Chapter 13

Estimating the Sizes and Social Compositions of Mortuary-Related Gatherings at Scioto Hopewell Earthwork–Mound Sites

CHRISTOPHER CARR, BEAU J. GOLDSTEIN, AND JAIMIN D. WEETS

The large, open spaces that are defined by Hopewellian earthen geometric enclosures in Ohio, the labor implied by their magnitude, and the hundreds of deceased persons who were buried in mounds within some earthen enclosures have each created images of past social and ceremonial gatherings in the imaginations of archaeologists, antiquarians, and the public. Hopewell mound sites also bring to mind images of burying and honoring the dead, as reasons for assembling. Yet, in actuality, little is known firmly about the sizes, social compositions, and range of purposes of such gatherings.

The goal of this chapter is to begin to grapple systematically and empirically with the demographic and social characteristics of the gatherings that occurred at Ohio Hopewell earthwork–mound complexes, mound groups, and isolated mounds and, in this way, to personalize the Ohio Hopewellian landscape. Five questions are addressed here. (1) How many persons attended mortuary gatherings at these centers, and how variable were these gatherings in size? (2) What were the social roles of those who attended such gatherings, and which roles were more or less common? (3) Is there evidence for distinct kinds of ceremonies that were repeatedly performed (i.e., institutionalized), based on repetition in the sizes and compositions of gatherings? If so, which kinds of ceremonies were most and least common? (4) Did the sizes, compositions, and kinds of gatherings that occurred in Ohio vary between large earthwork–mound complexes and smaller mound groups or single mounds, which may have been functionally differentiated? (5) Did the size and composition of gatherings change over time? Whereas previous studies of Ohio Hopewell gatherings have attempted to determine the kinds of activities of those who gathered at the centers—mortuary ceremonies (J. A. Brown 1979; Greber 1996) and nonmortuary activities (DeBoer 1997; Riordon 1998; Seeman 1979b; B. D. Smith 1992)—very little consideration has been given to the specific sizes and social compositions of the gatherings (Seeman 1979b).

Personalizing the Ohio Hopewellian social landscape with estimates of the sizes and social

compositions of ritual gatherings and the roles of those who assembled is worthwhile in its own right, as thick, descriptive prehistory. However, such reconstructions can also provide a view into other aspects of the Ohio Hopewellian world: the degree to which mortuary ceremonies were harnessed for cooperative and/or competitive display and alliance building; shifts in alliance-building strategies through time; the spatial–ceremonial organization of Ohio Hopewellian communities, including functionally differentiated ceremonial centers; the population sizes of communities; and whether Ohio Hopewellian peoples followed a mortuary–ceremonial calendar, to name a few topics.

To answer these five listed questions, analyses are made of the artifacts found with 404 individuals in 375 graves and placed within 56 ceremonial deposits—all at 22 mound and/or earthwork sites (Figure 13.1). Both focused, contextually rich studies and broader, statistical analyses are made. The first half of this chapter models the possible sizes and compositions of only the largest ceremonial gatherings of Ohio

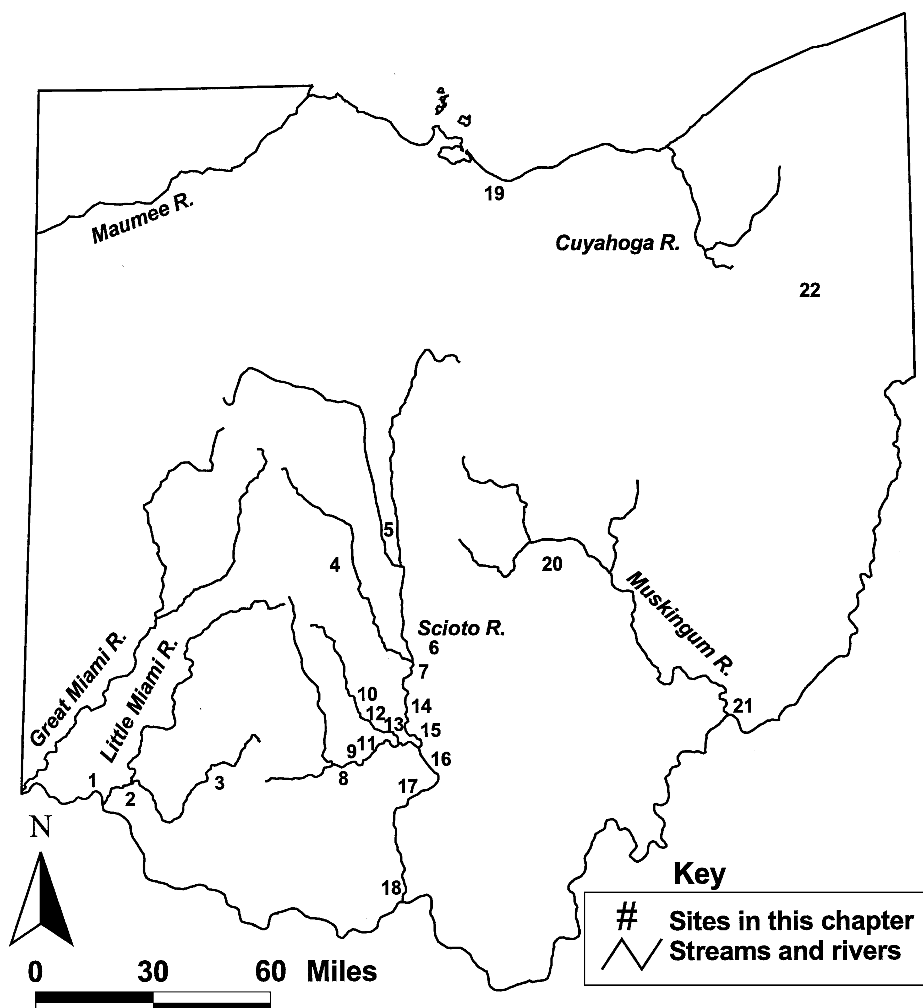

Figure 13.1. Archaeological sites with graves and ceremonial deposits used in this study: (1) West Mound, (2) Turner, (3) Boyle's Farm, (4) Rutledge, (5) Wright, (6) Snake Den, (7) Circleville, (8) Rockhold, (9) Seip, (10) Ater, (11) Bourneville, (12) Hopewell, (13) Mound City, (14) Ginther, (15) Shilder, (16) Liberty, (17) McKenzie, (18) Tremper, (19) Esch, (20) Hazlett, (21) Marietta, and (22) North Benton.

Hopewell peoples. Three approaches are used, the first two focused on gathering size and the third on gathering composition. The first approach is based on the numbers of persons buried in the largest mounds and earthworks and the numbers of relatives who might have come to mourn and honor each deceased person on average. The second approach considers graves and ceremonial deposits where artifacts of one kind were placed in large numbers but normally were owned and deposited one per individual. The multiple "extra" specimens in such graves and deposits are taken to indicate the numbers of gift givers who assembled and made offerings. The third line of analysis uses the social and ritual functions of artifacts within rich burials and ceremonial deposits to assess the kinds and diversity of social roles of those who made offerings. Several manners in which large gatherings varied are identified, including single versus multicommunity gatherings, role-homogeneous versus role-specialized ceremonies, and gatherings that focused on the deceased versus those that addressed them indirectly and had other sociopolitical or religious purposes (i.e., burials versus ceremonial deposits).

The last half of the chapter extends the study of artifacts within graves and ceremonial deposits through quantitative analysis to all recorded graves and deposits—those with few artifacts as well as many—and to artifacts of all kinds. Estimates of the sizes and social compositions of gatherings, and the frequencies of gatherings of specific sizes and compositions, are thereby refined. Assessments of gathering sizes are made in several different ways, which involve differing assumptions about artifact ownership and/or gifting of artifacts. This approach provides a holistic, multiple artifact class view, in contrast to the single artifact class view of the sizes and social compositions of gatherings that is developed in the first half of the chapter. The greater scope and quantitative detail of the estimates made in the second half of the chapter, although requiring a conceptually more complex analysis, allow distinctions to be made in ceremony sizes and compositions among regions, times, and mound centers of different functions.

The studies in the two halves of the chapter produce rich results and interpretations. First, the studies show that most ceremonial gatherings within mortuary spaces were very small, of the order of 1 to 3 gift givers, that only 10 assemblages indicate gatherings of 90 or more gift givers, and that only 2 suggest gatherings of more than 400 gift givers. Very large ceremonial gatherings within mortuary spaces were thus not regular, once-a-year events, or even fairly regular, once-a-decade events, like the historic Huron and Algonkian Feasts of the Dead, and probably did not rival the sizes of the historic Feasts. Second, it is possible to derive from the structure of the data, themselves, a typology of gatherings based on their sizes, whether or not a gathering was focused on the deceased, whether attendant gift givers were homogeneous or diverse in their social roles, and whether grave assemblages suggested rites of separation and/or rites of liminality. Third, large and intermediate-sized gatherings are found to offer little evidence of having been repeated periodically as part of a ritual "calendar" of institutionalized types of ceremonies. Fourth, gatherings of varying sizes and social compositions are shown to distinguish ceremonial centers of different, complementary functional types, which are defined here and in Chapter 7 and integrated into the model of Scioto Hopewell community organization presented in Chapter 3 by Carr and Chapter 4 by Ruby et al. Fifth, gathering sizes and compositions also are found to have shifted through time, indicating changing strategies of intracommunity and intercommunity alliance formation in the central Scioto valley. The forms of alliance documented and the sequence of changing forms accord well with anthropological theory about alliance formation. Sixth, a changing balance over time in the predominance of shaman-like versus nonshaman-like leaders at ceremonies conforms to Netting's theory of the rise of supralocal leadership through religious means, corroborating conclusions drawn by Carr and Case in Chapter 5. Seventh, gathering compositions indicate a segregation of the roles of the classic, generalized shaman among multiple, more specialized practitioners, in line with Winkelman's theory on the

changing nature of magicoreligious practitioners as societies become more complex and in agreement with the results of several analyses made by Carr and Case in Chapter 5. Eighth, some large, socially homogeneous gatherings probably represent the ceremonial meetings of multicommunity sodalities of several kinds, and by extension, indicate the formalization of this critical feature of tribal social structure among Hopewellian communities in both the central Scioto and Great Miami regions. Finally, it appears that over the course of the Middle Woodland period in the Scioto valley, social, political, and ceremonial organization was developing in complexity along three lines simultaneously: multicommunity alliances negotiated by leaders, institutionalized sodalities, and specialized magicoreligious practitioners and leaders whose positions were derived through the segregation of the roles of the classic, generalized shaman. This picture of development of social complexity is more multifaceted than that described by current anthropological models of sociopolitical evolution.

Throughout this chapter, we follow the terminological distinctions set forth in Chapter 5, by Carr and Case, among *shaman, shaman-like* practitioners, and *nonshaman-like* leaders and persons of social importance. Shaman are generalized magicoreligious practitioners in the classic sense, who take soul journeys while in trance, and use spiritual powers and information in nature. They do so in order to accomplish for their society a wide range of tasks such as healing, divination, guiding souls to lands of the dead, social adjudication, and facilitating hunt and harvest (Eliade 1972; Wallace 1966). Shaman-like practitioners are specialists who focus on one or a small subset of these tasks and evolve from classic shaman as a society becomes larger and socially more complex (Winkelman 1989, 1990, 1992). Shaman-like practitioners continue to use spiritual power and information from nature in their roles, and retain fundamental elements of classic shamanic cosmology and symbolism, but do not use soul flights routinely. Nonshaman-like leaders and important persons do not employ power and a symbolism strongly rooted in nature, and can vary from more religious in character (e.g., priest-like, community-wide leaders) to more secular (e.g., war leaders).

The overall approach that we have taken in our studies in this chapter is bottom-up, from empirical data to generalizations, without a priori theoretical expectations, but with one eye looking for the kinds of ceremonial activities posited to have taken place in the earthworks by the models summarized in Chapter 12 (see also Carr and Case, Chapter 1: Point of View, on the "exploratory approach"). We also note that the inspiration for this study came from Greber's (1996) study of the varying kinds of ceremonial deposits found within Scioto Hopewell mounds and her interpretation of the sizes of deposits in terms of numbers of persons who attended ceremonies.

FIRST VIEWS OF LARGE GATHERINGS FOR THEIR SIZES

Burial Populations

A general sense of the sizes of the largest Ohio Hopewell ceremonial gatherings can be gotten initially by considering the numbers of persons buried in the largest mounds and sites, and how many persons might have assembled to mourn or honor them. Table 13.1 presents the burial population sizes at the large Scioto Hopewell sites of Hopewell, Liberty, Seip, Ater, and Tremper, and the southwestern Ohio site of Turner. Multiplying these populations by possibly one, two, three, or four ceremony attendees per deceased yields the shown possible gathering sizes. If one considers that some deceased within these mounds were likely relatives and had the same living relatives to mourn or honor them, then a maximum of perhaps four mourners per deceased person on the average would appear to be a reasonable upper bound.

Multiple ways of conceiving of the organization of the cemeteries, coherent social groups within it, and relevant ceremony attendees are presented in the table. For example, the burial population of Hopewell Mound 25 can be considered by itself, or combined with the somewhat complementary, adjacent Mound 23, or in conjunction with all mounds at the site.

Table 13.1. Burial Populations and Possible Numbers of Mourners at Ohio Hopewell Earthworks and Mound Centers

		Times number of mourners per deceased				
Site and mound	**Burial population**	**1**	**2**	**3**	**4**	**Reference**
Hopewell Mound 25, floor of charnel houses	98	98	196	294	392	Greber & Ruhl (1983:47–49)
Hopewell Mound 23 floor	52+	52+	104+	156+	208+	Shetrone (1926:53–55)
Mounds 23 & 25 floors combined	150+	150+	300+	450+	600+	
Mounds 23 & 25 floors and above	154+	154+	308+	462+	616+	
All mounds at the Hopewell site	**218+**	218+	436+	654+	872+	Case & Carr (n.d.)
Edwin Harness charnel house	176	176	352	528	704	Greber (1979a:34)
Russell Brown mounds	7+	7+	14+	21+	28+	Seeman (1980) & Soday
Edwin Harness & Russell Brown mounds	**183+**	183+	365+	549+	732+	
Seip–Pricer charnel house	110	110	220	330	440	Greber (1979a:34)
Seip–Conjoined charnel house	43	43	86	129	172	Greber (1979a:34)
Seip–Pricer, Seip–Conjoined, & above-floor burials	**171**	171	342	513	684	Greber (1979a:34)
Turner Great Burial Place	55+	55+	110	165	220	Greber (1979b:52)
All burials at Turner	**101+**	101+	202+	303+	404+	Greber (1979b:52)
Ater mound	**59+**	59+	118	177	236	Case & Carr (n.d.)
Tremper mound (co-mingled, cremated remains; count estimated by volume only)	**375+?**	375+?	750+?	1,125+?	1,500+?	Mills (1916:280)

A significant conclusion drawn from Table 13.1 is that even considering the largest social groupings at the site level, such as all burials at the Hopewell site or all burials at Seip, and the largest likely number of mourners per deceased, almost all of the maximal estimates of gathering sizes are considerably less than those for the historic Huron and Algonkian Feasts of the Dead. All but one of the maximal estimates are fewer than 900 persons, in contrast to the 1,000 to 1,600 individuals recorded for some historic gatherings (see Carr, Chapter 12, Feast of the Dead).

Reasonable estimates of the sizes of Hopewellian gatherings considering those buried in single charnel houses under single mounds and fewer than four mourners per deceased on average are, with one exception, more modest—of the order of several hundreds of attendees. The larger of these estimates could encompass two separate minimal breeding populations or minimally sized tribes, suggesting intertribal alliance functions. However, even these large estimates, in addition to the smaller ones, could represent a single Historic-period Great Lakes tribe (Trigger 1978).

The one possible exception to this pattern is Tremper, with a maximum estimate of 1,500+ attendees assuming four mourners per deceased. This case may be suspect, however, because the body counts are not known clearly, having been estimated only by the total volume of co-mingled cremations (Mills 1916:280). An estimate of gathering size made by counting the grave goods at Tremper is more moderate (193 gift-givers; see Table 13.7) and more in line with other earthwork centers. Nevertheless, the historically unique, early position of Tremper in the Scioto Hopewellian sequence of earthwork centers and regional alliance development also must be considered, and leaves good room

for retaining Mills' estimate for discussion (see below).

Large Ceremonial Deposits and Burial Offerings

Another means that can be used to estimate the sizes of the largest Ohio Hopewell ceremonial gatherings considers the number of artifacts found within individual burials or ceremonial deposits. If an artifact type (e.g., breastplates, headplates) typically occurred one per deceased person across the Ohio region, and can thus arguably be characterized as having normally been owned one per person, then a ceremonial deposit with multiple examples of that artifact type can be interpreted as offerings by that number of ceremonial attendees. A burial with multiple examples can be interpreted as the offerings of that number of ceremonial attendees, perhaps minus one, representing an item possibly owned by the deceased him or herself. The same logic can be used for an artifact type that usually occurred in some set number per deceased person (e.g., earspools, which come in pairs), simply dividing the number of artifacts in the deposit or burial by the number typically found in a set.

This analytical approach turns around the traditional assumption that grave goods belonged to the deceased and that multiple examples of a kind of grave good indicate the deceased's wealth or precise prestige. Instead, the approach assumes that multiple grave goods or sets of grave goods of a kind represent gifts from mourners and other ceremonial attendees. Here, we take seriously the post-processual critique that a mortuary assemblage can reflect relationships of mourners to the deceased and the social roles and prestige of the mourners, as well as the deceased's social roles and importance (Pearson 1999:84).

This method provides an easily visualized estimate of the number of gift givers, but only a minimal, univariate one. A ceremonial deposit or burial might have had several kinds of artifacts, different kinds having been offered by different persons, but the estimate considers only one kind of artifact at a time. A complete picture requires a consideration of all the kinds of artifacts found in a deposit or burial, with the possible complexity of multiple kinds of artifacts having been given by multiple persons in different social roles. This more complex approach is presented in the last, quantitative section of this chapter.

Table 13.2 lists all recorded Ohio Hopewell ceremonial deposits and burials that had large numbers of artifacts (most *n*'s ≥ 15), usually primarily of one kind, and which can arguably be characterized as having typically been owned one or a set number per deceased (Case and Carr n.d.). Deposits or burials that share in a given kind of frequently offered artifact are listed together, so that gatherings of a kind can be compared to each other for their sizes and compared to other gatherings of other kinds. The table shows that from a simplistic, univariate, single-artifact-type point of view, the largest gatherings of persons of primarily one nature were several hundred people, and most were significantly smaller. This result reinforces those provided in Table 13.1, which would estimate the largest of Hopewell ceremonial gatherings of the order of several hundred attendees.

The largest gathering indicted in Table 13.2 may be represented by the five "Copena" style pipes deposited within the Seip–Pricer mound, above the Great Multiple Burial within the charnel house. Each Copena pipe was a large, probably communal pipe used by some large social unit such as a community, a clan, or a sodality. Four or five different social units are represented, the pipes depicting four or five different animals: an owl, a possible whipperwill, a possible bear, a dog, and a dog or wolf (Shetrone and Greenman 1931:373–374). If each social unit had 50–100 persons, for example, this ceremonial deposit would represent 250–500 persons—an unknown number of which might actually have been in attendance.

Another very large gathering listed in Table 13.2 is indicated by the hundreds of earspools deposited in Altar 1 of Hopewell Mound 25. The number of earspools placed in Altar 1 is not firmly known, is certainly greater than the minimal estimate of 500, and in all probability ranges between 750 and 1000 (Table 13.2, Footnote a). If each earspool was one of a pair, which is a conservative assumption (Ruhl, personal communication, 2004), then the deposit would represent the offerings of minimally 375 to 500 persons.

Table 13.2. Large Burial Assemblages and Ceremonial Deposits (Most $\geq$15 Items) Useful for Estimating Numbers of Gift Givers

Provenience	Number and kind of item	Estimate of number of gift givers	Reference
Communal pipes			
Seip–Pricer, Pipe Cache	5 "Copena" pipes: owl, whipperwill?, dog, dog or wolf, bear?	5 large social units: communities, clans, etc.	Shetrone & Greenman (1931:373–374)
Individual, platform pipes			
Mound City, Md. 8, Central Altar & Depository Bag	Almost 200 platform pipes & 50 fragments of pipes	200	Mills (1922:434–441)
Tremper, Lower Cache	136 platform pipes	136	Mills (1916:285)
*Hopewell, Shetrone's Md. 17, Offering 1	14 platform pipes	14	Shetrone (1926:44–45)
Cones/hemispheres			
Hopewell, Shetrone's Md. 17, Deposit 2	80 cones/hemispheres	20	Shetrone (1926:47–49)
Metal breastplates, celts, earspools			
*Hopewell Md. 25, Altar 1	500+ earspools[a]	250+	Greber and Ruhl (1983:134); Moorehead (1922:113)
*Hopewell Md. 25, Sk. 260–261	94–95 breastplates	93–94	Shetrone (1926:75–76)
*Hopewell Md. 25, Sk. 260–261	66 copper celts	65–66	Shetrone (1926:75–76)
*Hopewell Md. 25, B7	60 earspools	29–30	Shetrone (1926:65–66)
*Turner, Md. 3, Central Altar	50 earspools	25	Willoughby (1922:46–60)
*Hopewell, Shetrone's Md. 17, Offering 1	50+ granite, gabbro, slate celts	50+?	Shetrone (1926:44–45)
Seip–Pricer, Ceremonial Cache	12 breastplates	12	Shetrone & Greenman (1931:380)
Geometrics			
Hopewell Md. 25, Copper Deposit	109+ copper geometric cutouts	?	Shetrone (1926:74–75)
*Hopewell Md. 25, Altar 1	~200 mica geometric cutouts	?	Moorehead (1922:113)
Reel-shaped gorgets, crescents, pendants			
Turner, Md. 15, Cache	25 calcite reel-shaped gorgets	25	Willoughby (1922:87)
*Turner, Md. 3, Central Altar	17 copper pendants	?	Willoughby (1922:46–60)
Tremper, Sandstone Grave	8 mica crescents	8	Mills (1916:280)
Points			
*Hopewell Md. 25, Altar 2	100s (several) of obsidian spears	?	Moorehead (1922:114)
*Mound City, Md. 3, Altar & Crematory Basin	1 bushel fragmentary quartz & chert spearheads	?	Mills (1922:498–507)
*Mound City, Md. 3, Altar & Crematory Basin	50–100 limpid quartz "arrow points/knife blades"	?	Mills (1922:498–507)

Pearl & shell beads (300 max per necklace)			
*Hopewell Md. 25, Altar 2	100,000 pearl & shell beads	~333	Moorehead (1922:114)
*Turner, Md. 3, Central Altar	41,000 pearl & shell beads	~137	Willoughby (1922:46–60)
*Hopewell, Md. 25, Altar 1	19,000 pearl beads	~63	Moorehead (1922:113)
*Hopewell Md. 25, Sk. 260–261	16,000 pearl & shell beads	~53	Shetrone (1926:75–76); OHS catalog
*Mound City, Md. 13, Deposit 5	5,050 pearl, shell, & bone beads	~17	Mills (1922:452–453)
*Mound City, Md. 13, B1	5,000+ shell beads	~17	Mills (1922:448–451)
*Hopewell Md. 26, Crematory Basin	5,000+ shell & bone beads	~17	Shetrone (1926:107–108)
*Hopewell Md. 25, B6–7	5,000 pearl beads	~17	Shetrone (1936:63–65)
*Hopewell Md. 26, Crematory Basin	1000s (several) of bone beads	~10	Shetrone (1926:106–107)
Hopewell Md. 2, B3	1000s (several) of shell beads	~10	Shetrone (1926:23–24)
Hopewell Md. 25, B248	1000s of pearl & shell beads probably sewn onto a garmet	1	Shetrone (1926:86–876)
*Hopewell Md. 25, Sk. 260–261	1000s of pearl, shell, metal, bone beads	~10	Shetrone (1926:75–76)
Hopewell Md. 28, Crematory Basin	1,800 shell beads	~6	Shetrone (1926:108–109); OHS records
*Seip–Pricer, Burned Offering	1000s of bone beads	~10	Shetrone & Greenman (1931:377–380)
Rutledge, Md. 1, B3	2,400 shell & pearl beads	~8	Field notes, OHS, Columbus
Hopewell Md. 26, Deposit	1,000 shell beads	~3	Shetrone (1926:105–106)
Bear canines (4 max per necklace)			
*Turner, Md. 3, Central Altar	36 bear canines	~9	Willoughby (1922:46–60)
Seip–Pricer, Cremation Basin 2	30 bear canines	~7	Shetrone & Greenman (1931:366)
*Seip–Pricer, Burned Offering	30 bear canines	~7	Shetrone & Greenman (1931:377–380)
Hopewell Md. 25, B34	26 bear canines	~6	Shetrone (1926:87–89)
Harness Md., Cremation	20 bear canines	~5	Mills (1907:168–169)
Other animal teeth			
*Turner, Md. 3, Central Altar	2,000 small animal canines	?	Willoughby (1922:46–60)
Hopewell Md. 23, Sk. 207	506 wolf & fox teeth, perforated	?	Moorehead (1922:98)
Mound City, Md. 8, B3	150+ elk canines, perforated	?	Mills (1922:434); Mound City art. catalog
Mound City, Md. 8, B2	~100 elk canines, perforated	?	Mills (1922:434)
*Mound City, Md. 2, B16	35 elk canines, perforated	?	Mills (1922:445–446)
*Mound City, Md. 13, Deposit 5	25 elk canines, perforated	?	Mills (1922:452–453)
Hopewell Md. 25, B41	35 bear claws, 30 raccoon teeth	?	Shetrone (1926:92–93)
*Mound City, Md. 2, B16	22 copper alligator teeth	?	Mills (1922:445–446)

(*Continued*)

Table 13.2. (*continued*)

Provenience	Number and kind of item	Estimate of number of gift givers	Reference
Raw materials			
*Hopewell, Shetrone's Md. 29, Moorehead Md. 17	3,000 mica sheets over south end of mound	?	Moorehead (1922:91a)
Mound City, Md. 7	20 ft crescent of round mica sheets (10–12 in. in diameter) overlapping like fish scales	?	Squire and Davis (1948:473)
*Mound City, Md. 13, B1	7 × 6.5 ft covered w/ mica sheets	?	Mills (1922:448–451)
Mound City, Md. 23, B1	"Considerable" mica	?	Mills (1922:461)
*Hopewell, Shetrone's Md. 29	12 galena cubes, 12–15 lb each	?	Moorehead (1922:90–92)
Mound City, Md. 5, Altar	30 lb galena in 2-oz to 3-lb pieces	?	Squire and Davis (1848:149)
*Mound City, Md. 13, B1	25 lb galena crystals	?	Mills (1922:448–451)
Hopewell Md. 2, Central Cache	8,000+ Indiana hornstone disks	?	Squire and Davis (1848:158)
Hopewell Md. 11, Crematory Basin	136 kg worked obsidian	?	Shetrone (1930:202)
Hopewell Md. 1	30–40 chlorite disks	?	Stevens (1870:438)

Note. An asterisk indicates a ceremonial deposit or grave assemblage with more than one kind of item in great frequency and, hence, listed more than once. Md., mound; Sk., skeleton; B, burial; OHS, Ohio Historical Society.

