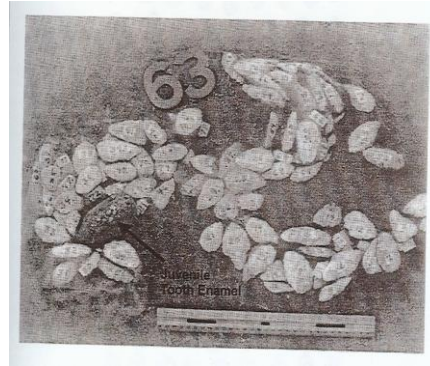


Figure 20. A picture of the bi-face spiral found with a juvenile individual at the Riverside site, Menominee County, MI.

CONCLUSIONS

In conclusion, this study has provided light into the mortuary practices of past cultures in the Upper Midwest region. As can be seen in the results above, differences found between the sites are culture specific. The Archaic are found to use more red ochre, while the Oneota make use of clam/mussel shells. Both the Woodland and Oneota use pottery in their burials because it was being made at this time, unlike in the Archaic where it wasn't. However, the Oneota use a much larger amount of pottery than the Woodland. The significant difference in flake use in burials over time could result in further research. Perhaps it's due to the mobile nature of Archaic people versus the sedentary lifestyles of the Oneota, but this question is not the focus of this study.

The concept of age and sex do appear to be the cause of preferential treatment of individuals throughout time. Copper in burials show the most significant difference between age groups. For ornamental artifacts, the Oneota Tradition shows a favoring of children. In contrast, the Archaic showed no preference at all. Both the Oneota and Archaic favored adolescent and adults for a specific artifact, namely tools. The Archaic shows preference toward the burials of adolescents and adults and copper tools, while the Oneota favors adolescent in "hunting" implements. Though these treatments do exist between age groups, more care in the treatment between the sexes can be seen over time. Specifically, there is a switch in preference of males and females within the Archaic and Oneota. Females are favored more often within the Archaic as seen in high use of red ochre and beads with female burials. A larger amount of females are associated with at least one artifact within the studied Archaic sites. On the contrary, the Oneota Tradition appears to show a favoring towards males. This can be seen within the higher amount of males associated with at least one artifact. Beads (copper tubes and shell), points, and lithic tools are prime examples of this preferential treatment of males in the Oneota sites.

It seems that individuals from all times are treated with respect and usually given something to be buried with. Through the study conducted, the differentiation in treatment of burials was apparent. The Archaic sites showed few differentiations in treatment, but they were still evident. The majority of these differences were seen with the treatment of females over males in red ochre use, beads and the association of artifacts in general. The ranking of individuals was more evident within the Oneota, as seen in the favoring of children in association with ornamental copper. Like the Archaic, the Oneota sites showed a greater difference in treatment between the sexes. However, unlike the Archaic sites, male burials were preferred over female burials for being buried with at least one artifact. Males were also found more often with beads, points, and lithic tools. The Woodland culture in this study shows a different, possibly more communal, burial treatment of individuals. Though there are individuals that are associated with artifacts, they are outnumbered by the individuals with no artifact association. Preferential treatment in the Woodland site may also be seen in the two individuals buried in their own mound. All of this evidence supports what is already known about the studied cultures, and lends credibility to past research of them.

Therefore, it is evident that there was change in the burial treatment of individuals over time within the sites used for this study. Like Pleger had found in his dissertation, the earlier sites showed less favoring of individuals based on their age and sex, though there was some present. As seen within the Archaic sites of this study, more egalitarian qualities are present with a slight favoring of females. The later Oneota sites show a greater amount of differential treatment within the burials based on both the age and sex of an individual. Unlike the Archaic sites, there was more of a favoring of males and children in differential treatment.

FURTHER STUDY

Further studies should be done in much the same manner as this one in order to get a better understanding of social organization in the Upper Midwest in the past. Specifically a more in depth look at the Woodland culture should be conducted. These sites can be difficult to find with the particular needs of the study, but can be done with the right site. It may also be beneficial to factor in the more elite Hopewell sites for a further understanding of the Woodland mortuary practices on their own. Other Archaic and Oneota sites from various areas within the Upper Midwest should be looked at for a more regional understanding of the cultures. Finally, the significant patterns found within this study should be looked at in more detail, such as the use of red ochre in more female burials during the Archaic and the increase presence of flakes in burials during the Oneota time period. These are questions that should be studied and could possibly lead to more insight about the past cultures of the Upper Midwest.

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Burial Data

APPENDIX A