[a] Willoughby's notes on Hopewell Mound 25, Altar 1 (Greber and Ruhl 1989:77) indicate that it contained "over 500 ear ornaments". In contrast, Moorehead (1922:116) said that "While no one has yet counted the multitudinous objects in the Field Museum collection, it is estimated that there are about two thousand one hundred copper ear-ornaments or busks in storage"–most of which would have come from Moorehead's excavation of Altar 1. Willoughby was a meticulous archaeologist (Greber and Ruhl 1989:1, 9; S. Williams 1989:xxiii), whereas Moorehead was "not always inclined towards sufficient attention to details" (Greber and Ruhl 1989:2, see also p. 10). Moorehead's estimate was never confirmed. However, Katharine Ruhl (personal communication, 2004) estimates that the number of earspools found in Altar 1 was between the two figures, about 1000. She estimates that she has examined and confirmed in recent years the existence of over 700 earspools in the Field Museum's repository of Mound 25 artifacts, and many tens of them from Mound 25 at other institutions to where they were traded. She also notes that not all earspools from the Altar were apparently recovered from the field, having been embedded in the Altar, and may not have been included in Willoughby's count, and that Willoughby may not have been sent the entirety of the Mound 25 holdings at the Field Museum when he inventoried and analyzed them at Harvard. These factors may account for Willoughby's estimate being too low relative to Ruhl's observations.

Change over time in the frequency of large gatherings also appears to be indicated in Table 13.2. Because the table includes all ceremonial deposits and burials with large numbers of artifacts of a kind that have been excavated in Ohio, one can ask whether large gatherings were more common in earlier or later Hopewell sites. Of the seven sites listed in Table 13.2, six are approximately datable and can be roughly ordered into five time periods, refining Prufer's (1961, 1964a) chronology: (1) Very Early Hopewell—Tremper; (2) Early Hopewell—Mound City; (3) early Middle Hopewell—Mounds 25 and 11 and perhaps certain other mounds at Hopewell; (4) late Middle Hopewell—Seip–Pricer, Edwin Harness, and possibly certain mounds at the Hopewell site; and (5) late Middle to Late Hopewell—Turner (see also Greber 1983, 2003; Ruhl 1996; Ruhl and Seeman 1998). Almost all (29) of the 38 large ceremonial deposits or burial assemblages found at these sites occur at the Early to early Middle Hopewell locations of Mound City, Mound 25 of the Hopewell site, and other mounds there. Only five such ceremonial deposits or burials are found in the late Middle Hopewell mounds of Seip–Pricer and Edwin Harness. The Very Early Hopewell site of Tremper has only two such deposits and the late Middle to Late Hopewell site of Turner has only two.

Interpreting sociologically the rise-and-fall pattern of the frequency of large gatherings requires a consideration of any differences in site function that might be compounded with the temporal dimension. Complementary information on the social compositions and nature of the gatherings is also desirable. These matters and the task of interpreting the rise-and-fall pattern are addressed in the second, quantitative half of this chapter.

A FIRST VIEW OF LARGE GATHERINGS FOR THEIR COMPOSITIONS

The social composition of large Hopewellian gatherings can be inferred by inventorying the kinds of artifacts found together in individual ceremonial deposits and burials, and by listing the social roles indicated by those artifacts. This is done in Tables 13.3 for a selection of deposits and burials inventoried in Table 13.2. The chosen deposits and burials each had large numbers of one or a few kinds of artifacts and, together, differed widely in the kinds of artifacts that predominated in them. The social roles marked by various artifact types are those documented ethnographically or inferred by Case and Carr (n.d.).

Socially Homogeneous versus Socially Diverse Gatherings

Patterning in Table 13.3 gives insight into the varying kinds of ceremonial gatherings that occurred. The widest and strongest pattern is a distinction between (1) deposits or burials with artifact types marking primarily one social role or a closely related set of roles, and (2) deposits or burials with artifact types indicating a great diversity of roles. This contrast distinguishes more socially homogeneous gatherings from more socially diversified gatherings, at least with regard to those persons who offered gifts.

The socially homogeneous gatherings are very common. They are predominated by shaman-like practitioners (e.g., Hopewell Mound 25, Altar 2; Mound City Mound 3, Altar; Hopewell Mound 17, Deposit 2), or sodality members marked by breastplates and leaders marked by celts and headplates (Hopewell Mound 25, Skeletons 260 and 261), or clanpersons (Mound City Mound 8, B2), or a social role marked by reel-shaped gorgets (Turner Mound 15, Cache), or a social role marked by crescents (Tremper, Sandstone Grave), or simply items of personal prestige such as smoking pipes (Mound City Mound 8, Central Altar) or beads (Hopewell Mound 26, Crematory Basin). In each case, one or two kinds of artifacts predominate: breastplates and celts, obsidian points, quartz points, cones/hemispheres, reel-shaped gorgets, crescents, animal teeth, pipes, or pearls. The social role(s) marked by the predominant artifact type are often complemented by related roles marked by much less numerous artifact types, and sometimes a few unrelated roles indicated by infrequent artifacts. For example, Hopewell Mound 25, Alter 2, is predominated by obsidian spear points that possibly indicate shaman-like

Table 13.3. Spectrum of Social Roles Associated with Large Burial Assemblages and Ceremonial Deposits

Kind of artifact	Number of specimens	Associated social role
Deposit of pipes: Mound City, Md. 8, Central Altar & Depository Bag (Mills 1922:434–441)		
Platform pipes	~200	Personal, prestigious
Pearl & shell beads	Many	Personal, prestigious
Ornaments, silver-covered copper	A number	Personal, prestigious
Disks, tubes, of copper (necklaces?)	Numerous	Personal?, prestigious
Human head sculpture	1	Unknown
Breastplates and celts: Hopewell Md. 25, Sk. 260–261 (Moorehead 1922:110; Greber and Ruhl 1989:90–100)		
Breastplates, copper	94–95	Sodality membership or achievement
Celts, copper	66	Leadership of a whole society/community or a sodality
Headdress	2	Leadership of a whole society/community
Human femur & eagle bone, carved	?	Shaman-like public ceremonial leader
Containers, shell	?	Shaman-like public ceremonial leader
Colored earths	?	Shaman-like ceremony
Nuggets of algondonite, copper, silver, meteoric iron	27+	Shaman-like manufacture
Bear head form, copper	1	Shaman-like or clan leader
Jaw	1	Clan leadership or membership
Animal teeth	A number	Clan membership
Beads, shell, pearl, bone, meteoric iron	16,000	Personal, prestigious, or community offering
Anklets, copper	~10	Personal, prestigious
Bracelets, copper	~10	Personal, prestigious
Rings, copper	~10	Personal, prestigious
Effigies, copper (1 bird)	?	?
Obsidian projectile points, knives: Hopewell Md. 25, Altar 2 (Moorehead 1922:114)		
Spearpoints, obsidian	100s	Shaman-like war or hunt divination, pulling or sending power intrusions
Spearpoints, quartz	A number	Shaman-like war or hunt divination, pulling or sending power intrusions
Knives, chalcedony	Many	Shaman-like war or hunt divination, pulling or sending power intrusions
Quartz crystals	Several dozen	Shaman-like divination
Plummet, hematite, shell	2	Shaman-like divination
Cone, hollow slate	1	Shaman-like divination
Boatstone, hawk w/ human face, antler	1	Shaman-like divination
Wand, dark triangular, decorated bones	Several	Shaman-like healing
Cutouts, copper	Various	Shaman-like philosopher
Awls, needles, bone	Many	Shaman-like psychopomp?
Tablets, stone	?	Shaman-like ceremony
Sharks teeth, fossil	Several	Shaman-like ceremonial leader (scratching)?
Iron pyrite	?	Shaman-like?
Tortoise shell pendants	?	Shaman-like?
Human head, antler	1	Shaman-like associative magic?, other
Antler effigy, copper	1	Leadership, clan or other social unit
Earspools, ceramic, graphite	?	Sodality membership or achievement?
Panpipes	Several	A social role
Animal jaws, cut	?	Clan leadership or membership
Bear canines, perforated	?	Ordinary clan membership or sodality memberhsip
Bear claws	128	Ordinary clan membership or sodality membership
Bear tooth, stone	1	Ordinary clan membership or sodality membership
Platform pipes	6	Personal, prestigious
Beads, pearl, shell, iron, bird bone	100,000	Personal, prestigious, or community offering
Bar amulet	1	A social role?, personal, prestigious

Table 13.3. (*continued*)

Kind of artifact	Number of specimens	Associated social role
Animal feet bones, small	690	Shaman-like animal power parts?
Cloth	?	?
Shells, cut, for embroidery	413	?
Quartz projectile points, knives: Mound City, Md. 3, Altar & Crematory Basin (Mills 1922:498–507)		
Spearheads, quartz & chert	1 bushel	Shaman-like war or hunt divination, pulling or sending power intrusions
Arrowheads/knife blades, limpid quartz	50–100	Shaman-like war or hunt divination, pulling or sending power intrusions
Arrowpoint, obsidian	1	Shaman-like war or hunt divination, pulling or sending power intrusions
Quartz crystals, 3–4 in. in diameter	Several	Shaman-like divination
Garnet crystals, 3–4 in. in diameter	Some	Shaman-like divination
Shark teeth, perforated	?	Shaman-like ceremonial leader (scratching)?
Beads, copper tubular	20+	Personal, prestigious
Platform pipes	2	Personal, prestigious
Beads, shell & pearl	?	Personal, prestigious
Gravers, chisels, copper	2	Personal, utilitarian?
Implements, copper	Many	Personal, utilitarian?
Implements, stone	Many	Personal, utilitarian?
Pottery	A quantity	
Cones/hemispheres: Hopewell, Shetrone's Md. 17, Deposit 2 (Shetrone 1926:47–49)		
Cones/hemispheres, chlorite, pyrite	80	Shaman-like divination
Boat-shaped objects, quartz crystal	3	Shaman-like divination?
Cup-shaped object, quartz crystal	1	Shaman-like ceremony?
Bird tail feather fan effigy?, chlorite	2	Shaman-like ceremony?
Tablets, chlorite	?	Shaman-like ceremony
Cutouts, mica	?	Shaman-like philosopher
Barlike objects, chlorite, pipestone	10	?
Worked chlorite	6	?
Bear claws	10	Ordinary clan membership or sodality membership
Club-shaped, sandstone	1	Warrior?
Gorgets, chlorite	?	Personal, prestigious?
Grooved axe, stone	1	Personal, utilitarian
Celts, celt-shaped, granite	5	Personal, utilitarian
Hammerstones, granite	2	Personal, utilitarian
Bladelets, flint	3	Personal, utilitarian
Pottery, utilitarian	Fragments	Personal, utilitarian
Spatulas, bone	?	Personal, utilitarian
Geometrics: Hopewell Md. 25, Copper Deposit (Moorehead 1922:109; Shetrone 1926:74–75)		
Geometrics, copper	109+	Shaman-like philosopher
Arrowhead, copper effigy	1	Shaman-like war or hunt divination, pulling or sending power instrusions
Scratcher?, copper effigy	1	Shaman-like ceremonial leader?
Panpipe	1–2	A social role
Earspools, copper, iron, one with 4-Directions symbolism	6+	Sodality membership or achievement
Bear paw comb/effigy	4	Sodality or clan membership or leadership
Fish effigy, copper	3	Clan leadership or membership?
Effigy human face, copper	1	?
Sheet copper, masses, lengths	124+	?

(*Continued*)

Table 13.3. (*continued*)

Kind of artifact	Number of specimens	Associated social role
Reel-shaped gorgets: Turner, Md. 15, Cache (Willoughby 1922:86–87)		
Reel-shaped gorgets, calcite	25	A social role
Bifaces, stone	8	Personal, utilitarian
Antler handles for bifaces	?	Personal, utilitarian
Mica crescents: Tremper, Sandstone Grave (Mills 1916:280)		
Crescents, mica	8	A fairly rare social role
Earspools, copper	4	Sodality membership or achievement
Bear effigy, mica	1	Clan? Sodality?
Flint spearpoint	1	Personal
Totemic animal power parts: Mound City, Md. 8, B2 (Mills 1922:434)		
Elk canines, perforated	~100	Ordinary clan membership
Elk teeth, imitation	Several	Ordinary clan membership
Mountain lion canines	?	Ordinary clan membership
Eagle claws, copper imitation	3	Ordinary clan membership
Bear canines	?	Ordinary clan membership or sodality membership
Bear canines, imitation	?	Ordinary clan membership or sodality membership
Beads, shell and pearl	100	Personal, prestigious
Disks, shell, large & small (necklace?)	~50	Personal, prestigious
Awl, copper	1	Personal, utilitarian?
Pearl and shell beads: Hopewell Md. 26, Crematory Basin (Shetrone 1926:106–107)		
Beads, small shell & bone	5,000+	Personal, prestigious or community offering
Celts, copper	4	Leadership of a whole society/community or a sodality
Thread spool-shaped objects, shell	6	?
Raw materials and preforms: Hopewell Md. 2, Central Cache (Moorehead 1922:88–89; Squire and Davies 1848)		
Hornstone disks	8,000+	Community offering?
Raw materials: Mound City, Md. 5, Altar		
Galena, 30 lb in 2-oz to 3-lb pieces	?	Community offering?
Raw materials: Hopewell Md. 11, Crematory Basin (Shetrone 1926:39–43)		
Obsidian, from manufacture of bifaces	136 kg	Shaman-like war or hunt divination, pulling or sending power intrusions
Mica mirrors/sheets	2	Shaman-like divination
Mica figures	2	?
Beetle-shaped object, chlorite	1	?
Beads, pearl	A few	Personal, prestigious
Diverse: Hopewell Md. 25, Altar 1 (Moorehead 1922:113)		
Earspools, copper	500+[a]	Sodality membership or achievement
Earspools, slate, possibly ceramic	14+	Sodality membership or achievement
Celts, stone (nonfunctional?)	Several	Leadership?
Cystals, quartz	Many	Shaman-like divination
Crystal, black tourmaline	1	Shaman-like divination
Boatstones, stone effigy & plain	Several	Shaman-like divination
Cones, quartz	2	Shaman-like divination
Plummets, stone & shell	Several	Shaman-like divination
Balls, copper, silver-covered	?	Shaman-like divination?
Mica mirrors/sheets	Many	Shaman-like divination or community offering
Knife fragments, obsidian	?	Shaman-like war or hunt divination, pulling or sending power intrusions

Table 13.3. (***continued***)

Kind of artifact	Number of specimens	Associated social role
Cores, obsidian	?	Shaman-like?
Cutouts, mica	∼200	Shaman-like philosopher
Wand, antler human effigy	1	Shaman-like public ceremonial leader
Shark's teeth (possibly present)	?	Shaman-like ceremonial leader (scratching)?
Blades & core, quartz	Many & 1	Shaman-like ceremony
Tablets, stone	?	Shaman-like ceremony
Fossils, irridescent, perforated	1	Shaman-like ceremony
Nuggets, copper, silver	?	Shaman-like manufacture
Panpipe, iron jacketed	1	A social role
Gorgets, reel-shaped, shell	?	A social role
Teeth, bear, perforated	?	Sodality membership or clan membership
Claws, bear, perforated	167	Sodality membership or clan membership
Tooth, bear, shell effigy	1	Sodality membership or clan membership
Teeth, panther	?	Clan membership
Beads, pearl	19,000	Personal, prestigious, or community offering
Beads, shell	Many	Personal, prestigious
Beads, bird bone	325, 1 string	Personal, prestigious or shamanic
Pearls, seed & mustard seed	Many	Personal, prestigious
Tubes, copper, thick & wide	?	Personal?, prestigious
Platform pipe (possibly present)	1	Personal, prestigious
Effigy, spoonbill	1	Personal?, prestigious
Ornaments, slate	Several	Personal, prestigious
Bar amulet, stone	1	Personal?, prestigious
Buttons, copper-covered	?	Personal, prestigious
Adzes, iron, w/ antler handles	Several	Personal, utilitarian?
Drill, iron	1	Personal, utilitarian
Knives, flint	?	Personal, utilitarian
Chisel, stone	1	Personal, utilitarian
Arrowpoints, spearpoints, stone	Several	Personal, utilitarian
Blades, chert	?	Personal, utilitarian
Resin lumps	?	Personal, utilitarian
Pots, fragmentary	3	Personal, utilitarian?
Cloth	?	?
Cut shells for embroidery?	?	?
Miscellaneous copper objects	?	?
Small mammal foot bones	110	Shamam-like animal power parts?
Diverse: Turner Md. 3, Central Altar (Willoughby 1922:46–60)		
Headplate, iron	1	Leadership of a whole community/society
Celt, copper	1	Leadership of a whole community/society or a sodality
Breastplate, copper	1	Sodality membership or achievement
Earspools, copper & silver/iron-covered	50	Sodality membership or achievement
Earspools, terra cotta	3	Sodality membership or achievement
Bifaces & blades, obsidian	Several	Shaman-like war or hunt divination, pulling or sending power intrusions
Bifaces & blades, micaceous schist	11	Shaman-like war or hunt divination, pulling or sending power intrusions
Geometric cutouts, copper	8	Shaman-like philosopher
Annuli & circles, mica cutouts	10	Shaman-like philosopher
Parietals, carved with cosmos model	2	Shaman-like philosopher
Fossils	Several	Shaman-like ceremony
Bird-man, mica cutout	1	Shaman
Mirrors, mica	3	Shaman-like divination

(*Continued*)

Table 13.3. (*continued*)

Kind of artifact	Number of specimens	Associated social role
Bifaces, knives, obsidian	6?	Shaman-like divination
Tinklers, copper & silver-covered	50+	Shaman-like ceremony
Nuggets of copper, meteoric iron	38+	Shaman-like manufacture
Sheets of gold	15	Shaman-like manufacture
Spatula, tortoise shell	1	Shaman-like?
Crescent, copper	1	A social role
Panpipe jacket, meteoric iron	1	A social role
Canines, bear	36+	Ordinary clan membership or sodality membership
Teeth, bear, bone & shell effigy	5+	Clan membership or sodality membership
Bear effigy, mica	5	Sodality, clan membership, or shamanic?
Canines, small animal, perforated	2,000	Ordinary clan membership
Pendants, copper	17	Personal?, prestigious
Bracelets, copper, silver-covered	2	Personal, prestigious
Buttons, copper-covered	?	Personal, prestigious
Beads, copper, wood, meteoric iron	712+	Personal, prestigious
Beads, pearl & shell	41,000	Personal, prestigious, or community offering
Rings, shell, bone	Many	Personal, prestigious
Shells for embroidery	17,000	?
Alligator teeth	12	?
Small animal phalanges	600	Shaman-like animal power parts?
Bifaces, flint	6	Personal, utilitarian
Vessels, pottery, fragmentary	Many	Personal, utilitarian
Diverse: Mound City, Md. 13, Burial 1, Mica Grave (Mills 1922:448–451)		
Mica mirrors/sheets	100s	Shaman-like divination
Spear points, quartz & obsidian	?	Shaman-like war or hunt divination, pulling or sending power intrusions
Shark teeth, perforated	?	Shaman-like ceremonial leader (scratching)?
Animal canines, perforated	?	Ordinary clan membership
Platform pipes, 2 effigy frog, 2 effigy crow	4	Personal prestigious
Beads, pearl & shell	5,000+	Personal prestigious or community offering
Galena crystals	25 lb	Community offering?
Whitneyite pieces	3 lb each	Community offering?
Awls, bone & copper	2	Personal, utilitarian?

[a] See Table 13.2, Footnote a, for qualifications.

war or hunt divination, but also includes several other artifact types used in shaman-like divination generally (e.g., plummets, cones), a few other artifact types used in other shaman-like tasks (wands, tablets), and a few kinds of artifacts that indicate sodality or clan membership and personal prestige (earspools, animal canines, beads). The total picture is of a largely homogeneous set of gift givers.

Socially very diversified gatherings are rare. They are manifested in Hopewell Mound 25, Altar 1, and Turner Mound 3, Central Altar. These deposits include artifact types that marked leaders of one or more kinds, shaman-like practitioners of many kinds, sodality members, clan members, several well-defined but unidentified social roles (reel-shaped gorgets, crescents, panpipes), and personal prestige. Mound City Mound 13, Burial 1, the Mica Grave, also has diverse kinds of artifacts, but it is possible that most pertain to related shaman-like roles.

Social Roles That Were and Were Not the Focus of Large Homogeneous Gatherings

A good number of the social roles that are interpreted as having been marked by Hopewellian artifacts (Case and Carr n.d.) formed the core of gift givers in the large, socially homogeneous,

Table 13.4. Social Roles Associated with Select Hopewellian Artifact Types That Predominate in Large Ceremonial Deposits and Burial Offerings[a]

Artifact type	Social role
Spear points, obsidian	Shaman-like war or hunt divination, pulling or sending power intrusions
Obsidian from biface manufacture	Shaman-like war or hunt divination, pulling or sending power intrusions
Spear points, quartz	Shaman-like war or hunt divination, pulling or sending power intrusions
Cones & hemispheres	Shaman-like divination
Crystals, quartz, gems	Shaman-like divination
Mirrors, mica	Shaman-like divination
Geometrics, copper, mica	Shaman-like philosopher/cosmologist
Animal foot and ankle bones	Shaman-like animal power parts?
Chlorite disks	Shaman-like equipment?
Celts, copper	Leadership of a whole society/community or a society-common sodality
Breastplates, copper	Sodality membership or achievement
Earspools, copper	Sodality membership or achievement
Reel-shaped gorgets	A socially institutionalized role
Crescents, mica or copper	A socially institutionalized role
Panpipes, metallic	One or more socially institutionalized roles
Bear canines	Ordinary clan membership or sodality membership
Elk teeth	Ordinary clan membership
Raccoon teeth	Ordinary clan membership
Other animal teeth, claws	Ordinary clan membership
Platform pipes	Personal, prestigious
Necklaces, pearl and shell	Personal, prestigious
Copena pipes	Community offering involving Shaman-like leaders?
Raw materials	
Galena	Community offering through Shaman-like practioners?
Hornstone disks	Community offering through Shaman-like practioners?
Mica sheets as tomb or mound structure	Community offering through Shaman-like practioners?

[a] Social role assignments are those determined by Carr (Chapter 7), Case and Carr (n.d.), and Turff and Carr (Chapter 18).

specialized gatherings (Table 13.2) that assembled in the earthworks and at mound sites. These roles are listed in Table 13.4. They include several kinds of apparently decentralized shaman-like roles (war or hunt divination or the pulling or sending of power intrusions, other divination, philosopher), probable society-wide leadership indicated by celts, membership or achievement in two kinds of sodalities indicated by breastplates and earspools, at least three unknown institutionalized roles marked by reel-shaped gorgets, crescents, and panpipes, and membership in certain totemic groups (bear, elk, one smaller instance of raccoon).

Other important social roles that can be identified archaeologically were not, however, central to large, homogeneous gatherings. The absence of the shaman-like healer can probably be attributed to the power of this person in one-on-one or small group arenas rather than larger, public affairs. The shaman as body processor and/or psychopomp, indicated by awls (grave covering skewers), and society-wide leaders marked by headplates—although both socially critical—would not have constituted the numeric core of gatherings because they were rare individuals, by grave counts across Ohio (Case and Carr n.d.). Most known Ohio Hopewellian animal-totemic clans (Thomas et al., Chapter 8) did not predominate in any large gatherings: raptor, fox, cat, wolf/dog, opposum, and beaver. Yet by grave count, members of the wolf/dog and cat clans were three to four times more numerous than members of the elk and raccoon clans, which did predominate at some large gatherings, and members of the raptor clan were as common as those of the elk and raccoon. If demographic factors do not explain why wolf/dog, cat, and

raptor clans did not find a central place in some large, homogeneous gatherings, perhaps local historical, sociopolitical reasons do.

Sociological Interpretation of Large Homogeneous and Large Diversified Gatherings

The social units responsible for these two kinds of gatherings can be fairly easily deduced. Many of the large, socially homogeneous gatherings involved social roles that would not have been common within a single community (e.g., shaman-like practitioners, group leaders, sodality members of high achievement). The large numbers of persons of these roles who came to these gatherings suggest a drawing from multiple communities, but of specialized segments possibly responsible for particular ceremonies. Other of the large, socially homogeneous gatherings involved social roles that would have been more common within a community (e.g., clanpersons, prestigious persons). These gatherings may have been constituted by members of either single or multiple communities but, again, perhaps only specialized segments who were caretakers for particular ceremonies. The chemical source data on pipes from the ceremonial deposit at Tremper (Weets et al., Chapter 14), at least, suggest that some of those who offered pipes there came from distances and had used distinct pipestone sources; these persons probably came from different communities or societies.

The large and rare, socially diversified gatherings have compositions that accord with the spectrum of roles to be found within a whole community or the compositing of several whole communities. In the case of Hopewell Mound 25, Altar 1, the number of earspools implies the gathering of more than one community. Over 500 earspools were found in the Altar, and probably between 750 and 1000 (Table 13.2, Footnote a), equating to over 250 persons, and probably between 375 and 500 persons. These numbers are larger than the burial populations of any of the earthworks in the Chillicothe area, except perhaps Tremper's (Table 13.1), and much larger than the 133 persons that Konigsberg (1985) estimated as the probable living population that fed the Seip–Pricer cemetery, as an approximate representative of the cemeteries in the area.[1] Multiple communities are implicated. The situation at Turner Mound 3, Central Altar, is less clear. The 41,000 pearl and shell beads found in the altar equate to at least 137 persons, if they were all from necklaces, which had a maximum of about 325 beads in the documented Ohio Hopewell world. This number is less than the known, individual burial populations of earthworks in the Chillicothe area, but a minimal estimate. It could represent the contributions of persons from one community or a few.

The Issue of the Origin of Sodalities and Tribes

It is possible that certain of the large, homogeneous gatherings constituted by persons from multiple communities indicate the operation of multicommunity sodalities that crosscut community residence and kinship and that were responsible for particular ceremonies and/or other social tasks, i.e., the existence of multi-community, tribal sociopolitical organization in Service's (1971) cross-cultural terms. Relevant here are the large gatherings of specialized forms of shaman-like practitioners, including war or hunt diviners, other kinds of diviners, and philosophers/cosmologists, as well as gatherings of social personae marked by breastplates, earspools, reel-shaped gorgets, panpipes, smoking pipes, and possibly bear canines and elk teeth (Table 13.4). Breastplates and earspools have already been identified empirically as likely sodality markers by Carr (Chapter 7). All of these shaman-like and other social personae can easily be seen as analogous to the members of sodalities of the historic Central Algonkians, including "sacred pack" organizations for warfare, hunting, sorcery, healing the whole tribe, epidemics or drought, and those blessed by the same spirit, including dance cult groups (Callender 1962:31, 35, 41; Skinner 1915; Tax 1937:267). These organizations had memberships that were voluntary and nonhereditary and crosscut clans, lineages, and each other (Callendar, p. 31; Tax, p. 267).

Several kinds of evidence support the interpretation of the large, homogenous gatherings as ceremonial meetings of sodalities.

First, two kinds of sodalities, marked by earspools and breastplates, are already known with reasonable certainty to have existed among Scioto Hopewellian societies; additional sodalities would not be unexpected in this context. The probable sodalities symbolized by earspools and breastplates have been identified with multiple lines of evidence—by their frequency, demographic distribution, intrasite spatial patterning, certain contexts of deposition, and/or manufacturing charcteristics—by Carr (Chapter 7) and Ruhl (Chapter 19). Second, each kind of specialized shaman-like practitioner whose paraphernalia were placed in a homogeneous archaeological deposit was found in Chapter 8, by Thomas et al., to have been recruited from multiple kinship groups (clans) rather than along kinship lines, in accordance with the definition of a sodality. Third, many of the artifact classes that might represent sodalities were found in Chapter 5, by Carr and Case, to partially associate with each other within graves of individuals across multiple Ohio cemeteries. This archaeological pattern suggests that some persons fulfilled more than one of the social roles of concern here, and/or were members of multiple social groups that had those roles. This overlapping role pattern recalls the overlapping memberships of Central Algonkian sodalities (Callendar 1962; Skinner 1920). Fourth, the development of sodalities is expectable in social situations where the multiple roles of classic, generalized shaman are in the process of becoming segregated among specialized magicoreligious practitioners, as modeled by Winkelman (1989, 1990, 1992; see next section). This was clearly the situation of Scioto Hopewellian societies (Carr and Case, Chapter 5; see below, The Issue of the Social Evolution of Magicoreligious Practitioners).

Partially contrary of the interpretation that the large, homogeneous artifact deposits represent the remains of ceremonies of sodalities is that many of the deposits are unique in their artifact compositions and indicate one-time, unique ceremonies (Table 13.2), rather than the repeated, collective ceremonies one might expect for sodalities. However, repeated ceremonies are evidenced by three very large deposits of mica mirrors at Mound City, two large deposits of galena there, three moderately sized deposits of bear canines below the Seip-Pricer mound and Hopewell Mound 25, three moderately sized deposits of elk canines at Mound City, two large to very large deposits of earspools under Hopewell Mound 25, and two very large deposits of smoking pipes at the Tremper and Mound City sites, which may have overlapped in their times of use.

An additional, minor difficulty with interpreting the large, socially homogenous gatherings as evidence for sodality organization is that it is unclear, in a few cases, whether the social groups who assembled were comprised of persons from multiple residence groups (communities) or from within a single community. The definition of a sodality would require the former. It is possible that a certain kind of gathering that occurred at multiple, approximately coeval sites represents multiple, distinct, ceremonial societies of a similar *kind* in different communities, rather than one, formal ceremonial society spanning several communities. This possibility must be considered for the three deposits of bear canines found at Hopewell, Seip, and Liberty. The deposits are small and each could easily indicate a ceremonial society within a community. The two deposits of smoking pipes found at Tremper and Mound City, and the two deposits of breastplates recovered from Hopewell and Seip might also be interpreted in this manner, but the number of items found in the deposits from Tremper, Mound City, and Hopewell are very large (n = 136, 200, 94–95, respectively), suggesting multicommunity participation.

An alternative interpretation of the large, socially homogeneous gatherings is that they involved leaders of one kind or another (Carr and Case, Chapter 5), and were occasions of alliance formation facilitated by such leaders, rather than sodality affairs. This interpretation is strongly supported by multiple lines of intrasite and regional-scale evidence of Hopewellian alliance-building reported in Chapter 7 by Carr.

A third possible interpretation of the archaeological data currently seems most likely. Considering all available data, it appears that institutionalized sodalities and multicommunity alliances negotiated by leaders were arising and operating hand-in-hand in the Scioto valley during the Middle Woodland, and that the different, large, homogeneous, burial assemblages

and ceremonial deposits pertain to one or the other kind of social structure. All three alternative interpretations offered above require further investigation, using the demographic and other criteria by which copper breastplates and earspools were identified with good certainty to have been markers of sodalities in Chapter 7.

Assuming for the moment that at least some of the large, homogeneous gatherings documented in Table 13.2 were the meetings of sodality members, one can ask when sodality organization arose and came to flourish. The Scioto valley, with its large number of excavated sites and intrasite proveniences, gives the best picture in Ohio. There, the sites of Tremper, Mound City, and Hopewell were functionally analogous and are analytically comparable ceremonial centers (see above, Site Function and Regional Distinctions), and define a sequence through time that is now secured by many archaeological criteria (Greber 1983, 2003; Prufer 1961a, 1964a; Ruby et al., Chapter 4; Ruhl 1996, Chapter 19; Ruhl and Seeman 1998; Weets et al., Chapter 14). For these three sites, the total number of large burial assemblages and ceremonial deposits that are distinct in kind at a site–that is, that potentially indicate distinct sodalities–increased over time from 2 at the very early Middle Woodland site of Tremper, to 6 at the slightly later but still early Middle Woodland site of Mound City, to 17 at the middle Middle Woodland site of Hopewell (Table 13.2). The total number of such large assemblages and deposits, distinct in kind or repeated at a site, increased from 2 at Tremper, to 10 at Mound City, to 17 at Hopewell (Table 13.2). These data suggest that sodality organization–if the homogenous burial assemblages and ceremonial deposits can be interpreted as such–had its origins in the Scioto valley at least as early as the beginning of the Middle Woodland period. Significantly, this time coincides with a shift in the Scioto valley from vertically stratified Adena mounds to horizontally laid out Hopewellian charnel buildings (Greber 1991), indicating new, horizontal means of social organization (Carr, Chapter 7), such as the rise of multicommunity, mortuary-based alliances (Carr, Chapter 7:Summary of the Historical Reconstruction of the Tripartite Alliance and Its Fall; Weets et al., Chapter 14:Conclusions). The rise of sodalities, also horizontal social structures, fits comfortably in this culture-historical, developmental context. The data further suggest that sodality organization–if this identification is correct–was a major dimension of Scioto Hopewellian social life by the heart of the Middle Woodland period.

The possibility that a wide variety of sodalities characterized Ohio Hopewellian societies by the middle of the Middle Woodland Period bears directly on Braun's (1977, 1986:123–125) view of the "decline" of Hopewell. Braun argued that Hopewellian mortuary flamboyance was produced by displays of prestige and power by community leaders in the process of creating and bolstering alliances among them. The decline of this flamboyance was tied by Braun to the development of supralocal sodalities, which, as institutions, were more effective in binding communities together than unpredictable, negotiated relationships among community leaders. If the large, homogeneous, multicommunity gatherings of persons of particular social roles documented here do indicate formal sodalities (i.e., social structures) that linked Ohio Hopewell communities, rather than less formal arrangements among community leaders, then Braun's argument would be countered empirically: the timing of substantial development of sodalities would date to the heart of the Middle Woodland rather than the transition to the Late Woodland period. This conclusion deepens our questioning of Braun's hypothesis begun in Chapter 7. Rigorous testing of his idea, however, will require determining which kinds of large, homogeneous burial assemblages and ceremonial deposits do actually represent the meetings of sodalities, and which do not, following the steps taken in Chapter 7 for breastplates and earspools.

The Issue of the Social Evolution of Magicoreligious Practitioners

The large, socially homogeneous gatherings of each of several, specialized kinds of shaman-like practitioners documented here can be understood and are expectable within the framework of Winkelman's (1989, 1990, 1992) model of the changing nature of magicoreligious practitioners

as social complexity increases. Winkelman found that, cross-culturally, the social person of the shaman, who performs a great diversity of tasks for a social group, is restricted to simply organized band and tribal societies that practice hunting–gathering and, occasionally, horticulture. As societal size and complexity increase and agriculture becomes more important, the multiple roles of the shaman become dispersed (i.e., "segregated") among multiple, more specialized magicoreligious practioners within a society (see Carr and Case, Chapter 5, for details of the theory). The centralized arrangement of shamanic roles found in simply organized societies seems to characterize well the shamanic practitioners of Glacial Kame and Red Ochre peoples of the terminal Archaic and Adena peoples of the Early Woodland period in Ohio (Baby 1956; Converse 1981; Otto 1975; Webb and Baby 1957:61–76, 83–101). The segregated arrangement of roles found in larger and more complex societies fits the pattern of homogeneous gatherings of specialized kinds of shaman-like practitioners found here for Ohio Hopewell peoples. Significantly, and in line with Winkelman's model, Ohio Hopewellian societies flourished after Glacial Kame, Red Ochre, and most Adena ones, developed from Adena societies, and depended considerably more on horticulture than did these earlier societies (Wymer 1996, 1997).

An association between the process of role segregation for magicoreligious practitioners and the process of development of institutionalized, pan-tribal sodalities, as posited in the preceding section, is not discussed in detail by Winkelman. However, he does document (Winkelman 1992:58) that, cross-culturally, as the centralized roles of the classic shaman become divided among more specialized, shaman-like practitioners, the mode of training of these practitioners shifts from individual experience to formalized teaching and initiation into full status by institutionalized, professional groups with their own collective ceremonies. Winkelman's cross-cultural survey also indicates that early in the role-segregation process, members of such professional groups are recruited from multiple kinship groups–specifically clans–but does not document whether members come from multiple residential groups also, constituting sodalities in Service's (1971) terms. However, clear examples of such sodality arrangements are found in Puebloan cultures of the Southwestern United States and the Central Algonkians of the Great Lakes-Riverine area, as summarized by Carr (Chapter 7:Notes 14-16).

The large, socially homogenous Hopewell gatherings of specialized, shaman-like practitioners documented here could represent the specialized, professional sodalities and their collective ceremonies that Winkelman's model describes. In accord with the model, the shaman-like practitioners who met and deposited their paraphernalia together in ceremony are known to have been recruited from differing clans rather than by kinship line (Thomas et al., Chapter 8). Three other kinds of evidence for the gatherings having been constituted by sodalities, apart from shaman-like ceremonial evidence of concern here, are summarized in the previous section.

The Issue of Calendric Timing of Gatherings

There is no indication that either the socially homogeneous gatherings or the socially diversified gatherings were cyclical in their timing. Single sites, and even temporally nearly synchronous sites such as Seip and Liberty, seldom contain multiple examples of deposits or burials with the same artifact compositions. For example, there is only one deposit predominated by obsidian spear points at Hopewell, only one deposit predominated by quartz spear points at Mound City, only one grave with large numbers of celts and breastplates at Hopewell, only one deposit predominated by cones and hemispheres at Hopewell, only one deposit dominated by copper geometrics at Hopewell, only one large deposit of hornstone preforms at Hopewell, only one accumulation of chlorite disks at Hopewell, and only one deposit dominated by galena at Hopewell. Further, most of these artifact accumulations do not seem to pair in any obvious, complementary fashion at the same site. The two examples of massive, diverse deposits are rare and found at distant sites. These data instead paint a picture

of materially unique kinds of ceremonies, often centered around specialized social roles that differed from occasion to occasion and that shifted unpredictably over long periods of time. This cultural situation calls to mind Wiessner's (1999) description of the spread of waves of distinct religious cults among communities in Papau, New Guinea, over a 250 to 400 year period, as intercommunity alliance networks were being cemented together (Carr, Chapters 3, 16).

Greber (1996:162–165, 1997:219) proposed the existence of a multigenerational, two-part calendric cycle among pre-Middle Woodland and Middle Woodland societies of southern Ohio. Her basis for this reconstruction is the supposed two-stage construction of a number of mounds, embankments, and other mortuary facilities in southern Ohio. Greber's picture and that presented here are not necessarily contradictory, because specific ceremonies that shift in nature over time can nevertheless be woven into broader, transcultural structures, such as Chanaka–Christmas and Passover–Easter, which are periodic. Moreover, different forms of material evidence often are sensitive to different cultural phenomena.[2]

Gatherings Focused or Not Focused on the Deceased

Crosscutting the distinction between homogeneous and diversified gatherings is another, between (1) gatherings that were ceremonially focused on one or a few deceased persons and (2) gatherings that were not and that employed the mortuary realm only in general as their context of action. The first kind of assembly is marked by large accumulations of artifacts associated with the grave of one or a few deceased persons. The second kind is indicated by artifact accumulations in crematory basins (altars) or floor deposits. The multiple kinds of gatherings that can be defined by the two, crosscutting dimensions of variation add to our understanding of the great diversity of kinds of ceremonies held within Ohio Hopewellian mortuary contexts.

Artifact assemblages associated with a grave, indicating either socially homogeneous or diversified gatherings, would most likely be the remains of funerary rites of separation or liminality. Rites of separation and/or liminality would be represented by assemblages placed within the primary mounds with the deceased, whereas only rites of liminality would be represented by artifacts placed on top of the primary mounds. For example, spear point fragments, pipe fragments, galena, and other artifacts from the Mica Grave (Burial 1) in Mound 13 at Mound City (Mills 1922:448–451) were mixed within soil forming a subrectangular ridge tomb like the embankment of Mound City, itself. Over and within this rectangle were placed hundreds of rounded mica mirrors, upon which four cremations were laid. This assemblage was then covered with a primary mound of clay, a layer of fine sand, and a layer of mica plates. The artifacts within the rectangular structure of this tomb and the first layer of mica mirrors clearly were associated with the burial process and a rite of separation, perhaps having been used in the initial stages of this ceremony and then ritually killed. Possibly in contrast, are Skeletons 260 and 261 from Hopewell Mound 25 (Moorehead 1922:110). Ninety-four or ninety-five copper breastplates and 66 copper celts were found above the skeletons, tightly fitted together, forming a rectangular area 5 × 7 feet. It is likely that this deposit was placed within the limits of and above a rectangular, log-surrounded tomb, similar to the ones that Shetrone (1926) had recorded for most of the burials he excavated from the mound and that Moorehead probably missed for nearly all the burials he excavated. The two skeletons may have laid partially exposed within the log tomb, after their rites of separation, and before the layer of breastplates and celts was placed down. If so, the celts and breastplates would probably constitute the remains of a rite of liminality, offered by leaders and prestigious sodality members whose social roles were marked by these items. This interpretation fits the cross-cultural observation of Turner (1969), that rites of liminality are typically the most elaborate (and socially most attended) part of rites of passage that include ceremonies of separation, liminality, and reincorporation: the gathering in honor of the two persons in Graves 260 and 261 was composed of an unusually high number of very high-prestige attendees, marked by celts and/or breastplates.[3]

Integrating our observations on grave assemblages with those on the social homogeneity or diversity of gatherings suggests that some large funerary rites of separation may have been attended by individuals of select social roles from multiple communities (e.g., Hopewell Mound 25, joint Burials 6 and 7), whereas others may have been attended by persons of a broader range of social roles from single or multiple communities (e.g., the Mound City Mound 13, Mica Grave). Likewise, some large funerary rites of liminality may have been attended by persons of select social roles from multiple communities (e.g., Hopewell Mound 25, Skeletons 260 and 261), whereas others may have been comprised of persons of many social roles from single or multiple communities (e.g., Hopewell Mound 25, B34, or other log tombs with many and diverse offerings). Sociologically, the diversity of Hopewellian ceremonies quickly mounts.

Large artifact accumulations found in otherwise empty cremation basins within charnel houses, or on a charnel house floor, or above the floor on a mound surface, indicate gatherings that may have employed the mortuary realm in only a general, way as a context for social action. Specifically, refining somewhat a distinction drawn by Gluckman (1937), Morris (1991), and Buikstra and Charles (1999), gatherings focused on particular dead have potential for emphasizing ties with the ancestors, lineage continuity, and the status quo in sociopolitical relations. Gatherings within a mortuary setting that do not focus on particular dead may ostensibly address the deceased in general, but afford the opportunity for expressing competition and for challenging the status quo in relations of prestige, power, and property among assembled social units—both those distinguished by kinship and those defined by other social dimensions. Likewise, cooperation among either kin-based or nonkin-based social units may be expressed, or some balance of competition and cooperation. The large deposits of Hopewellian artifacts not found with graves or in altars spatially associated with them (Table 13.3) may very well reflect the latter, competitive and/or cooperative sociopolitical purpose.

Integrating the idea of ceremonies held in the mortuary realm but not focused primarily on the deceased with the distinction between whether they involved socially homogeneous or socially diversified gatherings again suggests differing sociological theaters. Cooperative and/or competitive ritual displays among similar, select segments from different communities (e.g., shaman-like diviners from multiple communities), in the case of large, socially homogeneous gatherings, stand in contrast with cooperative and/or competitive displays between similar social segments of many kinds simultaneously, either within or among communities (e.g., community leaders versus community leaders, plus clans versus clans, plus shaman-like diviners versus shaman-like diviners). Common, between-community, cooperative and/or competitive displays in socially homogeneous gatherings are suggested by the deposit of obsidian spear points in Altar 2 of Hopewell Mound 25, the accumulation of quartz spear points in the Altar of Mound 3 at Mound City, the assemblage of cones/hemispheres in Deposit 2 of Hopewell Mound 17, and the diverse copper geometrics in the above-floor Copper Deposit of Hopewell Mound 25, for example. Rarer, either within or between-community cooperative and/or competitive displays among persons of diverse kinds of social roles and units could be indicated by the varied assemblages of artifacts in Altar 1 of Hopewell Mound 25 and the Central Altar of Turner Mound 3.

Notice that these two kinds of presumed cooperative and/or competitive displays were not necessarily undertaken on different ritual floors under different mounds. On the floor of Hopewell Mound 25, Altar 2 appears to have been the focus of a large, socially homogeneous cooperative and/or competitive display, whereas Altar 1, some distance away, seems to have been the locus of a large, socially diversified cooperative and/or competitive display. If we add to this distinction the on-the-floor (Altars 1 and 2) vs. above-the-floor (Copper Deposit) contrast, which may have had some (unknown) sociological–ritual significance, the picture of ritual variability even within a single mound arena is made complex.

Social Roles of the Honored Dead

There are 24 known individuals buried in 16 graves across Ohio (Table 13.2, Appendix 13.1) who were the recipients of large quantities of artifacts or that were paired with them. It can be asked what social roles these honored dead may have had that could have led to the large gatherings around them—other than perhaps the social role(s) represented in plenty by the redundant gifts given to the deceased at the gatherings. If one assumes that the artifacts found with the 24 individuals, other than those that were amassed in number, represented the social roles of the deceased rather than those of gift-givers, then the question can be answered. Patterning is strong and the list of fancy auxilliary artifacts associated with these deceased is short: copper breastplates (10 individuals), copper earspools (8 individuals), obsidian and/or quartz bifaces (5 individuals), copper headplates (4 individuals), trophy skulls (4 individuals), copper nostrils (2 individuals), and a frog-effigy copper cutout (1 individual). The seven social roles marked by these artifact classes consolidate to probable society-wide leaders with headplates, shaman-like practitioners of various kinds, and perhaps warriors with trophy skulls. Most of these social roles would have had much sociopolitical power (e.g., society leaders, shaman-like war or hunt diviners, warriors) or were commonly recognized, prestigious social distinctions (e.g., breastplates, earspools). The significance of the two persons with copper nostrils is unclear; however, there are only three such individuals known archaeologically from the Hopewellian world, and the pearl symbolic water barriers placed around each of them suggest their great power (Carr, Chapter 7: Chronology).

Summary and Synthesis

The various kinds of large artifact accumulations and ceremonial gatherings delineated above can be combined with some of the depositional patterns identified by Greber (1996) to give a fuller picture of Ohio Hopewell gatherings. Artifact accumulations and gatherings of gift-givers of eight kinds can be defined to this point:

(1) a gathering of a few individuals for mortuary rites of separation, marked by a small numbers of grave offerings of several kinds not likely to have all been owned by the deceased (e.g., Hopewell Mound 25, B11, B22, B281);

(2) a gathering of a few individuals for funerary rites of separation or liminality, indicated by thin, spatially restricted deposits of ash, burned animal bones, pottery fragments, broken lithics, mica scrap, and/or minor personal ornaments on charnel house floors or as sweepings in pits in this area (e.g., Greber 1996:153–156);

(3) a large gathering of socially homogeneous, role-specialized segments of multiple communities for funerary rites of separation or liminality, reflected in a grave containing large quantities of predominantly one kind of artifact (e.g., Mound City, Mound 8, B2; Tremper, Sandstone Grave);

(4) a large gathering of socially homogeneous, role-specialized segments of multiple communities for funerary rites of liminality, indicated by a large assemblage of primarily one kind of artifact, placed in or on top of a log tomb or on a primary mound (e.g., possibly Hopewell Mound 25, Skeletons 260 and 261);

(5) a large gathering of persons who had a broad range of social roles and who came from single or multiple communities for funerary rites of separation or liminality, indicated by a grave containing large numbers of diverse kinds of socially significant artifacts (e.g., Mound City, Mound 13, B1—Mica Grave);

(6) a large gathering of persons who had a broad range of social roles and who came from single or multiple communities for funerary rites of liminality, marked by large numbers of diverse kinds of socially significant artifacts placed in or on top of a log tomb or on a primary mound. (There are no really good examples of this type of gathering. Hopewell Mound 25, B3–4 and B34–35 approach the type but suggest gatherings of moderate size.);

(7) a large cooperative and/or competitive ritual display among similar, select segments from different communities (e.g., shaman-like ceremonial leaders from multiple communities) during ceremonies of world

renewal, initiation, thanksgiving, or other purposes not specifically dedicated to the dead, indicated by large artifact accumulations found (a) in otherwise empty cremation basins not specifically associated with graves within a charnel houses, (b) on a charnel house floor, or (c) above the floor on a mound surface (e.g., Hopewell Mound 25, Altar 2; Mound City Mound 3, Altar; Hopewell Mound 25, Copper Deposit, respectively); and

(8) a large, cooperative and/or competitive ritual display between similar social segments of many kinds simultaneously, either within or among communities (e.g., community leaders versus community leaders plus clans versus clans) in the course of ceremonies of world renewal, initiation, thanksgiving, or other purposes not specifically dedicated to the dead, indicated by large artifact assemblages found (a) in otherwise empty cremation basins not specifically associated with graves within a charnel houses, (b) on a charnel house floor, or (c) above the floor on a mound surface (e.g., Hopewell Mound 25, Altar 1; Turner Mound 3, Central Altar).

Most of these eight types of gatherings necessarily pertain to large ones, which have been the focus of this first half of this chapter. A fuller account of gathering types is laid out at the end of the chapter, after gatherings of all sizes have been analyzed.

QUANTITATIVE ANALYSIS OF THE SIZES AND COMPOSITIONS OF GATHERINGS, LARGE AND SMALL

The rich contextual approaches used above to examine artifact deposits and grave assemblages have allowed a picture of the maximal sizes of ceremonial gatherings to be assembled. A variety of kinds of large ceremonial gatherings within Hopewell earthworks and mound centers has also been defined. However, these studies, being highly focused on ceremonial artifact assemblages of large size and employing counts of only single artifact types, do not give a sense of the full range of ceremonies of different sizes and natures and their relative frequencies. These matters we now address through detailed, quantitative, multivariate analyses.

Method

The approach that we use here to estimate the sizes and social compositions of ceremonial gatherings rests most basically on the assumption that the numbers of artifacts and the numbers of kinds of artifacts within a deposit or grave reflect the number of persons who offered gifts and the number of different social roles of those gift givers, respectively, during a ceremony. Obviously, any estimates built on this foundation assumption are minimal ones: persons who did not give gifts may have participated in the ceremony, in addition to those who made offerings.

For a ceremonial deposit, which does not include the remains of a person, the assemblage of artifacts within it can be attributed entirely to gift givers. For a burial, the question of which artifacts were given by mourners and which were the property of the deceased arises. In this analysis, as above, we invert conventional mortuary theory that attributes all grave goods to the deceased and their social roles and wealth. Instead, we assume that when a grave included multiple examples of an artifact class that were normally owned one item per person, as indicated by their typical burial one per person across Ohio, all but one specimen of that class represent gifts from mourners who had the same role as the deceased, marked by that artifact class. One specimen is held back from the count of gifts assuming that it belonged to the deceased. When an artifact class typically occurred two per burial, as in the case of earspools, or four per person, in the case of bear canines, or some other unit number, then units are tallied instead of individual artifacts, for the number of gift givers and the deceased. This basic model of artifact ownership was then varied in several ways, making different sociological assumptions about role distributions and producing multiple estimates of numbers of gift givers.

Three estimates of the number of persons who gave gifts were calculated for ceremonial deposits, and three for burials. The estimates for deposits and burials are essentially the same, except that one count of items or units of items

was subtracted in the case of burials in order to accommodate possible ownership by the deceased. The estimates are derived with the following logic, illustrated here for deposits. (1) One very minimal measure of the number of persons who made offerings at a ceremony is the number of different artifact *classes* present in a deposit. This could represent the number of persons of different social roles who gifted artifacts of different kinds. We call this measure Sum A. (2) An often more generous measure of the number of gift givers to a deposit is the number of *items* of a class present that typically occurs one per person in burials, summed over all such artifact classes. Again, units of multiple items are tallied instead of individual artifacts in the case of artifact classes that typically occurred in set multiples within burials. The measure also takes into consideration to some degree artifact classes for which it is unclear how many items or how much of a material typically were buried per person (e.g., quartz spear points, buttons, galena cubes) by giving each such class a count of one. This measure of ceremony size assumes that persons who were of one kind of role and gave one kind of offering were distinct from persons who had another kind of role and gave another kind of offering. The possible bundling of multiple roles in one person is not considered, potentially leading to some overestimation of the number of gifters. At the same time, balancing this possible overestimation is the fact that the measure does not consider the actual number of persons who might be represented by an artifact class that is unknown for the quantity of it typically buried per person. We call this measure Sum B. (3) A final, often intermediate measure of the number of gift givers to a deposit is like Sum B, but is the number of items of a class present that typically occurred one per person in burials, for only that one class having the maximum number of items, rather than summed over all classes. This measure is more conservative than Sum B in that it assumes maximal role bundling, i.e., that persons who had the role represented by the greatest number of items also had, among them, all other roles represented by less numerous items. Again, units of multiple items are tallied instead of individual artifacts in the case of artifact classes that typically occurred in multiples within burials. We called this measure Sum C.

A fourth measure of ceremony size, which is possible to calculate but clearly would be an overestimation in many instances, is the sum of all artifacts of any class. This tally was not calculated. It would have erroneously counted *n* specimens of an artifact class that normally was owned *m* items per person (e.g., beads, earspools, bear canine pendants), as well as *n* specimens of artifact classes for which the number of items owned per person is unknown and/or might vary significantly (e.g., quartz or obsidian projectile points, raw material specimens), as *n* persons rather than *n/m* persons.

The first three measures of ceremony size were combined in three ways to produce a Minimal minimum, Maximal minimum, and Best estimate of ceremony size. (1) The *Minimal minimum* was calculated for deposits as the minimum of Sum A or Sum C. For burials, it was calculated as the minimum of Sum A minus one or Sum C minus one, taking into account the one artifact class or artifact that might have been owned by the deceased instead of gifted. This estimate chooses the minimum of two already minimizing estimates played off against each other: the number of artifact classes present in a deposit or burial against the number of items of a class present that typically occurs one per person in burials, for only that one class having the maximum number of items. (2) The *Maximal minimum* plays off the same two minimizing estimates but maximizing the minimum. It was calculated for deposits as the maximum of Sum A or Sum C and for burials as the maximum of Sum A minus one or Sum C minus one. (3) The *Best estimate* of ceremony size was calculated for a deposit as Sum B—the number of items of a class present that typically occurred one per person in burials, tallied over all such classes, plus the number of other classes present for which the typical number or weight of items per person is unknown. For burials, the number one was subtracted from this total, to take into consideration an item or artifact class owned by the deceased. The Best measure uses each artifact class to the best of its potential for representing gift givers—either its quantity or its presence. It also assumes no role bundling, which is a more

realistic assumption than maximal role bundling, given the low association between most kinds of artifact classes among graves across Ohio. Nevertheless, the Best estimate probably still underestimates the numbers of persons who offered gifts in some instances, because it counts only the presence of artifact classes rather than the number of items of an artifact class when the typical number of items or amount of material per person is unknown or quite variable.

The Minimal minimum, Maximal minimum, and Best estimates of ceremony size were each calculated for individual burials and deposits considering all artifact classes in the provenience and the social roles they represent, as well as focusing on eight subsets of artifact classes indicating eight different general categories of social roles: shaman-like leadership, possible shaman-like leadership, nonshaman-like leadership or persons of high prestige, prestigious clan roles, prestigious personal roles, ordinary clan roles, ordinary personal roles, and unknown roles.[4] When a grave contained multiple artifact classes indicating multiple general role categories, and when estimates of numbers of gift givers for these categories were made separately, the count of one was subtracted from each of the Minimal minimum, Maximal minimum, and Best estimates for each category, in order to represent the possible role of the deceased in each category. This produced a conservative estimate of the number of gift givers of each role category and recognized our uncertainty in the social role(s) had by the deceased. When estimating the total number of gift-givers of all role categories for a burial, considering all artifact classes found with it, the count of one was subtracted from each of the Minimal minimum, Maximal minimum, and Best estimates only once, in order to represent the role of the deceased. This procedure assumes no role bundling, which is a more realistic assumption than complete role bundling.

Table 13.5 lists all of the 22 mound and/or earthwork–mound ceremonial centers, which are most of the reported excavated sites in Ohio, for which populations of ceremonial deposits and burials were studied (see also Figure 13.1). Also listed are some subsets of these centers (e.g., Mounds 25 and 23 at Hopewell) that vary in their sociological meanings and that were studied. Appendix 13.2 lists all the artifact classes that were analyzed and the general categories of social roles that they certainly or probably represent. Appendices 13.3 and 13.4 present the three

Table 13.5. Mound Centers and Earthwork–Mound Complexes Included in This Study

Large mound centers and mound–earthwork complexes of the central and southern Scioto drainage, Chillicothe area and south

- Ater
- Hopewell, all
  - Mound 25
  - Mound 23
  - Mound 17
  - All other small mounds
- Liberty (Edwin Harness Mound)
- Mound City
- Seip (Pricer Mound)
- Tremper

Small mound centers of the central Scioto valley, Chillicothe area

- Bourneville
- Ginther
- McKenzie
- Rockhold
- Shilder
- West

Small mound centers of the central Scioto valley, Circleville area

- Circleville
- Snake Den

Small mound center of the northern Scioto valley

- Wright–Holder

Large earthwork–mound complex of the Little Miami valley, southwestern Ohio

- Turner

Small mound center of southwestern Ohio

- Boyle's Farm

Small mound centers of northeastern Ohio

- Esch
- North Benton

Small mound centers of the central Muskingum valley

- Hazlett
- Rutledge

Large earthwork–mound complex of the lower Muskingum valley

- Marietta

estimates of ceremony size for each of the 403 individuals within a maximum of 358 graves and each of the 55 ceremonial deposit that were studied. The tallies are broken down by categorized social role. The many graves that had no artifacts or only one per deceased are not included here, because they do not inform about ceremony size; they would have yielded estimates of zero gift givers. Appendix 13.3 lists the estimates for burials with one or more persons per graves by individual and for single ceremonial deposits. For graves having more than one person, the association of artifacts with one person or another in the grave is certain or reasonably so. Appendix 13.4 lists the estimates for burials with more than one persons per grave, for those graves where the association of one or more grave offerings with one person or another is unknown. An artifact placed between *n* persons and having an unclear association is given the value 1/*n* for each of those persons.

Graves that had more than one person in them posed the problem of whether the persons had been laid out at once, their joint artifact assemblage representing one large gathering and rite of separation, or had been laid out at different times, their individual artifact assemblages representing several smaller gatherings and rites of separation. For the analyses presented here, both scenarios are assumed and presented in the tables. The two scenarios produce very similar findings. Of the 458 ceremonial deposits of artifacts and individuals associated with artifacts considered here, approximately 53 individuals occur in multiperson graves. Only 9 graves (20 individuals) produce estimates of 11 or more gift givers assuming a single time of layout and ceremony. Thus, the ambiguity of multiperson burials has little effect on the statistics we generate and, particularly, on our estimates of the size of moderate to large gatherings. There is only one very rich multiperson grave that produces widely varying results under the two assumptions: Burial 260–261 in Hopewell Mound 25 indicates 186 gift-givers when assuming one time of layout for both persons and one ceremony, and 93 gift-givers when assuming two times of layout and two ceremonies. Other details of the analysis are endnoted.[5]

Sizes of Gatherings

The minimum numbers of persons who made offerings to the deceased or contributed to ceremonial deposits are considered here. Estimates are given (1) for all sites in total, (2) by sites of different function and sizes, (3) by time period, and (4) by geographic region.

The General Picture

Table 13.6 presents the numbers of individual burial assemblages and ceremonial deposits that represent gatherings of given minimal size ranges, using the Best estimation described above, considering all 22 sites. The vast majority of the indicated gatherings are small. Nearly two-thirds (ca. 61%) represent gatherings of minimally one to three gift-givers ($n = 200$ of 326 or 213 of 344, depending on assumptions). When graves having no or few grave goods indicating very small gatherings with no gift givers are figured in, the proportion of very small ceremonies with zero to three gift-givers increases to three-fourths (ca. 76.7%, assuming that multiple burials represent multiple ceremonies). Only eight burial assemblages or ceremonial deposits indicate gatherings of more than 90 gift-givers, and only two suggest gatherings of more than 400 gift-givers: 441 and 514, or perhaps some what higher (see Table 13.6, Footnote c). Although these are minimal estimates of gathering sizes, and one cannot know the number of persons who attended ceremonies but did not offer gifts, the total picture presented is one of very few, large gatherings that would have been attended by a whole community or multiple whole, neighboring communities. Such community-wide or multicommunity gatherings would have involved hundreds of persons.

In addition, none of the burial assemblages or ceremonial deposits represent the numbers of persons that approach the 1000 to 1600 person, maximal attendances of the historic Huron and Algonkian Feasts of the Dead (see Carr, Chapter 12, Feast of the Dead). This result agrees with estimates of ceremony size derived above from the analysis of burial population sizes.

One way to put this situation into perspective is to make the bold and unrealistic

Table 13.6. Numbers of Individual Burial Assemblages and Ceremonial Deposits That Represent Gatherings of Given Minimal Size Ranges, for All 22 Ceremonial Centers

Size of gathering	Number of individual burial assemblages and ceremonial deposits: Single[a]	Multiple[b]	Largest burial assemblages and ceremonial deposits	Size of gathering
>500	1	1	Hopewell Mound 25, Altar 1	514[c]
201–500	2	2	Turner, Mound 3, Central Altar	441
101–200	5	4	Mound City, Mound 8, Depository	209
51–100	2	3	Hopewell Mound 25, Sk. 260 & 261 together	186
25–50	6	6	Tremper, Lower Cache	172
11–25	24	21	Hopewell Mound 25, Copper Deposit	127
7–10	29	29	Hopewell Mound 17, Offering 1	113
4–6	57	65	Hopewell Mound 17, Offering 2	111
1–3	200	213	Hopewell Mound 25, Sk. 260 by itself	93
			Hopewell Mound 25, Sk. 261 by itself	93
Total	326	344	Turner, Mound 4, Central Altar	67
			Mound City, Mound 8, B2	58

[a]The number of gift givers represented by burial assemblages and ceremonial deposits, assuming that each multiple burial involved only a single gathering and episode of deposition.
[b]The number of gift givers represented by burial assemblages and ceremonial deposits, assuming that each multiple burial involved multiple gatherings and episodes of deposition.
[c]This estimate assumes that the number of earspools deposited in Hopewell Mound 25, Altar 1, is 500 (250 pairs). If the number of earspools in the Altar was 750 to 1000 (375 to 500 pairs), per Table 13.2, Footnote a, then the estimated size of gathering represented by this feature would be 643 to 768 persons.

assumption, for illustration, that all or most deceased persons within a charnel house or on a burial floor—like those under Hopewell Mound 25 or Seip–Pricer or Edwin Harness mound—were honored and given their gifts at once. The numbers of gift givers implied is still small compared to the sizes of the historic Feasts of the Dead. Multiplying the 98 to 176 persons within these burial areas (Table 13.1) by the median 2 or 3 gift givers per deceased produces estimates of only 196 to 528 gift givers, in contrast, to the 1000 to 1600 persons who gathered at large historic Feasts. It is true that we do not know the percentages of the 1,000 to 1,600 attendees who actually gave gifts and whether this might be comparable to the estimated number of gift givers at the largest of Ohio Hopewell ceremonies. However, we also do not know for the historic feasts the counterbalancing factor of the numbers of gifts given per gift giver on average.

Another way of putting the sizes of Ohio Hopewell gatherings into perspective relative to those of the Feasts of the Dead is provided by the sum of all gift-givers tallied for all gatherings—burial assemblages and ceremonial deposits—by site. This information is given in Table 13.7. None of the sites except Hopewell have totals of *all* gatherings at them that approach even *one* of the reported Huron or Algonkian Feasts of the Dead.

In sum, the results presented do not support the idea that intercommunity and intracommunity sociopolitically cooperative and/or competitive displays were a regular (e.g., annual) aspect of Ohio Hopewellian ceremonial life with a mortuary component. Instead, most Ohio Hopewell burial assemblages and ceremonial deposits indicate small, intimate gatherings for rites of separation or liminality. This picture concords with a reconstruction derived below: that strong, religiously and spiritually solidified alliances among and within communities made cooperative and/or competitive ceremonial displays of material goods less necessary during the middle and late Middle Woodland.

Site Function and Regional Distinctions

Table 13.8 lists by site the numbers of individual burial assemblages and ceremonial deposits that represent gatherings of particular, minimal

Table 13.7. Sum of All Gift Givers at All Gatherings (Burial Assemblages and Ceremonial Deposits) Documented in Ohio Hopewell Ceremonial Centers, by Center

	Sum of all gift-givers at all gatherings, assuming . . .	
Site	**Single gatherings**[a]	**Multiple gatherings**[b]
Large mound centers and earthwork–mound complexes		
Central and southern Scioto drainage		
Hopewell, all[c]	999	1007
Hopewell Mound 25	(580)	(588)
Hopewell Mound 17	(224)	(224)
Hopewell Mound 23	(34)	(34)
Hopewell, other small mounds	(161)	(161)
Mound City, all	531	532
Seip–Pricer mound	229	236
Tremper	193	193
Ater mound	80	81
Liberty (Edwin Harness)	Unknown	Unknown
Little Miami valley, southwestern Ohio		
Turner	662	663
Lower Muskingum valley		
Marietta	Unknown	Unknown
Small mound centers		
Northeastern Ohio		
Esch	58	58
North Benton	37	37
Central Muskingum valley		
Hazlett	8	8
Rutledge	3	3
Northern Scioto valley		
Wright–Holder	2	2
Central Scioto valley, Circleville area		
Snake Den	18	18
Circleville	1	1
Central Scioto valley, Chillicothe area		
McKenzie	17	17
Ginther	12	12
Rockhold	13	13
Bourneville	10	10
Shilder	4	4
West	2	2
Southwestern Ohio		
Boyle's Farm	0	0

[a] The number of gift givers represented by burial assemblages and ceremonial deposits, assuming that each multiple burial involved only a single gathering and episode of deposition.
[b] The number of gift givers represented by burial assemblages and ceremonial deposits, assuming that each multiple burial involved multiple gatherings and episodes of deposition.
[c] The estimates for the entire Hopewell site and Mound 25 assume that 500 earspools were deposited in Mound 25, Altar 1. See Table 13.2, Footnote a, and Table 13.6, Footnote c, for a perspective on these estimates.

Table 13.8. Numbers of Individual Burial Assemblages and Ceremonial Deposits That Represent Gatherings of Given Minimal Size Ranges, by Ceremonial Center

	Size of gathering[a]								
Site	**1–3**	**4–6**	**7–10**	**11–25**	**26–50**	**51–100**	**101–200**	**201–500**	**>500**
Large mound centers and earthwork–mound complexes									
Central and southern Scioto drainage									
Hopewell, All	54/58+5	20/20+5	9/9+1	8/8+1	1/1+0	0/2+0	1/0+3		0/0+1
Mound 25	27/31+2	10/10+1	6/6+0	5/5+0	1/1+0	0/2+1	1/0+1		0/0+1
Mound 17							0/0+2		
Mound 23	7/7+0	3/3+0	1/1+0						
Other small mounds	20/20+3	7/7+4	2/2+1	3/3+1					
Mound City, all	17/17+4	8/12+0	3/3+1	4/3+1	2/2+0	1/1+0		0/0+1	
Tremper			1/1+0	0/0+1			0/0+1		
Seip–Pricer mound	35/42+0	8/9+1	4/4+1	3/2+1	0/0+1				
Ater mound	18/19+1	1/1+0	2/2+0		1/1+0				
Liberty (Edwin Harness)									
Little Miami valley, southeastern Ohio									
Turner	23/24+7	5/8+1	3/3+0	1/0+1	0/0+1	0/0+1		0/0+1	
Lower Muskingum valley									
Marietta[b]									
Small Mound Centers									
Northeastern Ohio									
Esch	7/7+1	1/1+0	1/1+0	2/2+0					
North Benton	2/2+1	1/1+0	1/1+0	0/0+1					
Central Muskingum valley									
Hazlett		1/1+0							
Rutledge	1/1+1								
Northern Scioto valley									
Wright–Holder	2/2+0								
Central Scioto valley, Circleville area									
Snake Den	1/1+0		1/1+0						
Circleville	1/1+0								
Central Scioto valley, Chillicothe area									
McKenzie	3/3+0	1/1+0	0/0+1						
Ginther	0/0+5								
Rockhold	2/2+1		1/1+0						
Bourneville	3/3+0	1/1+0							
Shilder		1/1+0							
West	1/1+0								
Southwestern Ohio									
Boyles Farm	0/0+0								

[a]For each entry, the number before the "/" is the number of burial assemblages within the given size range of gatherings, assuming each multiple burial to have been only a single gathering and episode of deposition. The number after the "/" is the number of burial assemblages with the given range of gatherings, assuming each multiple burial to have been multiple gatherings and episodes of deposition. The number after the "+" is the number of ceremonial deposits within the given size range of gatherings.
[b]Inadequate information to make estimates for the site.

size ranges, using the Best estimation described above. Only four sites have estimates of minimal gathering sizes greater than 51 gift-givers. The sites are Tremper (one gathering), Mound City (two gatherings), Hopewell (five gatherings), and Turner (two gatherings). These sites also are estimated to have had one or more gatherings of more than 100 gift givers. All four sites are earthwork–mound complexes with large burial populations. In contrast, the large mound of Seip–Pricer in the Seip earthwork and the large mound of Ater have peak minimal estimates of only 29 and 35 gift-givers, respectively. Information on burial assemblages and ceremonial deposits from the Liberty earthwork is too scant to quantitatively assess the sizes of gatherings there fairly. However, the general paucity of fancy and other artifacts found within Edwin Harness and Russell Brown Mounds 1, 2, and 3 indicates smaller assemblies.

These results are agreeable with the reconstruction of Scioto Hopewell community spatial–ceremonial organization developed in Chapter 7. There, it is argued that the Hopewell site was a burial place generally reserved for persons of much prestige, whereas Seip, Liberty, and Ater served as cemeteries for a broader spectrum of society. Supporting this conclusion is the greater material richness of Hopewell, including its total mound volume, quantity and diversity of Hopewell Interaction Sphere goods, and special quality of crafting of certain artifact classes. Also supporting the postulate is Hopewell's unique, adult male-biased burial population, in contrast to the more normal age–sex distributions of Seip, Liberty, and Ater, as far as they can be determined. Finally, the predominance of extended burials over cremations at Hopewell alone, and the cross-site correlation between extended burial and prestigious social roles, indicates Hopewell's special function. Chapter 7 goes on to reconstruct that a community in the North Fork of Paint Creek where Hopewell and Ater are located, a second community in main Paint Creek where Seip resides, and a third community in the adjacent section of the Scioto valley where Liberty resides each buried their important persons disproportionately at Hopewell compared to Seip, Liberty, and Ater. In this way, Hopewell was regionally unique and more significant. The much larger sizes of the ceremonial gatherings estimated for Hopewell compared to Seip, Liberty, and Ater are expectable given the generally greater prestige of those buried there and the greater number of persons that would have been duty-bound to them.

The large ceremony sizes estimated for Tremper and Mound City can be understood in a similar way. These sites are in general earlier than Hopewell (Greber 2003: 92; Prufer 1961a, 1964a; Ruhl 1996, Chapter 19; Ruhl and Seeman 1998; Weets et al., Chapter 14), Tremper being the oldest and Mound City somewhat younger and perhaps overlapping with the earliest uses of Hopewell (Hatch et al. 1990). On their own time planes, Tremper and Mound City each stand out as the only documented, functioning earthwork–mound complexes in the Scioto drainage, and with regard to the volume of earth moving they represent. (The Hopeton earthwork, adjacent to Mound City and coeval with it, is almost completely void of burial mounds and was probably complementary to Mound City and an integral part of its ceremonial landscape [Ruby et al., Chapter 4].) Also, Mound City is distinguished in its number and diversity of Hopewell Interaction Sphere goods compared to other large ceremonial centers like Seip, Liberty, and Ater, and Tremper is extraordinary in having been the burial place of the largest known Ohio Hopewell burial population. In Tremper, the cremations of most of about 375 people were centralized in one resting place (Communal Depository 1 [Mills 1916:277]). The diverse sources of the pipestones from which the many pipes found at Tremper (Weets et al., Chapter 14) and Mound City (Gundersen and Brown 2002) were made also imply the regional significance of these sites. In these ways, Tremper and Mound City can be argued to have been extraordinary regional centers like Hopewell. Thus, the large gatherings estimated for Tremper and Mound City, like those at Hopewell can be explained by their proposed, special region-scale functions.

The regional function of Turner compared to Fort Ancient and other earthwork–mound centers in the Little Miami river is unclear.

In contrast to the large earthwork and mound centers just discussed are 14 small

Table 13.9. Estimates of the Numbers of Gift Givers at Ceremonies at Small Mound Centers, by Region

Region	Size of gathering[a]					Number of sites
	1–3	4–6	7–10	11–25	26–50	
Northeastern Ohio	11 (5.5)	2 (1)	2 (1)	3 (1.5)		2
Central Muskingum valley	2 (1)	1 (.5)				2
Northern Scioto valley	2 (2)					1
Central Scioto valley						
Circleville area	2 (1)			1 (.5)		2
Chillicothe area	15 (2.5)	3 (.5)	2 (.3)			6
Southwestern Ohio	0 (0)					1

[a]For each cell entry, the first number is the total number of gatherings of the given size, considering all sites in the region. The second number, in parentheses, is the average number of gatherings of the given size per site in the region.

mounds or mound clusters in this study. In the broad view, these are all estimated to have had only small ceremonial gatherings of fewer than 25 gift givers and, for most of the centers, fewer than 6 gift givers (Table 13.8). This generalization holds as well for the Chillicothe area, where the great geometric earthworks concentrate, as it does elsewhere (Table 13.9). It suggests the general functional similarity of all of these small mounds and mound centers, in comparison to the large, prestigious regional centers of Hopewell, Mound City, and Tremper and the other large sites of Seip, Liberty, and Ater, regardless of region. Most logically, the small mound centers serviced local social segments below the scale of the community alone, whereas the larger sites serviced one or more communities.[6]

Changes over Time

Changes in the estimated sizes of ceremonial gatherings and their frequencies over time can be roughly sketched for the larger sites in the Chillicothe area. The periods of earliest use and the midpoints of use of Tremper, Mound City, Hopewell, Seip, and Ater form a sequence from earliest to late Hopewell by many criteria (Greber 1983, 2003; Prufer 1961a, 1964a; Ruhl 1996, Chapter 19; Ruhl and Seeman 1998; Weets et al., Chapter 14). Gathering sizes for the first three sites can be compared, given their analogous functions as unique or extraordinary regional centers (see above). Gathering sizes at the last two sites in the sequence can likewise be compared because of their analogous functions as large regional centers, though not unique and as rich materially.

The frequencies of larger ceremonial gatherings and the average size of gatherings, measured in numbers of gift-givers, increase exponentially over time from Tremper to Mound City to Hopewell (Table 13.10). It is not possible to make these comparisons for the part of the sequence bridging Hopewell to Seip, because these sites apparently differed in function. However,

Table 13.10. Numbers of Individual Burial Assemblages and Ceremonial Deposits That Represent Gatherings of Given Minimal Size Ranges, for Large Ceremonial Centers through Time

Site: "youngest" to "oldest"	Size of gathering[a]								
	1–3	4–6	7–10	11–25	26–50	51–100	101–200	201–500	>500
Ater	19/20	1/1	2/2	0/0	1/1				
Seip	35/42	9/10	5/5	4/3	1/1				
Hopewell, all	59/63	25/25	10/10	9/9	1/1	0/2	4/3		1/1
Mound City	21/21	8/12	4/4	5/4	2/2	1/1	0/0	1/1	
Tremper	0/0	0/0	0/0	2/2	0/0	0/0	1/1		

[a]For each entry, the number before the "/" is the number of burial assemblages and/or ceremonial deposits within the given size range of gatherings, assuming each multiple burial to have been only a single gathering and episode of deposition. The number after the "/" is the number of burial assemblages and/or ceremonial deposits within the given range of gatherings, assuming each multiple burial to have been multiple gatherings and episodes of deposition.

from Seip to Ater, the frequency of midsized gatherings (there are no large ones) and the average size of gatherings decreases. This pattern, which considers burial assemblages and ceremonial deposits of all sizes, parallels the rise-and-fall pattern found for large burial assemblages and deposits, alone (see Large Ceremonial Deposits and Burial Offerings, above).

Our reconstruction of the increasing sizes of ceremonial gatherings for the times of Tremper through Hopewell, which comprise much of the Middle Woodland Period, is supported by two other, independent lines of evidence. First is changes in the sizes and styles of earspools over the Middle Woodland. Earspools became larger and contrasted more in profile through time, which would have improved their visibility by persons at distances. In turn, this suggests, among other alternatives, that the ceremonies in which earspools were worn and displayed involved increasingly larger audiences, with greater wearer-to-viewer distances, through time (Ruhl, Chapter 19). Ruhl's earspool seriation does not include a decrease in the size of earspools at the end of the Middle Woodland. However, the monotonic method of stylistic seriation she used does not allow for stylistic changes that reverse themselves over time, and may well have masked this final episode. Only further empirical study will clarify this situation.

The second form of data that supports the reconstructed changes in the sizes of ritual gatherings is the increasing acreage of earthworks in the Chillicothe area and the number of internal divisions within them. Tremper is a single elliptical embankment, and Mound City a single squarish embankment. These held only 3.5 acres and 13 acres, respectively. The apparently later, two-part, square-and-circle earthworks of Hopeton, Circleville, Highbank, and Seal, according to DeBoer's (1997:232) morphological seriation of earthworks, each held more territory—40 acres. Later, the tripartite earthworks of Seip, Baum, Liberty, Works East, and Old Town each enclosed 78 acres. The latest site of Ater had no embankment around it. This evidence provides only tentative support, because radiometric verification of some of the seriation is lacking, the duration over which some earthworks were built is debated (Connolly 1996; Greber 1997, 2003; Riordon 1998), and possible differences in site function are not considered.

Evolving Alliance Formation Strategies

The increase and decrease over time in the number of large gatherings and the average size of gatherings suggest a shift in the nature and effectiveness of alliance formation strategies within and among communities over time within the Scioto valley, as described in Chapter 7. Early attempts at alliance building appear to have been primarily economic and social, largely outside of the religious and mortuary realms, and seldom choreographed within ceremonial centers, with Tremper having been an exception to the rule. Later, cooperative and/or competitive displays nested within mortuary rituals may have been employed to create and periodically renegotiate alliances among communities and/or their segments, resulting in the large and frequent ceremonial deposits found at Mound City and in Hopewell Mounds 25 and 11 and others (Table 13.2). Yet later, during the use of the Seip–Pricer charnel house, when spiritual and religious means for alliance formation had been perfected through the burial together of portions of multiple communities within the same mounds (Carr, Chapter 7), cooperative and/or competitive displays appear to have become less necessary, and gift-giving appears to have decreased in frequency and flamboyance. The lack of very large burial assemblages and ceremonial deposits and the reduction of midsized ones at Seip–Pricer, as well as the generally less rich artifact content of Seip–Pricer, Seip–Conjoined, and Edwin Harness, may indicate this shift in alliance strategies. However, the different functions of Hopewell and Seip do not allow this change to be firmly tracked by gathering size. The decreasing frequency of midsized gatherings and the decrease in the average size of gatherings from Seip to Ater accord with the breakdown of a regional alliance documented in Chapter 7, from a three-community network to a two-community network.

This picture of change in the nature of alliances over time is supported by shifts in the nature of ceremonial deposits through time. Tables 13.2 and 13.3 indicate that large ceremonial deposits comprised of predominantly personal

items (smoking pipes of the platform kind [Gernet and Timmins 1987]) are restricted to the early Middle Woodland, at Tremper and Mound City. These deposits reflect the assembly of persons as individual agents (e.g., ritual trading partners) rather than persons as leaders or members of social units. Dyadic economic and social interactions, which would have occurred regularly outside of the ceremonial centers, are implied. In contrast, large deposits that date later in time indicate the assembly of multiple leaders or members of social groups: shaman-like leaders, leaders marked by copper celts, clan members, sodality members, and, possibly, whole communities marked by communal offerings (Table 13.3). Group-organized sociopolitical ventures with some cooperative and/or competitive displays within ceremonial centers are implied. Thus, shifts over the Middle Woodland in both the size and the nature of gatherings within the ceremonial centers point to the same shift in the nature of alliance formation strategies.

The culture-historical model of alliance development posed here helps to explain the large number of bodies (ca. 375+) estimated by Mills to have been deposited at Tremper relative to the numbers found in later charnel houses (Table 13.1), and the difference between this large estimate and our more moderate estimate of the numbers of gift givers at Tremper (n = 193). Within and/or between-community alliances in the Scioto valley at the early time of Tremper appear to have been worked out largely through the economics and social relations of *individual* commoners as agents, who were then buried together at Tremper, leading to the apparently large burial population there. Burial together in the same charnel house would have helped to solidify alliances; but without attention on group leaders, it would not have required heavy gift giving and cooperative and/or competitive displays, leading to the more moderate number of gift givers indicated by the Tremper archaeological record. Later in the Middle Woodland, when alliance negotiations apparently became funneled more so through *representative* local leaders, joint burial came to focus on these persons, producing the smaller burial populations within the charnel houses of Hopewell Mound 25, Seip–Pricer, Seip–Conjoined, and Edwin Harness (Table 13.1), but initially with more attention on cooperative and/or competitive displays and gift-giving, at Hopewell Mound 25 than later at Seip-Pricer and Edwin Harness (Table 13.10). As can be seen, it is essential to distinguish the number of gift givers implied by a charnel house's artifactual evidence from the number of deceased buried within a charnel house when examining and interpreting alliance strategies through time.

In this reconstruction, the assembly at the Tremper charnel house is more analogous to the historic Huron and Algonkian Feasts of the Dead, which involved common persons and large numbers of persons, than the assemblies at the charnel houses of Hopewell Mound 25, Seip–Pricer, Seip–Conjoined, and Edwin Harness, which involved high proportions of social leaders and fewer persons (see below and Table 13.12). However, even the estimated body count for the Tremper charnel house is a third of the number of deceased brought to the large, historic Huron and Algonkian Feasts of the Dead (see Carr, Chapter 12; Weets et al., Chapter 14).

Social Composition of Gatherings

The social composition of gatherings of persons who made offerings to the deceased or in the form of ceremonial deposits is quantified in this subsection. Estimates are presented (1) for all sites in total, (2) by sites of different function and sizes, (3) by time period, and (4) by geographic region.

Composite categories of social roles are used to characterize the social spectra of gatherings (Appendix 13.2). The categories include shaman-like leaders, nonshaman-like leaders and other persons of high prestige, prestigious clan leaders, ordinary clan members, prestigious personal roles, and ordinary personal roles, as defined by Case and Carr (n.d.) and Carr (Chapter 7) and summarized in Note 4.

The General Picture

The gifts given during mortuary-related ceremonies in all 22 sites represent overwhelmingly leaders and similar persons of high prestige compared to persons of more ordinary roles. In addition, leaders and persons of high prestige

Table 13.11. Estimates of the Numbers of Gift Givers of Various Social Roles (Categorized), for All 22 Ceremonial Centers[a]

Social category	Nonshaman-like leaders	Shaman-like leaders	Prestigious persons	Ordinary persons	Prestigious clanpersons	Ordinary clanpersons	Total
Total number of gift givers[b]	1,389/1,403	792/799	417/423	300/305	29/29	51/59	2,977/3,018
Percentage of gift givers	46.7/46.5%	26.6/26.5%	14.0/14.0%	10.1/10.1%	.97/.96%	1.71/1.95%	100/100%
Number of gift givers, without two largest deposits[c]	589/603	656/663	404/410	281/286	19/20	39/47	1,988/2,029
Percentage of gift givers, without two largest deposits	29.6/29.7%	33.0/32.7%	20.3/20.2%	14.1/14.1%	.96/.99%	1.96/2.32%	100/100%

[a] For each entry, the number before the "/" is the number of gift givers of the social role indicated by burial assemblages and/or ceremonial deposits, assuming each multiple burial to have been only a single gathering and episode of deposition. The number after the "/" is the number of gift givers of the social role indicated by burial assemblages and/or ceremonial deposits, assuming each multiple burial to have been multiple gatherings and episodes of deposition. The same format holds for the percentages.
[b] The estimates include all grave assemblages and ceremonial deposits listed in Tables 13.8 and 13.9.
[c] The estimates includes all grave assemblages and ceremonial deposits listed in Tables 13.8 and 13.9, excepting the two largest deposits: Hopewell Mound 25, Altar 1, and Turner, Mound 3, Central Altar, which are both heavily biased toward gift givers who were nonshamanic leaders.

marked by insignia not obviously tied to cross-cultural shaman-like roles are represented somewhat more often than shaman-like leaders (Table 13.11). There is no indication that Ohio Hopewellian societies and ceremonies were run primarily by shaman-like practitioners or, inversely, by other forms of leaders such as war and peace chiefs, priests, Big Men, or a suite of clan heads and/or sodality heads.

Site Function and Regional Distinctions

Table 13.12 summarizes the social compositions of gift givers at large and small ceremonial centers in Ohio. The only two large sites that are functionally differentiated and that significantly overlap in their time plane of use, allowing comparison, are Hopewell and Seip. The comparison corroborates the idea that Hopewell was a unique regional center where predominantly persons of importance were buried—and we may now add, honored—whereas Seip serviced a broader social spectrum. For Hopewell, a high 80.7%–81.3% of gift givers were shaman-like and nonshaman-like leaders, while 18.7%–19.3% were more ordinary persons. For Seip, the percentages are 68.7% and 31.3%, respectively—nearly twice the percentage of more ordinary persons who gave gifts at Hopewell.

Small mound centers across Ohio appear to fall into two modal, functional categories, according to the social composition of gift givers (Table 13.12). At some centers, gift givers are predominantly shaman-like and nonshaman-like leaders. The sites of North Benton, Hazlett, Snake Den, Shilder, Bourneville, Rockhold, and West fall in this group. At other centers, more ordinary persons constitute most or all gift givers. The sites of Esch, Rutledge, Circleville, and McKenzie define this group. Only one site, Ginther, witnessed roughly equal numbers of important and ordinary gift-givers, so the two kinds of sites are well distinguished.

For small sites where important persons comprised most or all gift givers, there is no modal or dichotomous pattern in the proportions of shaman-like leaders compared to nonshaman-like leaders and persons of high prestige (Table 13.12).

Changes over Time in Social Composition, Alliance Strategies, and Leadership

Changes in the social composition of gift givers at ceremonial gatherings over time can be tracked for the large earthwork–mound complexes and mound centers around Chillicothe. As noted in the previous section on gathering sizes, the sites

Table 13.12. Estimates of the Numbers of Gift Givers of Various Social Roles (Categorized), for Individual Large and Small Ceremonial Centers[a]

	Social category				
Site	Nonshaman-like leaders	Shaman-like leaders	Personal roles	Clan roles	Total
Large mound centers and earthwork–mound complexes					
Central and southern Scioto drainage					
Ater mound	24 (44.4%)	7 (13.0%)	21 (38.9%)	2 (3.70%)	54 (100%)
	24 (42.8%)	7 (12.5%)	22 (39.3%)	3 (5.36%)	56 (100%)
Seip–Pricer mound	64 (43.5%)	37 (25.2%)	29 (19.7%)	17 (11.5%)	147 (100%)
	69 (43.9%)	39 (24.8%)	32 (20.4%)	17 (10.8%)	157 (100%)
Hopewell, all	341 (42.4%)	313 (38.9%)	128 (15.9%)	22 (2.74%)	804 (100%)
	345 (42.1%)	316 (38.6%)	131 (16.0%)	27 (3.30%)	819 (100%)
Mound City, all	59 (13.0%)	145 (31.9%)	245 (53.8%)	6 (1.32%)	455 (100%)
	61 (13.1%)	148 (31.9%)	248 (53.4%)	7 (1.51%)	464 (100%)
Tremper	13 (6.81)	17 (8.90%)	156 (8.38%)	5 (2.62%)	201 (100%)
	13 (6.81)	17 (8.90%)	156 (8.38%)	5 (2.62%)	191 (100%)
Little Miami valley, southwestern Ohio					
Turner	387 (63.3%)	160 (26.2%)	45 (7.36%)	19 (3.11%)	611 (100%)
	389 (62.7%)	159 (25.6%)	53 (8.55%)	19 (3.06%)	620 (100%)
Small mound centers					
Northeastern Ohio					
Esch	5 (11.9%)	6 (14.3%)	30 (71.4%)	1 (2.38%)	42 (100%)
	6 (14.0%)	6 (14.0%)	30 (69.8%)	1 (2.32%)	43 (100%)
North Benton	10 (31.2%)	10 (31.2%)	11 (34.4%)	1 (3.12%)	32 (100%)
	10 (31.2%)	10 (31.2%)	11 (34.4%)	1 (3.12%)	32 (100%)
Central Muskingum valley					
Hazlett	1 (100%)				1 (100%)
	1 (100%)				1 (100%)
Rutledge			1 (100%)		1 (100%)
			1 (100%)		1 (100%)
Northern Scioto valley					
Wright–Holder					0
Central Scioto valley, Circleville area					0
Snake Den		13 (86.7%)	2 (13.3%)		15 (100%)
		13 (86.7%)	2 (13.3%)		15 (100%)
Circleville			1 (100%)		1 (100%)
			1 (100%)		1 (100%)
Central Scioto valley, Chillicothe Area					
McKenzie	3 (25.0%)		8 (66.7%)	1 (8.33%)	12 (100%)
	3 (25.0%)		8 (66.7%)	1 (8.33%)	12 (100%)
Ginther		8 (61.5%)	5 (38.5%)		13 (100%)
		8 (61.5%)	5 (38.5%)		13 (100%)
Rockhold	5 (83.3%)	1 (16.6%)			6 (100%)
	5 (83.3%)	1 (16.6%)			6 (100%)
Bourneville	4 (80.0%)	1 (20.0%)			5 (100%)
	4 (80.0%)	1 (20.0%)			5 (100%)
Shilder		3 (100%)			3 (100%)
		3 (100%)			3 (100%)
West	2 (100%)				2 (100%)
	2 (100%)				2 (100%)
Southwestern Ohio					
Boyle's Farm					0
					0

[a]For each social role (one column), for each site (two lines), the number (and percentage) on the first line pertains to gift givers of the social role indicated by burial assemblages and/or ceremonial deposits, assuming each multiple burial to have been only a single gathering and episode of deposition. The number (and percentage) on the second line pertains to gift-givers of the social role indicated by burial assemblages and/or ceremonial deposits, assuming each multiple burial to have been multiple gatherings and episodes of deposition.

Table 13.13. Estimates of the Numbers of Gift Givers of Various Social Roles (Categorized), for Individual Large Ceremonial Centers Through Time[a]

	Ratio of social categories[b]	
Site, "youngest" to "oldest"	% Nonshaman-like and shaman-like leaders to % personal roles (prestigious and ordinary)	% Nonshaman-like leaders to % shaman-like leaders
Ater	57.4% to 38.9% = 1.48	44.4% to 13.0% = 3.42
	55.3% to 39.3% = 1.41	42.8% to 12.5% = 3.42
Seip	68.7% to 19.7% = 3.49	43.5% to 25.2% = 1.73
	68.7% to 20.4% = 3.37	43.9% to 24.8% = 1.77
Hopewell, all	81.3% to 15.9% = 5.11	42.4% to 38.9% = 1.09
	80.7% to 16.0% = 5.04	42.1% to 38.6% = 1.09
Mound City	44.9% to 53.8% = .83	13.0% to 31.9% = .41
	44.9% to 53.4% = .84	13.1% to 31.9% = .41
Tremper	15.7% to 81.7% = .19	6.81% to 8.90% = .76
	15.7% to 81.7% = .19	6.81% to 8.90% = .76

[a]For each ratio of social roles (column), for each site (two lines), the percentages and ratio on the first line pertain to gift givers of the social role indicated by burial assemblages and/or ceremonial deposits, assuming each multiple burial to have been only a single gathering and episode of deposition. The percentages and ratios on the second line pertain to gift givers of the social role indicated by burial assemblages and/or ceremonial deposits, assuming each multiple burial to have been multiple gatherings and episodes of deposition.

[b]The percentages in this table are drawn from Table 13.16, retaining all of their assumptions.

of Tremper, Mound City, and Hopewell form a sequence in their periods of earliest use and midpoints of use, and can be compared because they are similar functionally as unique, prestigious regional centers. The sites of Seip and Ater also order temporally, appear to have been functionally analogous, and can be compared.

Two time trends that are significant to Hopewell social evolution and culture history can be found in the social compositions of gift givers at ceremonies (Table 13.13). First, the proportion of shaman-like leaders and nonshaman-like leaders who gave gifts relative to individuals in personal roles who gave gifts rises from Very Early Hopewell to Middle Hopewell times, represented by Tremper, Mound City, and Hopewell. The proportion then decreases from Middle to Late Hopewell times, represented by Seip and Ater, respectively. This trend parallels the increasing and then decreasing sizes of ceremonial gatherings over time, and suggests the same interpretation made above for changing gathering size: evolving alliance strategies. Specifically, alliance building within and between communities appears to have begun with mainly economic and social means, carried out by dyads of individual agents most often in nonmortuary contexts. This is expected theoretically (Carr, Chapter 3; 1992a; Carr and Maslowski 1995). Within mortuary-related ceremonies during this era, it is these dyads who came together and honored the dead with their gifts. This situation is evident in the high proportion of gift-givers who were ordinary people at Tremper and Mound City. Individually owned smoking pipes and other personal items were given. With time, alliance-building activities were consolidated to a considerable degree under the leaders of societies, again as expected theoretically (Braun 1986:121; Carr, Chapter 7, 1992a; Carr and Maslowski 1995), and were played out increasingly in earthwork theaters and in more complex, ritually structured ways within mortuary-related ceremonies. Leaders who spoke for their communities increasingly became the agents who presented gifts to honor the dead, and probably also to each other, in the spirit of cooperative and/or competitive display. These activities are evidenced in the increased proportion of gift givers who were shaman-like or nonshaman-like leaders at Hopewell compared to Mound City and Tremper. During subsequent, Middle Hopewell times, when the charnel houses under Seip–Pricer, Seip–Conjoined, and Edwin Harness were used, alliances were built and

maintained primarily religiously and spiritually through the burial of persons from multiple communities together in the same charnel houses and mounds (Carr, Chapter 7). This would naturally have been accompanied by a reduction in cooperative and/or competitive gift giving, which is seen in the lower frequency of large, individual burial assemblages and ceremonial deposits within these Middle Hopewell mounds (see above), yet the continued predominance of community leaders in gift giving (Table 13.13; Seip). The natural evolutionary trend in alliance development (Carr, Chapter 7, 1992a; Carr and Maslowski 1995) expressed in all of these changes then appears to have been cut short by a historical event of some kind, which led to fracturing the alliance network in the region. The number of communities who buried their dead together was reduced from three, as expressed at the Seip–Pricer and Edwin Harness mounds, to two, as represented by the Seip–Conjoined and Ater mounds (Carr, Chapter 7). Significantly, during this period, the proportion of gift givers who were shaman-like or nonshaman-like leaders compared to individuals in personal roles decreased (Table 13.13, Seip–Pricer to Ater). This suggests an uncertainty in the ability or the lesser capability of community leaders to negotiate alliances between them, and some reversion to personal, dyadic means of forming and maintaining intercommunity alliances. The two lines of evidence—alliance network expanse as expressed in the sizes of gatherings and the mechanisms of alliance formation as expressed in the social composition of gatherings—neatly coincide.

A second time trend that is significant to Hopewell social evolution and culture history can also be found in the social compositions of gift givers at ceremonies. This trend is the progressive increase through time in the proportion of nonshaman-like leaders to shaman-like leaders who gave gifts (Table 13.13). This pattern suggests a shift in the nature of community leadership: specifically the development of institutionalized community leadership roles and behaviors that complemented the more idiosyncratic ceremonial ways and leadership styles of shaman-like practitioners. This change would be expected as alliance networks formalized, intensified, and widened regionally, and more predictable and standardized leadership behaviors became necessary for the effective communication of intentions at multicommunity ceremonies. It is unclear whether the change involved a secularization of leadership, as well. The relationship of the religious meanings of metallic plain headplates, celts, breastplates, and earspools and other artifacts indicating nonshaman-like leaders or persons of high prestige to their sociopolitical power bases is not known (Carr and Case, Chapter 5).

The significant predominance of shaman-like leaders over nonshaman-like leaders in the earlier portions of the Middle Woodland suggests the applicability of Netting's (1972) theory of the religious foundation for the rise of supralocal leadership over Sahlins's (1968, 1972) political–economic view (Carr and Case, Chapter 5; Carr 1998/1999). Netting proposed that religious identities gave local leaders a means to free themselves of their local identity and bridge to persons in other localities.

Small ceremonial centers that can be ordered in time (Ruhl, Chapter 19; Ruhl and Seeman 1998; Prufer 1961a, 1964a) vary in both the proportions of leaders/prestigious persons versus more ordinary persons who gave gifts to the deceased and in the proportion of shaman-like leaders versus nonshaman-like leaders who gave gifts (see above). However, neither of these forms of variation sequence temporally. One would not expect temporal trends in these aspects of the social composition of gift givers at small centers like those at the larger centers, because the small centers almost certainly serviced only local social segments below the scale of the community. It is unlikely that the smaller centers functioned in the formation and maintenance of intercommunity and intracommunity-wide alliances, which was the apparent basis for the trends at the larger centers.

Kinds of Ceremonial Gatherings Revisited

An encompassing picture of the wide range of social gatherings of different sizes and natures that occurred in Ohio Hopewell ceremonial centers, and the relative frequencies of those

occasions, can be drawn typologically. Here, the contextually rich study of large ceremonial artifact assemblages with which this chapter began (Tables 13.2–13.4, Appendix 13.1), and Greber's (1996) study of deposits, are refined and extended using our multivariate quantitative approach for estimating numbers of gift givers. Ceremonial assemblages of small as well as large sizes are considered. This section brings the chapter full circle.

Large Ceremonial Deposits and Burial Offerings

Tables 13.2 and 13.3 showed that graves and ceremonial deposits with very many artifacts fall into two general classes kinds: those predominated by artifact types marking one social role or a closely related set of roles for gift givers, and those having a diversity of artifact types indicating many roles for gift givers. The specialized assemblages, in turn, varied among each other in the social roles they highlighted: shaman-like war or hunt diviners, other shaman-like diviners, shaman-like philosophers, leaders of whole communities or community-wide sodalities, sodality members, clan members, other socially institutionalized roles of importance, individual prestige, and the community as a whole (Table 13.4). These kinds of gatherings and their role characteristics are verified quantitatively in Table 13.14.[7]

Estimates of numbers of gift givers who attended socially homogeneous and diversified gatherings (Table 13.14, column 6) indicate that the diversified gatherings were much larger: of the order of two to three times the largest homogeneous gatherings (514 and 441 gift givers versus 209, 186, or fewer gift givers). The large sizes of the diversified gatherings suggest their attendance by members of multiple communities, if an estimate of average community size of 133 persons (Konigsberg 1985) is accepted (see Note 1). The socially homogeneous gatherings have large numbers of persons in roles that would have been uncommon in a single community (e.g., shaman-like practitioners, society-wide leaders, sodality members of high achievement), likewise suggesting the attendance of ceremonies by persons from multiple communities. These quantitative results provide a measure of certainty to these interpretations that was not possible by contextual analysis, alone (see above).

The quantitative results in Table 13.14, column 6, also make it possible to infer which kinds of large, socially homogeneous gatherings of gift-givers were more or less grand. The largest of such ceremonial gatherings were dominated by possible society-wide leaders marked by celts and high achievers within sodalities marked by breastplates (186 gift givers) and by individuals represented by their personal smoking pipes (209 gift givers). Pearl and shell beads also seem to have marked the first two social roles. Somewhat smaller gatherings highlighted shaman-like philosophers marked by cosmologically significant geometrics (127 gift-givers) and shamanic-like diviners indicated by cones (111 gift-givers). Much smaller (maximum 52 gift-givers) were the gatherings of shamanic-like war or hunt diviners indicated by quartz and/or obsidian points, important and rare social roles marked by crescent pendants and reel-shaped pendants, and clan or sodality members identified by bear canines.

Small Ceremonial Deposits and Burial Offerings

The social compositions of small gatherings estimated to have been attended by three or fewer gift-givers are listed in Table 13.15 for ceremonial deposits and burial assemblages, separately, from all 22 sites. For both kinds of artifact assemblages, three distinct kinds of gatherings that differ in social composition are evident: gatherings where only nonshaman-like leaders gave gifts, gatherings where only shaman-like leaders gave gifts, and gatherings where only ordinary or prestigious individuals in their personal roles made offerings. Ceremonies that mixed two of these social categories were very rare in burial settings and only somewhat more common in other non-burial-focused contexts, indicating the culturally normative nature of the three types of small gatherings. In addition, this tripartite pattern reiterates that which characterizes many of the very large ceremonial deposits and burial offerings that were produced by socially homogeneous gatherings of gift-givers. The segregation of shaman-like from nonshaman-like leaders as

Table 13.14. Numbers of Gift-Givers of Various Social Roles (Categorized) Represented by Large Burial Assemblages and Ceremonial Deposits (>15 Items), for All 22 Ceremonial Centers[a]

Provenience	Nonshaman-like leaders	Shaman-like leaders	Personal roles, prestigious & ordinary	Clan roles, prestigious & ordinary	Total size of gathering
Socially homogeneous, specialized gatherings: Communal					
Communal pipes					
Seip–Pricer, Pipe Cache					5 communities
Socially homogeneous, specialized gatherings: Personal					
Individual, platform pipes					
Mound City, Md. 8, Central Altar & Depository Bag	0	6	**202**	0	209
Tremper, Lower Cache	3	17	**147**	5	172
*Hopewell, Shetrone's Md. 17, Offering 1	5	30	**75**	0	113
Socially homogeneous, specialized gatherings: Shaman-like leadership					
Cones/hemispheres					
Hopewell, Shetrone's Md. 17, Deposit 2	13	**90**	7	1	111
Points					
*Hopewell Md. 25, Altar 2	7.5	**27**	12.5	2	52
*Mound City, Md. 3, Altar & Crematory Basin	0	**24**	4	0	31
Geometrics					
Hopewell Md. 25, Copper Deposit	11	**114**	2	1	127
Raw Materials					
*Hopewell, Shetrone's Md. 29, Moorehead Md. 17	Not role-specific				
Mound City, Md. 7, mica crescent	0	**10**	0	0	10
*Mound City, Md. 13, B1	2	**7**	**10**	1	14
Mound City, Md. 23, B1	0	0	0	0	0
*Hopewell, Shetrone's Md. 29	Not role-specific				
Mound City, Md. 5, Altar	0	**1**	0	0	1
Hopewell Md. 2, Central Cache	**1**	**1**	0	0	2
Hopewell Md. 11, Crematory Basin	1	**3**	1	0	7
Hopewell Md. 1, Central Cache	0	**4**	0	0	4
Socially homogeneous, specialized gatherings: Nonshaman-like leadership, sodality achievement					
Metal breastplates, celts, earspools					
*Hopewell Md. 25, Sk. 260–261	**163**	11	0	0	186
*Hopewell Md. 25, B7	**33**	3	2	0	38
*Hopewell, Shetrone's Md. 17, Offering 1	5	30	**75**	0	113
Seip–Pricer, Ceremonial Cache	**13**	0	1	1	15

(*Continued*)

Table 13.14. (*continued*)

Provenience	Nonshaman-like leaders	Shaman-like leaders	Personal roles, prestigious & ordinary	Clan roles, prestigious & ordinary	Total size of gathering
Reel-shaped gorgets, crescents					
Turner, Md. 15, Cache	0	0	0	1	1
Tremper, Sandstone Grave	**9**	0	0	0	10
Pearl & shell beads (300 max per necklace)					
*Hopewell Md. 25, Altar 2	7.5	**27**	12.5	2	52
*Hopewell Md. 25, Sk. 260–261	**163**	11	0	0	186
*Mound City, Md. 13, Deposit 5	3	**13**	**6**	2	24
*Mound City, Md. 13, B1	2	**7**	**10**	1	20
*Hopewell Md. 26, Crematory Basin	**4**	0	2	0	6
*Hopewell Md. 25, B6–7	**36**	0	3	0	46
Hopewell Md. 2, B3	**3**	0	0	0	5
Hopewell Md. 25, B248 + 249	**3**	1	0	0	13
Hopewell Md. 28, Crematory Basin	**3**	0	2	0	5
*Seip–Pricer, Burned Offering	4	**14**	1	**7**	29
Rutledge Md. 1, B3	0	0	0	0	2
Hopewell Md. 26, Deposit	2	0	3	0	5
Socially diversified gatherings					
Hopewell, Md. 25, Altar 1	**463**[b]	32	12.5	3	514[b]
Turner, Md. 3, Central Altar	**337**	77	7	16	441
Artifacts of unclear role affiliation					
Bear canines (4 max per necklace)					
Seip–Pricer, Cremation Basin 2	?				
*Seip-Pricer, Burned Offering	4	**14**	1	**7**	29
Hopewell Md. 25, B34	**4**	0	0	**5**	14
Harness Md., Cremation	?				
Other animal teeth, claws					
Hopewell Md. 23, Sk. 207	1	0	0	0	3
Mound City, Md. 8, B3	1	0	1	1	6
Mound City, Md. 8, B2	0	**49**	2	2	58
*Mound City, Md. 2, B16	**9**	0	1	0	15
*Mound City, Md. 13, Deposit 5	3	**13**	6	2	24
Hopewell, Md. 25, B41A–C	2	1	0	0	16

[a]The number of gift-givers indicated by burial assemblages and/or ceremonial deposits assumes that each multiple burial was only a single gathering and episode of deposition. Numbers in bold indicate, for each provenience, the general category of social roles that predominates in that provenience, as evidenced by its artifact type composition.
[b]This estimate assumes that the number of earspools deposited in Hopewell Mound 25, Altar 1, is 500 (250 pairs). See Table 13.2, Footnote a, and Table 13.6, Footnote c, for a perspective on this estimate.

Table 13.15. Social Composition of Small Gatherings (≤3 Gift Givers) for All 22 Ceremonial Centers

Social role, categorized	Number of burials with the social role[a]	Number of ceremonial deposits with the social role
Homogeneous gatherings		
Nonshaman-like leaders, only	28	5
Shaman-like leaders, only	18	6
Personal roles (prestigious & ordinary) only	24	11
Mixed gatherings		
Nonshaman-like leaders > shaman-like leaders		
Nonshaman-like leaders < shaman-like leaders		1
Nonshaman-like leaders = shaman-like leaders		
Personal roles and nonshamanic leaders	2	3
Personal roles and shamanic leaders	1	3
Personal roles, nonshamanic leaders and shamanic leaders		
No evidence of gatherings	91	29

[a]The statistics for burial assemblages assume that each multiple burial was only a single gathering and episode of deposition. A strong tendency toward role-homogeneous assemblages is found despite this assumption, which could mix ceremonially unassociated grave assemblages and the social roles they indicate.

gift givers in both small and large ceremonies of most kinds and in both burial and nonburial ceremonial contexts suggests very fundamental and institutionalized differentiation of social roles and ceremonial functions. What those functions were specifically remains unclear.

In burial contexts, small gatherings that involved shaman-like or nonshaman-like leaders as gift givers were more common, two to one, than gatherings that involved ordinary or prestigious individuals in personal roles as gift givers. Gatherings focused on nonshaman-like gift givers were more common, three to two, than gatherings focused on shaman-like gift givers. In contrast, in nonburial ceremonial contexts, gatherings that highlighted shaman-like or nonshaman-like leaders as gift givers and those that highlighted individuals in their personal roles were equally frequent. Likewise, gatherings that centered on shaman-like gift givers and those that centered on nonshaman-like gift givers were equally common.

The Social Composition of Gatherings in Relation to Their Size

A picture of how the social composition of gatherings changes with their size is given in Table 13.16 for burials and ceremonial deposits separately. In both settings, change is primarily abrupt rather than continuous with gathering size. For burials and ceremonial deposits alike, the ratio of shaman-like and nonshaman-like leaders to individuals in their personal roles who gave gifts is consistently low (generally 1 to 4) for gatherings of 1 to 6 or 10 persons, then is much higher (generally 7 to 32) for larger gatherings with 7 or 11 to hundreds of people. In the latter range, the proportion of leaders to more ordinary persons generally rises with gathering size. The data thus suggest that social leaders played much more central roles in gatherings of more than 6 to 10 gift-givers and that these leadership roles continued to increase in importance as gathering sizes increased. This result is expectable considering the greater need to organize large crowds than small gatherings through leadership.

Table 13.16 also shows that for both burials and ceremonial deposits, there is little difference in the proportions of shaman-like and nonshaman-like leaders until very large gatherings of 150 to 300 gift-givers are reached. At these large gatherings, nonshaman-like leaders come to outnumber shaman-like leaders overall by a ratio of 5:1 to 15:1. This result also is expectable, given the need to control large crowds with the predictable means of institutionalized, nonshaman-like leadership in contrast

Table 13.16. Change in the Social Composition of Gatherings with Gathering Size

	Ratio of . . .	
Total size of gathering	Nonshaman-like & shaman-like leaders to personal roles	Shaman-like leaders to nonshaman-like leaders
Burials[a]		
1	.79	1.20
2	3.93	2.06
3	1.60	1.18
4	3.50	.88
5	1.27	.90
6	2.69	1.87
7	1.53	2.25
8–10	1.27	1.94
11–15	6.75	2.72
16–25	1.04	.12
26–50	12.00	2.08
51–100	24.50	.00
141–200	174.00	14.80
Ceremonial deposits		
1	.50	2.00
2	1.60	1.00
3	1.36	.67
4–6	1.67	1.00
7–15	7.50	.67
16–30	4.67	1.06
31–100	32.00	.00
101–200	2.95	.12
201–300	.30	.00
301–500	59.10	4.77
≥501	23.90	7.89

[a] The statistics for burial assemblages assume that each multiple burial was only a single gathering and episode of deposition. Assuming that each multiple burial involved multiple gatherings produces similar quantitative results and the same patterning.

to the often idiosyncratic means of shaman-like practitioners. The shift to a predominance of nonshaman-like leadership at gatherings has a temporal as well as functional dimension. Previously, it was shown (Table 13.13) that the ratio of nonshaman-like to shaman-like leaders who were the focus of ceremonies increased over time, as intercommunity alliance networks formalized, intensified, and widened.

A Typology of Ceremonial Gatherings

Quantification of the sizes and social compositions of ceremonial gatherings using both small and large artifact assemblages, as well as the counts of both predominant and less frequent artifact classes within each assemblage, allows the classification of gatherings approximated in the first half of this chapter to be filled out. A fine-grained typology of gatherings, with examples of the rarer, moderate to large-size gatherings, is presented in Table 13.17.

The fundamental dimensions that define the typology, and that were *suggested by the nature of the assemblages and the structure of the data, themselves, rather than imposed upon this information*, are as follows: (1) the size of the gathering—either large to moderate or small; (2) whether the artifact assemblage evidencing a gathering was directly associated with the dead in or above graves, or found in free-standing ceremonial deposits; (3) whether gift givers of diverse social roles or predominantly one or two social roles participated in the ceremonies, as indicated by the artifact classes found in a

Table 13.17. A Typology of Ohio Hopewell Ceremonial Gatherings

I. Moderate to large cooperative and/or competitive ritual displays involving multiple communities. Not directly associated with the dead.

A. *Gift givers of diverse social roles. Nonshaman-like leaders emphasized over shaman-like leaders.*
Hopewell Mound 25, Altar 1. Total: 514[a] gift givers. Social composition:[b] **463**, 32, 12.5, 3
Turner Mound 3, Central Altar. Total: 441 gift givers. Social composition: **337**, 77, 7, 16
Ater, B51A, B. Total: 36 gift givers. Social composition: **18**, 6, 3, 2

B. *Gift givers of a specialized social role. Shaman-like leaders predominate.*
1. Shaman-like war or hunt diviners predominate
Hopewell Mound 25, Altar 2. Total: 52 gift givers. Social composition: 7.5, **27**, 12.5, 2
Mound City, Mound 3, Altar. Total: 31 gift givers. Social composition: 0, **24**, 4, 0
Mound City, Mound 13, Deposit 5. Total: 24 gift givers. Social composition: 3, **13**, 6, 2
2. Shaman-like as diviner in general
Hopewell Mound 17, Deposit 2. Total: 111 gift givers. Social composition: 13, **90**, 7, 1
Seip–Pricer, Burned Offering. Total: 29 gift givers. Social composition: 4, **14**, 3, 7
3. Shaman-like as philosopher/cosmologist predominate
Hopewell Mound 25, Copper Deposit. Total: 127 gift givers. Social composition: 11, **114**, 2, 1
4. Shaman-like practitioners of unknown roles, associated with bulk fancy raw materials
Mound City, Mound 5, Altar. Total: unknown. 30 lb of galena in 2-oz to 3-lb pieces
Hopewell, Mound 1. Total: unknown. 30–40 chlorite disks
5. Shaman-like practitioners of several specializations
Turner, Mound 4, Central Altar. Total: 67 gift givers. Social composition: 0, **64**, 2, 0

C. *Gift givers of a specialized social role. Role of nonshaman-like leader predominates.*
Turner, Mound 15, Cache. Total: 27 gift givers. Social composition: **25**, 0, 2, 0
Tremper, Sandstone Grave. Total: 12 gift givers. Social composition: **9**, 0, 1, 0

D. *Gift givers of a specialized social role. Role of the individual (prestigious?) predominates.*
Tremper, Lower Cache. Total: 172 gift givers. Social composition: 3, 17, **147**, 5
Hopewell Mound 17, Offering 1. Total: 113 gift givers. Social composition 5, 30, **75**, 0
Hopewell Mound 26, Crematory Basin. Total: unknown. 5,000+ shell and bone beads.
Hopewell Mound 28, Crematory Basin. Total: unknown. 1,800 shell or bone beads

II. Moderate to large cooperative and/or competitive ritual displays involving multiple communities. Directly associated with the dead.

A. *Gift givers of diverse social roles.*
1. Gifts in a grave. Rites of separation
Mound City, Mound 13, B1, Mica Grave. Total: 14+ gift givers. Social composition: 2, 7, 10, 1
Mound City, Mound 7, B9. Total: 12 gift givers. Social composition: 4, 5, 0, 0
2. Gifts in a log tomb (which can be reopened) or on top of it or a primary mound. Rites of liminality.
Seip–Pricer, B1. Total: 11 gift givers. Social composition: 6, 2, 1, 0

B. *Gift givers of one or two specialized social roles and closely related roles in lesser representation.*
1. Gifts in a grave. Rites of separation
a. Shaman-like leaders or practitioners of a kind predominate
Hopewell Mound 11, Crematory Basin. Total: unknown. 136 kg of obsidian debitage
Hopewell Mound 29, M1922:91A. Total: 11 gift givers. Social composition: 0, **11**, 0, 0
Snake Den, Mound C, Cremation. Total: 17 gift givers. Social composition: 0, **12**, 2, 0
b. Nonshaman-like leaders predominate
Mound City, Mound 2, B16. Total: 15 gift givers. Social composition: **9**, 0, 1, 0
c. High achievers in a sodality (earspools or breastplates) predominate.
Hopewell Mound 25, B7. Total: 38 gift givers. Social composition: **33**, 0, 2, 0
Seip–Pricer, Ceremonial Cache? Total: 15 gift givers. Social composition: **13**, 0, 1, 1
(In a normal looking grave but no human remains. Memorial?)

(*Continued*)

Table 13.17. (*continued*)

d. Role of the individual predominates
  Mound City, Mound 8, Central Altar. Total: 209 gift givers. Social composition: 0, 6, **202**, 0
  Esch, Mound 1, B1. Total: 14 gift givers. Social composition: 2, 1, **8**, 0
  Esch, Mound 2, B13a. Total: 20 gift givers. Social composition: 1, 0, **14**, 1

2. Gifts in log tomb (which can be reopened) or on top of it or a primary mound. Rites of liminality
  a. Society-wide leaders (celts) and high achievers in a sodality (breastplates) predominate
    Hopewell Mound 25, Sk. 260–261. Total: 186 gift givers. Social composition: **163**, 11, 0, 0
    Mound City, Mound 7, B12. Total: 32 gift givers. Social composition: **22**?, 5, 0, 0

III. Small ceremonies (1–3 gift givers) Not directly associated with the dead.
  A. Gift givers are nonshaman-like leaders but not shaman-like leaders or individuals in personal roles.
  B. Gift givers are shaman-like leaders but not nonshaman-like leaders or individuals in personal roles.
  C. Gift givers are individuals in personal roles but not shaman-like or nonshaman-like leaders.
  Classes A and B are of equal frequency. Classes A and B combined are equally as common as Class C.

IV. Small ceremonies (1–3 gift givers). Directly associated with the dead.
  A. Gift givers are nonshaman-like leaders but not shaman-like leaders or individuals in personal roles.
  B. Gift givers are shaman-like leaders but not nonshaman-like leaders or individuals in personal roles.
  C. Gift givers are individuals in personal roles but not shaman-like or nonshaman-like leaders.
  Class A is more frequent than Class B; 3:2. Classes A and B combined are more frequent than Class C; 2:1.

[a]This estimate assumes that the number of earspools deposited in Hopewell Mound 25, Altar 1, is 500 (250 pairs). If the number of earspools in the Altar was 750 to 1000 (375 to 500 pairs), per Table 13.2, Footnote a, then the estimated size of gathering represented by this feature would be 643 to 768 persons.
[b]Social composition statistics for gift givers are given as follows: number of nonshaman-like leaders, number of shaman-like leaders, number of prestigious or ordinary individuals in personal roles, number of clan members. The total number of gift givers cited usually is more than the sum of the number of nonshaman-like leaders, shaman-like leaders, individuals in personal roles, and clan members because some artifacts in graves and ceremonial deposits represent roles of unknown kinds, which are not tabulated here. Numbers in bold indicate, for each provenience, the general category of social roles that predominates in that provenience, as evidenced by its artifact type composition.

ceremonial assemblage; and (4) for grave assemblages, whether the artifacts were probably placed in the grave when the deceased was laid to rest, indicating a rite of separation, or whether the artifacts might have been placed in the grave later, indicating a rite of liminality. The latter possibility was indicated by burial in a log tomb in a charnel house, where the tomb's cover could have been repeatedly opened and closed. This dichotomy is the least certain. Each of these four dimensions of the typology and their culture-historical significance have been discussed in detail earlier in this chapter (see Summary and Synthesis, and Kinds of Ceremonial Gatherings Revisited).

Other dimensions of variation were not used to structure the typology. The distribution of their variants among the gathering types suggests interpretations beyond the patterning captured by the typology itself. These dimensions include: (1) the particular social roles—as opposed to the diversity of social roles—indicated by a grave assemblage or ceremonial deposit; (2) modes in gathering sizes within the large-to-moderate and small divisions; (3) site function; and (4) temporal placement.

The largest and rarest gatherings, with more than 300 gift givers (Class IA), were not directly associated with the deceased and involved gift givers of many different kinds of leadership, sodality, clan, and ordinary social roles. Nonshaman-like leaders and high achievers within sodalities were the most common attendees. The sizes of these gatherings relative to the sizes of the largest burial mound populations suggest that they involved multiple earthwork communities. Not focused on the deceased, these ceremonies might not have emphasized ancestral continuities and the status quo in social relationships but, instead, could have provided opportunities for expressing some competition between assembled social units through ostentatious

material displays and for challenging established relationships (*cf.* Buikstra and Charles 1999; Gluckman 1937; Morris 1991). Whether competition was central to the ceremonies, and the extent of competition, are unknown. Whatever the case, centrifugal social forces would have been countered by firm, intercommunity alliances based on joint burial within cemeteries (Carr, Chapter 7) and at least two kinds of intercommunity sodality organizations (Carr, Chapter 7 and below). Thus, the ceremonial expression of cooperation among social units would have been fundamental.

Intermediate to large-sized gatherings of about 27 to 183 gift-givers (Class IB) again were not focused on the deceased and were fairly rare. However, they were socially more homogeneous, having involved persons of predominantly one social role. Shaman-like roles concerned with war or hunt divination, divination in general, philosophy and cosmology, and other unknown roles were the most commonly predominant roles at these occasions; gatherings emphasizing nonshaman-like leaders of whole communities or community-wide sodalities, sodality members, clan members, certain other institutionalized roles, or individuals in their personal roles were less frequent. Most ceremonial gatherings of intermediate size, like the largest ones, must have involved representatives of multiple communities, because the numbers of leaders they involved are more than one would expect in a single community at one time. These gatherings also may have afforded opportunity for cooperative and/or competitive material displays.

Moderately sized gatherings comprised of about 11 to 38 gift-givers and focused on the deceased (most in Class II) were also infrequent. They were variable in their nature, sometimes attended by gift givers of diverse social roles, sometimes predominated by gift givers of one kind of social role. The latter, socially homogenous gatherings varied widely in the kind of roles they features: shaman-like leaders, nonshaman-like leaders, high achievers in sodalities, and individuals in personal roles. Gatherings of this fairly small kind need not, by their empirical signatures, have involved persons from multiple communities, but they could have. In addition, these gatherings most likely centered on ancestral continuities and the status quo in social relationships, having been focused on the deceased. Both rites of separation and rites of liminality may have been the subject of these gatherings, given the varying opportunities for adding, subtracting, or rearranging grave goods afforded by different kinds of tombs and as suggested by varying placements of grave goods.

Very small gatherings of one to three gift givers (Classes III and IV) dominate the Ohio Hopewell record of ceremonial assemblies. These were sometimes centered on the deceased, sometimes not. Almost all were homogeneous in the kinds of social roles had by the gift givers who gathered. Gift givers at a given gathering were either only shaman-like leaders or only nonshaman-like leaders or only individuals in personal roles, in almost all instances. The ceremonies held at these gatherings most likely emphasized relationships with the deceased, including rites of separation and liminality, rather than cooperative and/or competitive display, given the small numbers of attendees.

CONCLUSIONS

Reconstructing a personalized view of the Ohio Hopewellian world, in which its spacious earthwork enclosures, mound groups, and isolated mounds are peopled with ceremonial gatherings of known approximate sizes, social compositions, and purposes, is central to any satisfyingly thick, descriptive prehistory of Hopewellian life. A Hopewell material landscape left empty of people produces awe but little understanding. Estimates of the magnitude and nature of Hopewell ceremonial gatherings also set a solid foundation for inferring the internal characteristics and dynamics of Hopewellian societies, their interrelationships, and their change through time.

The reconstructive work done in this chapter has produced a good number of insights into Hopewellian gatherings and their broader sociological interpretation. Answers to each of the questions asked at the beginning of this chapter have been found: the sizes of gatherings, the

social roles of those who attended, whether they were repetitive and institutionalized in nature, their variation with site function, and their change over time. These insights and answers are as follows.

(1) The great majority of ceremonial gatherings within the mortuary spaces of Ohio Hopewell mound sites and earthwork–mound complexes were small. About two-thirds of the gatherings documented here for 22 sites involved only one to three gift givers. About three-fourths of all recorded graves and ceremonial deposits, including graves with no artifacts, indicated gatherings of three persons or less.

In all of the known Ohio Hopewell world, only eight burial assemblages or ceremonial deposits indicate gatherings of 90 or more gift-givers, and only two suggest gatherings of more than 400 gift givers: 441, and 514 or perhaps somewhat higher. None of these estimates, though conservative, approach the size of the historic Huron and Algonkian Feasts of the Dead, which sometimes involved as many as 1,000 to 1,600 attendees, 1,200 given gifts, and/or the remains of 1,000 deceased persons (Carr, Chapter 12). The burial populations of the largest charnel houses under Hopewell Mound 25, Seip–Pricer mound, and Edwin Harness mound reached only 98–176 persons, although the number of deceased buried at Tremper probably was more.

The limited number of large ceremonial gatherings identified here does not support the idea that major intercommunity and intracommunity cooperative and/or competitive displays within ceremonial centers were a regular (e.g., annual) aspect of Ohio Hopewellian ceremonial life having a mortuary component. Too few remains of such large gatherings exist for this to be the case. This finding is fully compatible with the reconstruction (Carr, Chapter 7) that intercommunity alliances during the middle and latter half of the Middle Woodland were solidified religiously and spiritually through multicommunity joint burial, which would have made cooperative and/or competitive ceremonial displays less necessary.

(2) Ohio Hopewell ceremonial gatherings in mortuary settings took many forms that varied in four fundamental ways: the size of the gathering, whether the gathering focused on the grave of a deceased person or resulted in a free-standing ceremonial deposit, whether gift givers were of homogeneous or diverse social roles, and, for grave-oriented ceremonies, apparently whether the gathering was for a rite of separation and/or rite of liminality.

The nature of gatherings varied systematically with their sizes. The largest gatherings, with more than about 300 gift-givers, were rare, not directly associated with the deceased, diverse in social composition, and involved persons from multiple earthwork communities. The ceremonies probably involved cooperative and/or competitive material displays that might have allowed established social relationships to be challenged to some degree, or might have emphasized cooperative ancestral or other relationships and the status quo. More moderately sized gatherings, of about 27 to 183 gift givers, were fairly rare, not focused on the deceased, homogeneous in social composition, and, in most instances, involved members of multiple earthwork communities. These ceremonies also would have been opportunities for cooperative and/or competitive displays. Smaller gatherings, of about 11 to 38 gift givers, were still relatively infrequent, focused on the deceased, either diverse or homogeneous in social composition, and may or may not have involved persons from multiple communities. Focusing on the deceased, these ceremonies likely emphasized continuities with ancestors and reinforced traditional social relationships. The very smallest of gatherings, with about one to three gift givers, were very common, centered on the deceased, homogeneous in social composition, and more probably included persons from only one community. Again, these ceremonies would likely have emphasized ancestral relations and the status quo. Both the small and the very small gatherings around the deceased likely encompassed rites of separation and liminality.

(3) Gatherings of large to intermediate sizes—both socially homogeneous and socially diverse—show little evidence of having been repeated periodically as part of a cycle or "calendar" of institutionalized types of ceremonies within a society, among neighboring societies, or across southern Ohio. Within individual

ceremonial sites and societies, almost all of the ceremonial gatherings in the large to intermediate size range are unique in their social compositions and the kinds of artifact deposits they generated. For example, at the Hopewell site, only one large ceremonial deposit or grave assemblage is found for each of the following items: obsidian spears, celts and breastplates, cones and hemispheres, copper geometrics, hornstone preforms, chlorite disks, and galena. None of these artifact accumulations at Hopewell seem to pair in any obvious manner. The same uniqueness and lack of pairing is true for most large to intermediately sized artifact accumulations within other sites. The only exceptions to this pattern are: three large deposits of mica mirrors at Mound City, two large deposits of galena there, three moderately sized deposits of bear canines at Seip-Pricer mound and Hopewell Mound 25, three moderately sized deposits of elk canines at Mound City, and two large deposits of earspools below Hopewell Mound 25. These pairs or triads of deposits may simply reflect historical continuity of situationally precipitated forms of ceremonies, not the periodic calendrical timing of ceremonies, within an individual society. Two points do not demonstrate a cycle, and three points do not without chronological information, especially in the context of the ample evidence for unique ceremonial gatherings.

For the scale of multiple societies, Greber (1996:162–165; 1997:219) postulated the existence of a multigenerational, two-part calendric cycle for pre-Middle Woodland and Middle Woodland societies across southern Ohio. Large and intermediately sized ceremonial deposits viewed across sites provide little support for Ohio Hopewellian peoples having had such a calendric cycle. The two largest ceremonial gatherings at Turner and Hopewell are somewhat analogous in their diversity and size. However, they differ significantly in the specific artifact forms they included, and were separated widely in space, number of generations, and social tradition. One possible indicator of a two-part, calendric cycle is the couple of ceremonial gatherings represented by the deposits of smoking pipes found at Tremper Mound and Mound City, Mound 8. The pipes are similar in nature, and the two sites sequence fairly closely in time and are but a short river trip apart. However, again, two points in time do not prove a cycle; situational timing of ceremonies is an alternative possibility. Some other evidence documented by Greber (1996:162–165) for a multi-society, multigenerational, periodic ceremonial calendar is more convincing.

(4) Gatherings of different sizes and social compositions distinguish ceremonial centers of different functional classes. The sites of Hopewell, Mound City, and Tremper, which can be defined as functionally specialized regional centers based on characteristics other than their peak gathering sizes (Carr, Chapter 7, and above), and the possible regional center of Turner, were the only Ohio Hopewell ceremonial centers that had one or more large gatherings of more than 51 gift givers. They also each had one or more large gatherings of more than 100 gift givers. In contrast, the large mounds of Seip–Pricer, Edwin Harness, and Ater, which are not regionally unique in any of the ways of the first three sites, had peak gatherings of much smaller sizes—29 and 35 gift givers for Seip–Pricer and Ater, respectively. The 14 much smaller mounds or mound clusters in this study all had peak ceremonial gatherings of fewer than 25 gift givers, and most had peak gatherings of fewer than 6 gift givers. The two small sites of Esch and North Benton, both in northeastern Ohio, stand out in having had double or more the number and/or size of gatherings that met at other small sites in other regions. The reasons for this regional development are unclear. There were a variety of other significant cultural differences between northeastern Ohio and central Scioto valley Hopewellian communities (Note 6; Field et al., Chapter 9; Carr and Turff, Chapter 18; Spence and Fryer, Chapter 20; Seeman 1996).

In social composition, the totality of gatherings documented for the regional center of Hopewell had a significantly greater percentage of shaman-like and nonshaman-like leaders who gave gifts than the gatherings documented at Seip: 80.7% to 81.3% versus 68.7%. For small mound centers, the small numbers of gift givers do not permit the accuracy of such percentages. However, the mound centers clearly

vary in whether gift givers were dominated by important shaman-like and/or nonshaman-like leaders, or by more ordinary persons. The sites of North Benton, Hazlett, Snake Den, Shilder, Bourneville, Rockhold, and West fall in the first class, while Esch, Rutledge, Circleville, and McKenzie fall in the second.

(5) Changes in the size and social composition of gatherings through time in the central Scioto valley follow a pattern that is expectable from what is known empirically about evolving alliance strategies among communities there and theoretically about alliance formation in general (Carr, Chapter 7, 1992a; Carr and Maslowski 1995). The periods of first use and the midpoints of use of the large sites of Tremper, Mound City, Hopewell, Seip, and Ater define a chronological sequence from earliest to late Hopewell by many criteria (Greber 1983, 2003; Prufer 1961a, 1964a; Ruhl 1996, Chapter 19; Ruhl and Seeman 1998). Over this sequence, the frequency of larger ceremonial gatherings and the average size of gatherings, measured in numbers of gift-givers, increased exponentially from Tremper to Mound City to Hopewell, which are functionally analogous centers, and then decreased from Seip to Ater, which are functionally analogous centers. The increase in sizes of gatherings found in the first part of this sequence is corroborated by increases over time in the acreage of ceremonial centers, in the number of divisions within ceremonial centers (DeBoer 1997), and possibly the increasing viewing distances and audience sizes implied by increases in earspool size (Ruhl, Chapter 19). Paralleling the time trend for increasing and then decreasing sizes of gatherings, the proportion of shaman-like and nonshaman-like leaders who gave gifts at gatherings relative to the proportion of more ordinary persons rose from Tremper and Mound City to Hopewell and then decreased from Seip to Ater.

The smaller gatherings with high proportions of ordinary persons early in the sequence reflect incipient attempts at alliance building through largely economic and social means between dyads of individual agents in primarily nonmortuary contexts. Within mortuary-related ceremonies, mainly these dyads honored the dead with their gifts of smoking pipes and other personal items at Tremper and Mound City. The larger gatherings with high proportions of leaders compared to ordinary persons in the middle part of the sequence, involving Mound City and Hopewell, indicate intensified efforts at alliance building, which were consolidated for efficiency and effectiveness in the hands of leaders and which were played out within earthwork–mound complexes. Cooperative and/or competitive ceremonial displays took prominence over the earlier forms of dyadic, economic and social partnerships and exchanges as alliance-making strategies. During the period of use of the Hopewell Mound 25 charnel house and, later, the Seip–Pricer charnel house, spiritual and religious mechanisms of alliance maintenance were perfected, involving the burial of persons from multiple communities together within each other's charnel houses. Cooperative and/or competitive gift giving naturally waned, evidenced in the reduced size of the largest grave assemblages and ceremonial deposits and fewer intermediate-sized grave assemblages and ceremonial deposits. Leaders who spoke for their communities would be expected to have continued their central roles in alliance maintenance relative to more ordinary persons in a setting of joint community burial, and did, it would appear, from the high proportion of leaders compared to ordinary persons who gave gifts at this time. At the end of the sequence, a partial return to gatherings with smaller numbers of gift givers reflects the breakdown of an alliance in the central Scioto from a three-community network to a two-community network. Increased input from more ordinary persons relative to leaders at these ceremonies suggests an uncertainty in the ability of community leaders to negotiate alliances and some reversion to personal, dyadic social and economic means of building intercommunity alliances.

Over the course of this sequence, the ratio of nonshaman-like leaders to shaman-like leaders who gave gifts increased steadily. This trend indicates the development of institutionalized community leadership roles that at first bolstered then in part replaced, the more idiosyncratic ceremonial rites and leadership styles of shaman-like practitioners—a characterization of shaman that

has cross-cultural regularity. Such a standardizing of leadership positions and behaviors would be expected during times when alliance networks were intensifying, widening, and formalizing, and when the need for effective communication of intentions at multicommunity gatherings was increasing.

(6) The analogy of Ohio Hopewell mortuary rites within ceremonial centers to protohistoric and historic Huron and Algonkian Feasts of the Dead, summarized in Chapter 12 by Carr, seems to hold well in the Scioto valley for only the early center of Tremper. At Tremper, as many as 375 cremations were laid to rest together, co-mingled in four depository basins within a charnel house. Also, most of the 500 ceremonial artifacts found within the charnel house had been decommissioned together in a single depository, much as the human remains had been mixed. The cremations and artifacts most likely had been brought for ceremony and deposit by multiple communities, some located at quite a distance from each other, to judge by the diversity of artifact styles and chemical sourcing data (Weets et al., Chapter 14). Later Ohio Hopewell charnel houses do not evidence the mixing of cremations and in seem to have held fewer deceased.

The distinction of Tremper from later Scioto Hopewell ceremonial centers in the mixing of its human remains and in their larger number likely reflects changes in the alliance strategies used by Scioto Hopewell peoples over time. As summarized above, economic and social relations among individual agents were replaced to a considerable degree by economic, social, and political activities centralized through leaders. Early, at Tremper, social segments within a community and multiple communities integrated themselves by co-mingling the remains of many individuals who *in total* represented those segments or communities. Later, in the charnel houses of Hopewell Mound 25, Seip–Pricer, Edwin Harness, and Seip–Conjoined, intracommunity social segments and communities were integrated by gift giving among leaders, cooperative and/or competitive gift giving to the deceased by leaders, and joint burial of leaders as representatives of intracommunity groups and communities. These later alliance mechanisms produced smaller burial populations without an emphasis on co-mingling the remains of the deceased.

(7) At no time during the Middle Woodland were Ohio Hopewell societies run entirely by shaman-like practitioners or entirely by leaders of nonshaman-like character, such as war and peace chiefs, priests, Big Men, clan heads, and/or sodality heads. There was always a mix of shaman-like and nonshaman-like kinds of leaders, and this balance shifted over time, as indicated by the artifact compositions of burial assemblages and ceremonial deposits. The predominance of shaman-like leaders earlier in the Middle Woodland suggests the applicability of Netting's (1972) theory of the religious foundation for the rise of supralocal leadership over Sahlins' (1968, 1972) political–economic view (Carr 1998/1999). Netting proposed that religious identities gave local leaders a means to free themselves of their local identity and bridge to persons in other localities.

The roles taken by Ohio Hopewell shaman-like leaders and nonshaman-like leaders were, for the most part, highly segregated from each other in ceremonies held in mortuary contexts. Leaders of the two categories seldom both gave gifts at the numerous, small ceremonial gatherings of one to three gift givers, in both small mound centers and large earthwork–mound complexes. At the few gatherings of intermediate size, the leaders of the two social categories sometimes both gave gifts, but shaman-like leaders generally outnumbered nonshaman-like leaders by large margins. At the two largest gatherings, shaman-like and nonshaman-like leaders both gave gifts, but here, nonshaman-like leaders greatly outnumbered shaman-like leaders. The two kinds of leaders appear to have played complementary roles in ceremonies of intermediate and large size.

(8) The possible operation of multi-community sodalities in the central Scioto and Great Miami regions and the existence there of tribal organization in the broad sense encompassed by Fried (1968), Voss (1980, 1982), and Braun and Plog (1982), qualifying Service (1971), is suggested by the large, socially homogeneous gatherings of several kinds that met within a number of earthwork and mound ceremonial centers in these regions, and that left

large, compositionally uniform assemblages of ceremonial objects and status markers in burials and deposits there. The role-specialized social segments that comprised these gatherings in most instances came from different communities, and may have been responsible for different kinds of ceremonies, given their distinct social roles and associated paraphernalia. Breastplates and earspools were identified as probable sodality markers in Chapter 7. Other potential sodalities suggested here but requiring further investigation to confirm them here include societies of war or hunt diviners, other kinds of diviners, philosopher/cosmologists, and social personae marked by reel-shaped gorgets, panpipes, smoking pipes, and possibly bear and elk canines. Sodalities of these kinds recall the sacred pack organizations of historic Central Algonkians for warfare, hunting, sorcery, healing of the whole tribe in times of drought or illness, and those persons blessed by the same spirit.

The possible existence of a number of multicommunity sodalities among Scioto Hopewell peoples during the heart of the Middle Woodland calls into question an often-recited idea of Braun's (1977, 1986:123–125): that the ending of the large, flamboyant, ceremonial displays that we identify as Hopewell was caused by the rise of sodalities and tribal organization at the Middle Woodland–Late Woodland transition (see also Carr, Chapter 7).

(9) Winkelman's (1989, 1990, 1992) model of the changing nature of magicoreligious practitioners with increases in social complexity is a reasonable description of the shift that occurred from generalized shaman who performed diverse tasks during the terminal Archaic and Early Woodland in Ohio to a variety of specialized shaman-like practioners among whom the classic shamanic tasks were dispersed and segregated during the Middle Woodland. The large, socially homogeneous gatherings of each of several specialized kinds of shamanic practitioners evidenced in Ohio Hopewell grave assemblages and ceremonial deposits suggest this role segregation during the Middle Woodland. Many other forms of evidence of this role segregation are presented in Chapter 5, by Carr and Case.

(10) Our current, best understanding of the development of Scioto Hopewell social, political, and ceremonial organization through time, considering all available data, is that multicommunity alliances negotiated by leaders, institutionalized sodalities, and specialized magicoreligious practitioners and leaders whose positions were derived through the segregation of the roles of the classic, generalized shaman, all were developing hand-in-hand in the Scioto valley during the Middle Woodland period. It is likely that different, large, homogeneous burial assemblages and ceremonial deposits reflect either leader-orchestrated alliance ceremonialism or sodality ceremonialism, as different kinds of social structures. The particular assemblages and deposits that evidence one or the other of these social structures remains to be determined. This picture of development of social complexity among Scioto Hopewellian peoples is more multifaceted than the pathways to complexity presented by current, general anthropological models of sociopolitical evolution.

In conclusion, the studies of Hopewell gatherings made here stand in the intersection of scientific, historical, and humanistic approaches to understanding. Through finding people in the archaeological record and placing them within the walls of earthwork ceremonial grounds and charnel house chambers, by richly describing their numbers, social roles, and motives when gathering—by taking the personalized and locally contextualized approach of thick prehistory—the past has been humanized. The revealed, detailed elements of Hopewellian life and their change over time open the possibility of coming to know Hopewellian peoples to a degree in their own terms, of tracing their history of ceremony, social relations, and politics, and of placing this history within the comparative context of anthropological models of several kinds. It has not been our intent here to provide any single view of Hopewell peoples and life but, rather, a complex of perspectives that reflects the many strands of their humanness, and that intrigues the many strands of our own.

Acknowledgments: We heartily thank the Ohio Historical Society, the Chicago Field Museum of Natural History, the Peabody Museum of Archaeology and Ethnology, Harvard

University, and Hopewell Culture National Historical Park, the National Park Service, for allowing us to work with their artifact collections, field notes, and museum records. Our data on the artifact contents of graves and ceremonial deposits were the product of this work. Our personal thanks go to Martha Otto, Melanie Pratt, William Pickard, Cheryl Johnston, Jonathan Haas, Elisa Aguilar-Kutza, Wil Grewe-Mullins, Jon Eric Rogers, Gloria Greis, Penelope Drooker, Bret Ruby, John Neal, and Deborah Wood of these museums and agencies for facilitating our research there. D. Troy Case bore most of the burden of compiling and coding the database, with support from Ed Ritchie. The database management and statistical computer programming involved in our studies were gratefully provided by Ian Robertson and Melanie Schwandt. We appreciate Kitty Rainey's GIS work that resulted in Figure 13.1.

NOTES

1. Konigsberg's (1985) estimate of 133 persons for the community focused on the Seip earthworks seems roughly acceptable as the *average minimum* size for the Seip community and its neighboring communities. Konigsberg assumed that all the persons buried at the Seip–Pricer mound were members of the Seip community, alone, which "fed" the Seip–Pricer cemetery in one span of time. Although this mound now appears to have been a burial ground for members of three separate communities instead of one (Carr, Chapter 7), each community seems to have apportioned their dead fairly equitably among each other's cemeteries. This would imply that the burial population at Seip reflects the average size of the three communities, rather than the specific size of the Seip earthwork community, itself. The estimate must be considered a minimal population because it appears that Seip–Pricer and other large mounds that were the burial places for the three communities are biased somewhat in their social spectrum toward more important individuals. We do not know how many persons of lesser importance were disposed of elsewhere, nor where or how they were disposed of.
2. At the same time, not all Ohio field archaeologists would share Greber's simplification of the stratigraphic sequences of some of the earthen architecture she cites as only two stages of building (e.g., Prufer 1997:314–320; Riordon 1998:81). Greber, herself, earlier assessed the Edwin Harness mound to have been built up in likely four or more stages (Greber 1979a:28), and Seip–Pricer (Greber 1979b:41) as having been formed of several distinct layers.
3. Such attendance probably was fitting. It is likely that the two skeletons, 260 and 261, were accompanied by the two headplates found in their grave. Headplates mark a leadership role that was rare, possibly community-wide in domain of power, and probably more prestigious than the more numerous leadership roles and sodality memberships marked by celts and breastplates (Carr, Chapter 7).
4. The category "shaman-like leaders" includes persons marked by equipment certainly or probably used in the cross-culturally common shaman-like tasks of war or hunt divination, other forms of divination, the keeping of mythology and cosmology, healing, processing corpses and/or guiding of souls to an afterlife, leading public ceremonies, working with facinating raw materials, and trance induction, as well as other unidentified activities. "Nonshaman-like leaders and persons of high prestige" include probable society-wide leaders marked by plain metallic headplates or celts, sodality members or high achievers marked by metallic breastplates and earspools, and other distinguished social roles indicated by copper and mica crescents, reel-shaped gorgets, large communal pipes, and effigy human "trophy" parts. "Prestigious clan leaders" and more "ordinary clan members" are distinguished by metal or mica effigy animal power parts (e.g., jaws, teeth, talons) and by power parts of bone, respectively. "Prestigious personal roles" and "ordinary personal roles" are, respectively, taken to be marked by metallic items of personal adornment (e.g., necklaces, beads, buttons, hair skewer pins, bracelets) in contrast to their nonmetallic equivalents and utilitarian objects (e.g., hammerstones, atlatl, stone celts). The definition of these social categories from their diagnostic artifact types is described more fully in Case and Carr (n.d.) and Carr (Chapter 7).
5. Other details of the analysis are as follows. (a) Quantities of an artifact class that were described subjectively in publications and field reports were assigned conservative quantitative estimates (e.g., "several" = 3, "many" = 10, "a considerable number" = 10). (b) Cremations accompanying inhumations were not considered gifts, although they might have been. They were considered separate individuals in their own right. (c) Because our estimates of numbers of gift givers depend somewhat on the number of classes of items that are present, the estimates are somewhat sensitive to lumping and splitting of artifact classes. To grapple with this problem, we tried to develop classes that tended to occur one item or some other consistent number of items per individual when present. Typically, this meant splitting morphological categories by material type (e.g., celts of copper versus iron versus cannel coal, earspools of copper versus laminated silver). Exceptions to this practice include clan and personal clothing items (e.g., mica versus copper effigy power parts, buttons, beads, and pins), which were not separated by material type. These decisions were modeled after our observation that some necklaces were made of beads of multiple kinds of materials, yet constituted only single items.

6. In a more particular view, focusing on the small mound centers alone, the region of northeastern Ohio stands somewhat apart from other areas (Tables 13.8 and 13.9). The sites of Esch and North Benton in northeastern Ohio each are estimated to have had two or three gatherings with between 9 and 20 gift givers. This is double or more the estimated frequency and/or size of gatherings at other small sites in other regions. The reasons for this regional development are unclear. Northeastern Ohio Hopewellian communities were distinguished from those in the central Scioto valley by the social roles and importance had by women compared to men (Field et al., Chapter 9), by the material styles and social role associations of Hopewellian panpipes (Turff and Carr, Chapter 18), by the distant geographic locations from which their silver was derived (Spence and Fryer, Chapter 20), and by mortuary architecture and artifact categories and material styles (Magrath 1945; Seeman 1996:306–308, 312).
7. Table 13.14 lists, for each large grave assemblage or ceremonial deposit examined, the Best estimates of the numbers of gift givers of four general categories of social roles: (1) leaders without clear shaman-like markings, (2) shaman-like leaders, (3) persons in the role of the prestigious or ordinary individual, and (4) prestigious and ordinary clan members. Grave assemblages and deposits that are dominated by one numerous artifact type (e.g., cones, quartz or obsidian points, geometrics) systematically are dominated by the general category of social role indicated by that artifact, even when all artifact types in the assemblage, indicating a variety of other roles, are tallied. In almost no case do the combined amounts of small quantities of diverse artifact types indicating some alternative general category of social roles rival the counts of the general category including the one numerous artifact type. For example, Alter 2 of Hopewell Mound 25 (Table 13.3) has obsidian points and knives as its most frequent artifact class, which probably indicates shaman-like war or hunt divination, but also many other artifact classes at lower frequencies, which indicate other social roles. Nevertheless, shaman-like leaders remain the most frequent category of social role of gift giver tallied for the assemblage, being over twice as common as prestigious and ordinary individuals, 4 times more common than nonshaman-like leaders, and 13 times more common than persons marked as clan members. Only assemblages dominated by bear canines or other animal teeth and claws could not be verified quantitatively to represent specialized gatherings of a kind—in this case, clan members. For animal teeth and claws, this result reflects our inability to characterize across Ohio a typical number of teeth or claws associated with a person and, consequently, our tally of species present rather than the number of items. The table also shows that strings of pearl and/or shell beads marked nonshaman-like leaders much more frequently than other social roles, for the majority of grave assemblages and ceremonial deposits.

   The data in Table 13.14 also verify the identity of ceremonial deposits with diverse artifact assemblages as the result of gatherings of gift givers of many social roles. Both shaman-like and nonshaman-like leaders are found with frequency in the two assemblages of this kind, with nonshaman-like leaders being more common. More diverse social spectra for both deposits would have been found had the numbers of recovered items of certain classes been known, and had the number of items typically found per individual across Ohio been stable and usable for tallying numbers of gift givers of various social categories.

Gathering Hopewell

Society, Ritual, and Ritual Interaction

Edited by

CHRISTOPHER CARR

Arizona State University
Tempe, Arizona

and

D. TROY CASE

North Carolina State University
Raleigh, North Carolina

Kluwer Academic / Plenum Publishers

New York Boston London Dortrecht Moscow

Library of Congress Cataloging-in-Publication Data

Gathering Hopewell : society, ritual, and ritual interaction / edited by Christopher Carr and D. Troy Case.
p. cm.—(Interdisciplinary contributions to archaeology)
Includes bibliographical references and index.
ISBN 0-306-48478-1—ISBN 0-306-48479-X (pbk.)
1. Hopewell culture—Ohio. 2. Indians of North America—Ohio—Rites and ceremonies. 3. Indians of North America—Material culture—Ohio. 4. Indians of North America—Funeral customs and rites—Ohio. 5. Scioto River Valley (Ohio)—Antiquities. 6. Miami River Valley (Ohio)—Antiquities. I. Carr, Christopher, 1952-II. Case, D. Troy. III. Series.

E99.H69G38 2004
977.1′01

2003062064

The cover illustration is part of the painting *A Hopewell Indian Burial Ceremony* ©; reproduced by courtesy of the artist, Louis Glanzman, with our warm thanks. Borders are adapted from Gregory Perino (1968). Cover design by Christopher Carr; technical rendering by Deann Gates and Susanne van Dyne.

ISBN HB: 0-306-48478-1
PB: 0-306-48479-X

© 2005 by Kluwer Academic/Plenum Publishers, New York
233 Spring Street, New York, New York 10013

http:/www.kluweronline.com

10 9 8 7 6 5 4 3 2 1

A C.I.P record for this book is available from the Library of Congress.

All rights reserved

No part of this work may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording, or ortherwise, without written permission from the Publisher, with the exception of any material supplied specifically for the purpose of being entered and executed on a computer system, for exclusive use by the purchaser of the work.

Permissions for books published in Europe: permissions @ wkap.nl
Permissions for books published in the United States of America: permissions @wkap.com

Printed in the United States of America

Contents

Dedication to Stuart Struever **1**
Christopher Carr

I. GENERAL INTRODUCTION

1. The Gathering of Hopewell **19**
Christopher Carr and D. Troy Case

2. Historical Insight into the Directions and Limitations of Recent Research on Hopewell **51**
Christopher Carr

II. SOCIAL AND POLITICAL ORGANIZATIONS OF NORTHERN HOPEWELLIAN PEOPLES

3. Salient Issues in the Social and Political Organizations of Northern Hopewellian Peoples: Contextualizing, Personalizing, and Generating Hopewell **73**
Christopher Carr

4. Community Organizations in the Scioto, Mann, and Havana Hopewellian Regions: A Comparative Perspective **119**
Bret J. Ruby, Christopher Carr, and Douglas K. Charles

5. The Nature of Leadership in Ohio Hopewellian Societies: Role Segregation and the Transformation from Shamanism **177**
Christopher Carr and D. Troy Case

6. **The Question of Ranking in Havana Hopewellian Societies: A Retrospective in Light of Multi-cemetery Ceremonial Organization** 238
Christopher Carr

7. **The Tripartite Ceremonial Alliance among Scioto Hopewellian Communities and the Question of Social Ranking** 258
Christopher Carr

8. **Animal-Totemic Clans of Ohio Hopewellian Peoples** 339
Chad R. Thomas, Christopher Carr, and Cynthia Keller

9. **Gender, Status, and Ethnicity in the Scioto, Miami, and Northeastern Ohio Hopewellian Regions, as Evidenced by Mortuary Practices** 386
Stephanie Field, Anne Goldberg, and Tina Lee

10. **Gender and Social Differentiation within the Turner Population, Ohio, as Evidenced by Activity-Induced Musculoskeletal Stress Markers** 405
Teresa Rodrigues

11. **Gender, Role, Prestige, and Ritual Interaction across the Ohio, Mann, and Havana Hopewellian Regions, as Evidenced by Ceramic Figurines** 428
Cynthia Keller and Christopher Carr

III. RITUAL GATHERINGS OF NORTHERN HOPEWELLIAN PEOPLES

12. **Scioto Hopewell Ritual Gatherings: A Review and Discussion of Previous Interpretations and Data** 463
Christopher Carr

13. **Estimating the Sizes and Social Compositions of Mortuary-Related Gatherings at Scioto Hopewell Earthwork–Mound Sites** 480
Christopher Carr, Beau J. Goldstein, and Jaimin Weets

14. **Smoking Pipe Compositions and Styles as Evidence of the Social Affiliations of Mortuary Ritual Participants at the Tremper Site, Ohio** 533
Jaimin Weets, Christopher Carr, David Penney, and Gary Carriveau

15. **Ceramic Vessel Compositions and Styles as Evidence of the Local and Nonlocal Social Affiliations of Ritual Participants at the Mann Site, Indiana** 553
Bret J. Ruby and Christine M. Shriner

IV. HOPEWELLIAN RITUAL CONNECTIONS ACROSS EASTERN NORTH AMERICA

16. Rethinking Interregional Hopewellian "Interaction" **575**
Christopher Carr

17. Hopewellian Copper Celts from Eastern North America: Their Social and Symbolic Significance **624**
Wesley Bernadini and Christopher Carr

18. Hopewellian Panpipes from Eastern North America: Their Social, Ritual, and Symbolic Significance **648**
Gina Turff and Christopher Carr

19. Hopewellian Copper Earspools from Eastern North America: The Social, Ritual, and Symbolic Significance of Their Contexts and Distribution **696**
Katharine C. Ruhl

20. Hopewellian Silver and Silver Artifacts from Eastern North America: Their Sources, Procurement, Distribution, and Meanings **714**
Michael W. Spence and Brian J. Fryer

References **735**

List of Tables **779**

List of Figures **783**

List of Appendices on Compact Disk **787**

Index **791**

Compact Disk of Appendices .... **Inside Cover**

References

Abler, Thomas S., and Elisabeth Tooker
1978 Seneca. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 505–517. Smithsonian Institution, Washington, DC.

Abbott, David R.
1994 The Changing Face of the Community in the Mesa Verde Region A.D. 1000–1300. In *Proceedings of the Anasazi Symposium 1991*. Art Hutchinson and Jack E. Smith, eds. Pp. 83–98. Mesa Verde Museum Association, Mesa Verde National Park, Mesa Verde, CO.
2000 *Ceramics and Community Organization Among the Hohokam*. University of Arizona Press, Tucson.

Adams, William R.
1949 *Archaeological Notes on Posey County Indiana*. Indiana Historical Bureau, Indianapolis.

Ahler, Steven R.
1988 *Excavations at the Hansen Site in Northeastern Kentucky*. *Archaeological Research Report*, 173. University of Kentucky, Program for Cultural Resource Assessment.
1992 The Hansen Site (15Gp14): A Middle/Late Woodland Site Near the Confluence of the Ohio and Scioto Rivers. In *Cultural Variability in Context: Woodland Settlements of the Mid-Ohio Valley.* M. F. Seeman, ed. Pp. 30–40. Kent State University Press, Kent, OH.

Akins, Nancy J.
2001 Chaco Canyon Mortuary Practices: Archaeological Correlates of Complexity. In *Ancient Burial Practices in the American Southwest: Archaeology, Physical Anthropology, and Native American Perspectives.* D. R. Mitchell and J. L. Brunson-Hadley, eds. Pp. 167–190. University of New Mexico Press, Albuquerque.

Anderson, David G.
1998 Swift Creek in a Regional Perspective. In *A World Engraved: Archaeology of the Swift Creek Culture.* M. Williams and D. T. Elliott, eds. Pp. 274–300. University of Alabama Press, Tuscaloosa.

Anderson, James E.
1968 *The Serpent Mounds Site Physical Anthropology*. Royal Ontario Museum Art and Archaeology Occasional Paper 11.

Angel, J. Lawrence
1966a Porotic Hyperostosis, Anemias, Malarias, and the Marshes in the Prehistoric Eastern Mediterranean. *Science* 153:760–762.
1966b Early Skeletons from Tranquillity, California. *Smithsonian Contributions to Anthropology* 2(1):1–19.

Angel, J. Lawrence, J. O. Kelley, M. Parrington, and S. Pinter
1987 Life Stresses of the Free Black Community as Represented by the First African Baptist Church, Philadelphia, 1823–1841. *American Journal of Physical Anthropology* 74:213–229.

Angus, Charlie, and Brit Griffin
1996 *We Lived a Life and Then Some: The Life, Death, and Life of a Mining Town*. Between the Lines, Toronto.

Appadurai, A.
1986 Introduction: Commodities and the Politics of Value. In *The Social Life of Things: Commodities in Cultural Perspective.* A. Appadurai, ed. Pp. 3–63. Cambridge University Press, Cambridge.

Ariès, Philippe
1974 *Western Attitudes toward Death from the Middle Ages to the Present*. John Hopkins University Press, Baltimore.
1981 *The Hour of Our Death*. Alfred A. Knopf, New York.

Asch, David L.
1976 *The Middle Woodland Population of the Lower Illinois Valley: A Study in Paleodemographic Methods.* Scientific Papers, vol. 1. Northwestern Archeological Program, Evanston, IL.

Asch, David L., and Nancy B. Asch
1978 The Economic Potential of Iva annua and Its Prehistoric Importance in the Lower Illinois Valley. In *The Nature and Status of Ethnobotany.* Richard I. Ford, ed. Pp. 300–341. Anthropological Papers 67. Museum of Anthropology, University of Michigan, Ann Arbor.

1985a Archeobotany. In *Smiling Dan: Structure and Function at a Middle Woodland Settlement in the Illinois Valley.* B. D. Stafford and M. B. Sant, eds. Pp. 327–401. Research Series, vol. 2. Center for American Archeology, Kampsville, IL.

1985b Prehistoric Plant Cultivation in West–Central Illinois. In *Prehistoric Food Production in North America*. Richard I. Ford, ed. Pp. 149–203. Anthropological Papers, vol. 75. Museum of Anthropology, University of Michigan, Ann Arbor.

Asch, David L., Kenneth B. Farnsworth, and Nancy B. Asch

1979 Woodland Subsistence and Settlement in West-Central Illinois. In *Hopewell Archaeology: The Chillicothe Conference*. David S. Brose and N'omi Greber, eds. Pp. 80–85. Kent State University Press, Kent.

Atwater, Caleb

1820 Description of the Antiquities Discovered in the State of Ohio. *Transactions and Collections of the American Antiquarian Society* 1:109–251.

Aument, Bruce

1990 *Mortuary Variability in the Middle Big Darby Drainage of Central Ohio between 300* B.C. *and* A.D. *300*. Unpublished doctoral dissertation, Ohio State University.

Aument, B. W., K. Gibbs, A. Ericksen, and M. J. Giesen

1991 *Phase III and IV Data Recovery Survey of 33 Fr 895 and 33 Fr 901 on the Wal-Mart Property in Grove City, Franklin County, Ohio.* Archaeological Services Consultants, Columbus, OH.

Baby, Raymond S.

1954 Hopewell Cremation Practices. *Papers in Archaeology*, 1. Ohio Historical Society, Columbus, OH.

1956 A Unique Hopewellian Mask-Headdress. *American Antiquity* 21(3):303–304.

Baby, Raymond S., and James A. Brown

1966 Mound City Revisited. Ohio Historical Center, Columbus, unpublished MS.

Baby, Raymond S., and Suzanne M. Langlois

1977 *Archaeological Investigations at Seip Mound State Memorial 1971–1974, 1975, 1976*. Ohio Historical Center. Unpublished Archaeological Completion Report.

1979 Seip Mound State Memorial: Nonmortuary Aspects of Hopewell. *In* Hopewell Archaeology: The Chillicothe Conference. D. S. Brose and N. Greber, eds. Pp. 16–18. Kent State University Press, Kent, Chillicothe, OH.

Bacon, Willard S.

1993 Factors in Siting a Middle Woodland Enclosure in Middle Tennessee. *Midcontinental Journal of Archaeology* 18(2):245–281.

Barbeau, C. Marius

1914 Supernatural Beings of the Huron and Wyandot. *American Anthropologist* 16(2):288–313.

1952 The Old World Dragon in America. In *Indian Tribes of Aboriginal America, Selected Papers of the 29th Congress of Americanists.* Sol Tax, ed. Cooper Square, New York.

Barnouw, Victor

1977 *Wisconsin Chippewa Myths and Tales and Their Relation to Chippewa Life*. University of Wisconsin Press, Madison.

Barth, Fredrik, ed.

1969 *Ethnic Groups and Boundaries: The Social Organization of Culture Difference*. Little, Brown, Boston.

Basilov, N. M.

1978 Vestiges of Transvestitism in Central-Asian Shamanism. In *Shamanism in Siberia*. V. Dioszegi and M. Hoppal, eds. S. Simon, trans. Pp. 281–289. Akademiai, Budapest.

Basmajian, J. V., and C. J. De Luca

1985 *Muscles Alive: Their Functions Revealed by Electromyography*, 5th ed. Williams and Wilkins, Baltimore, MD.

Basso, Keith H.

1969 Western Apache Witchcraft. Anthropological Papers, 15. University of Arizona, Tucson.

1990 *Western Apache Language and Culture.* University of Arizona Press, Tucson.

1996 *Wisdom Sits in Places*. University of New Mexico Press, Albuquerque.

Bastian, Tyler

1961 Trace Element and Metallographic Studies of Prehistoric Copper Artifacts in North America: A Review. In Lake Superior Copper and the Indians: Miscellaneous Studies of Great Lakes Prehistory. James B. Griffin, ed. Pp. 151–175. *Anthropological Papers*, 17, University of Michigan, Museum of Anthropology, Ann Arbor.

Beck, Lane A.

1990 Redefining Copena: A Regional Analysis of Mortuary Patterns in "Southern Hopewell." Unpublished doctoral dissertation, Northwestern University.

1995a *Regional Approaches to Mortuary Analysis*. Plenum Press, New York.

1995b Regional Cults and Ethnic Boundaries in "Southern Hopewell." In Regional Approaches to Mortuary Analysis. L. Beck, ed. Pp. 167–187. Plenum Press, New York.

Befu, Harumi, and Leonard Plotnicov

1962 Types of Corporate Unilineal Descent Groups. *American Anthropologist* 64(2):313–327.

Belmont, John S., and Stephen Williams

1981 Painted Pottery Horizons in the Southern Mississippi Valley. *Geoscience and Man* 22:19–42.

Bellrose, Frank Chapman

1976 *Ducks, Geese and Swans of North America*. 2nd edition. Stackpole Books, Harrisburg, PA.

Bendann, E.

1930 *Death Customs: An Analytical Study of Burial Rites*. Knopf, New York.

Bender, Barbara
1978 Gatherer-Hunter to Farmer: A Social Perspective. *World Archaeology* 10(2):204–222.
1985 Emergent Tribal Formations in the American Midcontinent. *American Antiquity* 50(1):52–62.

Bender, M. M., D. A. Baerreis, and R. L. Steventon
1981 Further Light on Carbon Isotopes and Hopewell Agriculture. *American Antiquity* 46:346–353.

Bennett, John
1944 Hopewellian in Minnesota. *American Antiquity* 9(3):336.

Benson, S. L.
1986 *Activity-Induced Pathology in a Puebloan Population: Grasshopper, Arizona.* Unpublished Master's thesis, Arizona State University.

Bentham, Jeremy
1789 *In Introduction to the Principles of Morals and Legislation*. 1907 edition. Clarendon Press, Oxford.

Bentley, G. Carter
1987 Ethnicity and Practice. *Comparative Studies in Society and History* 29:24–55.
1991 Response to Yelvington. *Comparative Studies in Society and History* 33(1):169–175.

Bernardini, Wesley
1999 Labor Mobilization and Community Organization: Ohio Hopewell Geometric Earthworks. Paper presented at the Annual Meeting of the Society for American Archaeology, Chicago, IL.
2004 Hopewell Geometric Earthworks: A Case Study in the Referential and Experiential Meaning of Monuments. *Journal of Anthropological Archaeology* 23:331–356.

Binford, Lewis R.
1964a A Consideration of Archaeological Research Design. *American Antiquity* 29:425–441.
1964b Archaeological Investigations on Wassam Ridge. Archaeological Salvage Report 17. Southern Illinois University Museum, Carbondale.
1971 Mortuary Practices: Their Study and Their Potential. *In Approaches to the Social Dimensions of Mortuary Practices.* J. A. Brown, ed. Pp. 6–29. *Memoirs of the Society for American Archaeology*, vol. 25. SAA, Washington, DC.
1972 Model Building—Paradigms, and the Curent State of Paleolithic Research. In *An Archaeological Perspective.* L. Binford, ed. Pp. 244–294. Seminar Press, NewYork.
1980 Willow Smoke and Dogs' Tails: Hunter-Gatherer Settlement Systems and Archaeological Site Formation. *American Antiquity* 45(1):4–20.

Bird, Traveller
1971 *Tell Them They Lie: The Sequoyah Myth.* Westernlore Publishers, Los Angeles.

Birdsell, J.
1968 Some Predictions for the Pleistocene Based on Equilibrium Systems for Recent Hunter-Gatherers. In *Man the Hunter.* R. B. Lee and I. DeVore, eds. Pp. 229–240. Aldine, Chicago.

Black, Deborah B.
1979 Adena and Hopewell Relations in the Lower Hocking Valley. In *Hopewell Archaeology: The Chillicothe Conference.* D. S. Brose and N. Greber, eds. Pp. 19–26. Kent State University Press, Kent, OH.

Black, Glenn A.
1941 Cultural Complexities of Southwestern Indiana. *Proceedings of the Indiana Academy of Science* 50:33–35.
n.d. Hopewellian in Indiana. Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, unpublished MS.

Black, Glenn A., and William R. Adams
1947 Archaeology of Posey County, Indiana. Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, unpublished MS.

Blakely, Robert L.
1977 Sociocultural Implications of Demographic Data from Etowah, Georgia. In *Sociocultural Adaptation in Prehistoric America.* R. L. Blakely, ed. Pp. 45–66. *Proceedings of the Southern Anthropological Society*, vol. 11. University of Georgia Press, Athens.

Blanton, Richard E., Gary M. Feinman, Stephen A. Kowalewski, and Peter N.
Peregrine
1996 A Dual-Processual Theory for the Evolution of Medsoamerican Civilization. *Current Anthropology* 37:1–14.

Blau, Peter M.
1970 A Formal Theory of Differentiation in Organizations. *American Sociological Review* 35(2):201–218.

Blitz, John H.
1986 The McRae Mound: A Middle Woodland Site in Southeastern Mississippi. *Mississippi Archaeology* 21(2):11–39.

Bloch, Maurice
1971 *Placing the Dead*. Seminar Press, New York.
1978 The Disconnection between Power and Rank as a Process: An Outline of the Development of Kingdoms in Central Madagascar. In *The Evolution of Social Systems.* J. Friedman and M. J. Rowlands, eds. Pp. 303–340. University of Pittsburgh Press, Pittsburgh.

Boehm, Christopher
1993 Egalitarian Behavior and Reverse Dominance Hierarchy. *Current Anthropology* 34(3):227–254.

Bohannan, Paul
1955 Some Principles of Exchange and Investment among the Tiv. *American Anthropologist* 57:60–70.

Bohannon, Charles
1972 *Excavation of the Pharr Mounds, Prentiss and Itawamba Counties, Mississippi*. U.S. Department of the Interior, National Parks Service, Office of Archaeology and Historic Preservation, Division of Archaeology and Anthropology.

Bostwick, Todd W.
2001 North American Indian Agriculturalists. In *Handbook of Rock Art Research*. D. S. Whitley, ed. Pp. 414–458. AltaMira Press, Walnut Creek, CA.

2002 *Landscapes of the Spirits: Hohokam Rock Art at South Mountain Park*. University of Arizona Press, Tucson.

Bourdieu, Pierre

1977 *Outline of a Theory of Practice*. R. Nice, trans. Cambridge University Press, Cambridge, UK.

1984 *Distinction: A Social Critique of the Judgement of Taste*. Harvard University Press, Cambridge, MA.

1990 *The Logic of Practice*. R. Nice, trans. Polity Press, Cambridge, UK.

Bourdieu, Pierre, and Jean-Claude Passeron

1977 *Reproduction in Education, Society, and Culture*. Sage, London. (orig. 1970)

1979 *The Inheritors: French Students and Their Relations to Culture*. University of Chicago Press, Chicago.

1983 The Field of Cultural Production, or: The Economic World Reversed. *Poetics* 12:311–356.

Bourne, E. G., ed.

1904 *Narratives of the Career of Hernando DeSoto*. 2 vol. A. S. Barnes, New York.

Brandt, Elizabeth

1979 Sandia Pueblo. In *Handbook of North American Indians*. vol. 9. Southwest. A. Ortiz, ed. Pp. 343–350. Southwest. Smithsonian Institution, Washington, DC.

Braun, David P.

1977 *Middle Woodland–Early Woodland Social Change in the Prehistoric Central Midwestern U.S*. Unpublished doctoral dissertation, University of Michigan.

1979 Illinois Hopewell Burial Practices and Social Organizaton: A Re-examination of the Klunk-Gibson Mound Group. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 66–79. Kent State University Press, Kent, OH.

1981 A Critique of Some Recent North American Mortuary Studies. *American Anthropologist* 46:398–416.

1985 Ceramic Decorative Diversity and Illinois Woodland Regional Integration. In *Decoding Prehistoric Ceramics*, B. A. Nelson, ed. Pp. 128–153. Southern Illinois University Press, Carbondale.

1986 Midwestern Hopewellian Exchange and Supralocal Interaction. In *Peer Polity Interaction and Socio-Political Change*. C. Renfrew and J. F. Cherry, eds. Pp. 117–126. Cambridge University Press, Cambridge.

1991 Why Decorate a Pot? Midwestern Household Pottery, 200 B.C.–A.D. 600. *Journal of Anthropological Archaeology* 10:360–397.

1995 Style, Selection, and Historicity. In *Style, Society, and Person: Archaeological and Ethnological Perspectives*. C. Carr and J. E. Neitzel, eds. Pp. 124–141. Plenum Press, New York.

Braun, David P., and Stephen Plog

1982 Evolution of 'Tribal' Social Networks: Theory and Prehistoric North American Evidence. *American Antiquity* 47:504–525.

Braun, David P., James B. Griffin, and Paul F. Titterington

1982 *The Snyders Mounds and Five Other Mound Groups in Calhoun County, Illinois*. Museum of Anthropology, Technical Report 13. University of Michigan, Ann Arbor.

Brettel, Caroline B., and Carolyn Sargent, eds.

2001 *Gender in Cross-Cultural Perspective*. 3rd edition. Prentice Hall, Upper Saddle River, NJ.

Brockman, C. Scott

1998 Physiographic Regions of Ohio. Map. Ohio Department of Natural Resources, Division of Geological Survey, Columbus. Electronic document. http://www.dnr.state.oh.us/geosurvey/gen/map/physio.htm. Retrieved January 28, 2002.

Brose, David S.

1976 An Historical and Archaeological Evaluation of the Hopeton Works, Ross County, Ohio. Report submitted to the National Park Service in fulfillment of Contract PX-6115-6-0141. On file, Hopewell Culture National Historical Park.

1979a A Speculative Model of the Role of Exchange in the Prehistory of the Eastern Woodlands. In *Hopewell Archaeology: The Chillicothe Conference*. David S. Brose and N'omi Greber, eds. Pp. 3–8. Kent State University Press, Kent, OH.

1979b An Interpretation of the Hopewellian Traits in Florida. In *Hopewellian Archaeology: The Chillicothe Conference*. D. Brose and N. Greber, eds. Pp. 141–149. Kent State University Press, Kent, OH.

1985 The Woodland Period. In *Ancient Art of the American Woodland Indians*. D. S. Brose, J. A. Brown, and D. Penney, eds. Pp. 43–92. Harry Abrams, New York.

1990 Toward a Model of Exchange Values for the Eastern Woodlands. *Mid-Continental Journal of Archaeology* 15(1):100–136.

Brose, David, James A. Brown, and David W. Penney

1985 *Ancient Art of the American Woodland Indians*. Harry Abrams, New York.

Brown, Charles E.

1939 Myths, Legends and Superstitions about Copper. *The Wisconsin Archaeologist (New Series)* 20(2):35–40.

Brown, Ian

1989 The Calumet Ceremony in the Southeast and Its Archaeological Manifestations. *American Antiquity* 54(2):311–331.

Brown, James A.

n.d. The Shamanic Element in Hopewellian Period Ritual. In *Recreating Hopewell: New Perspectives on Middle Woodland in Eastern North America*. D.K. Charles and J.E. Buikstra, eds. Book in progress.

1971 The Dimensions of Status in the Burials at Spiro. In Approaches to the Social Dimensions of Mortuary Practices. J. A. Brown, ed. Pp. 92–112. *Society for American Archaeology Memoirs*, vol. 25. SAA, Washington, DC.

1975 Spiro Art and Its Mortuary Contexts. In *Death and the Afterlife in Pre-Columbian America.* E. P. Benson, ed. Dunbarton Oaks Research Library and Collections, Washington, DC.

1976 The Southern Cult Reconsidered. *Midcontinental Journal of Archaeology* 1(2):115–135.

1979 Charnel Houses and Mortuary Crypts: Disposal of the Dead in the Middle Woodland Period. In *Hopewell Archaeology: The Chillicothe Conference.* D. S. Brose and N. Greber, eds. Pp. 211–219. Kent State University Press, Kent, OH.

1981 The Search for Rank in Prehistoric Burials. In *The Archaeology of Death.* R. Chapman, I. Kinnes, and K. Randsborg, eds. Pp. 25–37. Cambridge University Press, Cambridge.

1982 Mound City and the Vacant Ceremonial Center. Paper presented at the Annual Meetings of the Society for American Archaeology, Minneapolis, MN.

1994 Inventory and Integrative Analysis: Excavations of Mound City, Ross County, Ohio: Overview of Archaeological Investigations of the Mound City Group National Monument. Report to the National Park Service. On file at the Hopewell Culture National Historical Park.

1997a Lecture on Mound City and Hopewell Archaeology. Hopewell Culture National Historical Park, Chillicothe, OH.

1997b Comment on "Ceremonial Centres from the Cayapas (Esmeraldas, Equador) to Chillicothe (Ohio, USA)" by Warren R. DeBoer. *Cambridge Archaeological Journal* 7(2):225–253.

Brown, James A., R.A. Kerber, and Howard D. Winters

1990 Trade and the Evolution of Exchange Relations at the Beginning of the Mississippian Period. In *The Mississippian Emergence*. B.D. Smith, ed. Pp. 251–280. Smithsonian Institution Press, Washington, D.C.

Brown, James A., and James B. Stoltman

1992 Hopewellian Ceramic Sourcing with Thin-Section Analysis at Mound City, Ohio. Paper presented at the 37th Midwest Archaeological Conference, Grand Rapids, MI.

Brown, Judith K.

1970 Economic Organization and the Position of Women among the Iroquois. *Ethnohistory* 17:151–167.

Brumfiel, Elizabeth M.

1991 Weaving and Cooking: Women's Production in Aztec Mexico. In *Engendering Archaeology: Women and Prehistory.* J. M. Gero and M. W. Conkey, eds. Pp. 224–251. Oxford University Press, Oxford.

1994 Ethnic Groups and Political Development in Ancient Mexico. In *Factional Competition and Political Development in the New World.* E. M. Brumfiel and J. W. Fox, eds. Pp. 89–102. Cambridge University Press, Cambridge.

Buikstra, Jane E.

1972 Hopewell in the Lower Illinois River Valley: A Regional Approach to the Study of Biological Variability and Mortuary Activity. Unpublished doctoral dissertation, University of Chicago.

1974 Cultural Dimensions of Archeological Study: A Regional Perspective. Paper presented at the Annual Meetings of the Society for American Archaeology, Washington, DC.

1976 Hopewell in the Lower Illinois valley: A Regional Study of Human Biological Variability and Prehistoric Mortuary Behavior. *Northwestern University Archeological Program Scientific Papers*, 2. Northwestern Archeological Program, Evanston, IL.

1977 Biocultural Dimensions of Archeological Study: A Regional Perspective. *In* Sociocultural Adaptation in Prehistoric America. R. Blakely, ed. Pp. 67–83. *Proceedings of the Southern Anthropological Society*, vol. 11. University of Georgia, Athens.

1979 Contributions of Physical Anthropologists to the Concept of Hopewell: A Historical Perspective. In *Hopewell Archaeology: The Chillicothe Conference.* D. S. Brose and N. Greber, eds. Pp. 220–233. Kent State University Press, Kent, OH.

Buikstra, Jane E., and Douglas K. Charles

1999 Centering the Ancestors: Cemeteries, Mounds, and Sacred Landscapes of the Ancient North American Midcontinent. In *Archaeologies of Landscape: Contemporary Perspectives.* W. Ashmore and A. B. Knapp, eds. Pp. 201–228. Blackwell, Malden, MA.

n.d. Middle Woodland Monuments in the Lower Illinois Valley: Time, Traditions, and Transformations. In *Recreating Hopewell: New Perspectives on Middle Woodland in Eastern North America*. D.K. Charles and J. E. Buikstra, eds. Book in progress.

Buikstra, Jane E., and Douglas H. Ubelaker

1994 Standards for Data Collection from Human Skeletal Remains. Arkansas *Archaeological Survey Research Series*, 44. Arkansas Archeological Survey, Fayetteville.

Buikstra, Jane E., Douglas K. Charles, and Gordon F. M. Rakita

1998 Staging Ritual: Hopewell Ceremonialism at the Mound House Site, Greene County, Illinois. *Studies in Archeology and History*, 1. Center for American Archaeology, Kampsville, IL.

Bullard, W. R.

1962 Settlement and social structure in the southern Mayan lowlands during the Classic period. In *Ancient Mesoamerica*, J. Graham, ed. Pp. 137–145.

Bullen, Ripley

1951 The Terra Ceia Site, Manatee County, Florida. Florida Anthropological Society Publication No. 3. Graves Museum of Archaeology and Natural History, Dania Beach, FL.

1953 The Famous Crystal River Site. *Florida Anthropologist* 6:9–37.

Bullington, Jill

1988 Middle Woodland Mound Structure: Social Implications and Regional Context. *In* The Archaic

and Woodland Cemeteries at the Elizabeth Site in the Lower Illinois Valley. D. K. Charles, S. R. Leigh and J. E. Buikstra, eds. Pp. 218–241. *Kampsville Archeological Center Research Series*, 7. Kampsville, IL.

Bumstead, M. P., J. E. Booker, R. M. Barnes, T. W. Boutton, G. J. Armelagos, J. C. Lerman, and K. Brendel
1990 Recognizing Women in the Archaeological Record. *In* Powers of Observation: Alternative Views in Archaeology. S. M. Nelson and A. B. Kehoe, eds. Pp. 89–101. *Archaeological Papers of the American Anthropological Association.* AAA, Washington, DC.

Burkett, Frank N.
1997 Kings, Clouds, Birds, and Ears: Reflections on the Decorated Leather Objects from the Mt. Vernon Site. In *Hopewell in Mt. Vernon: A Study of the Mt. Vernon Site (12-PO-885)*. Pp. 265–275. General Electric, Mt. Vernon, IN.

Burks, Jarrod, and William S. Dancey
1999 The Strait Site: A Middle to Late Woodland Settlement in Central Ohio. Electronic document. http://www.ohioarchaeology.org/burks_1999.html. Retrieved July 6, 2003.

Burks, Jarrod, and Jennifer Pederson
1999 From Secular to Sacred: A Comparison of Occupation Debris from Middle Woodland Habitation and Earthwork Sites in Central Ohio. Paper presented at the Annual meeting of the Midwest Archaeological Conference, East Lansing, MI.
2000 An Update on Non-Mound Debris Studies at Hopewell Mound Group (33Ro27), Ross County, Ohio. Paper presented at the Joint Midwest Archaeological and Plains Conference, St. Paul, MN.

Burks, Jarrod, Jennifer Pederson, and Dawn Walter
2002 Hopewell Land Use Patterns at Hopeton Earthworks. Paper presented at the Annual Meeting of the Society for American Archaeology, Denver, CO.

Burton, M. L., L. A. Brudner, and D. R. White
1977 A Model of the Division of Labor by Sex. *American Ethnologist* 4:227–251.

Bush, David R., Frank J. Cantelas, and Jare Cardinal
1989 The Phase II Cultural Resource Report for the Proposed PIK-SR 32-13.55 Project in Pike County, Ohio—Final, Revised June 11, 1989. Archaeology Laboratory, Case Western Reserve University, Department of Anthropology, Cleveland, unpublished MS.

Bush, David R., Judith E. Thomas, Mark A. Kollecker, and Michael Simons
1992 The Phase III Investigations for the Proposed PIK_SR 32-13.55 Project in Pike County, Ohio—Final Draft. Archaeology Laboratory, Case Western Reserve University, Department of Anthropology, Cleveland, unpublished MS.

Butler, Brian M.
1968 Copena: A Re-evaluation. University of Tennessee, Knoxville, unpublished MS.
1979 Hopewellian Contacts in Southern Middle Tennessee. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 150–156. Kent State University Press, Kent, OH.

Byers, Martin
1996 Social Structure and the Pragmatic Meaning of Material Culture: Ohio Hopewell as Ecclesistic-Communal Cult. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology*, P. J. Pacheco, ed. Pp. 174–192. Kent State University Press, Kent, OH.

Cadiente, Teresa L.
1998 Musculoskeletal Stress Markers (MSM) and Social Differentiation: A Comparison of Hopewellian and Fort Ancient Peoples of Ohio. Unpublished master's thesis, Arizona State University.

Cadiente, Teresa L., and Bethel L. Nagy
1998 Activity-Related Sexual Dimorphism and Prehistoric Subsistence Strategies in the American Midwest. Paper presented at the Annual Meeting of the American Association of Physical Anthropologists.

Calais-Germain, B.
1993 *Anatomy of Movement*. Eastland Press, Seattle.

Caldwell, Joseph R.
1955 Interaction Spheres in Prehistory. *Illinois State Museum Scientific Papers* XII(6): 133–156.
1958 Trend and Tradition in the Prehistory of the Eastern United States. *American Anthropological Association Memoirs*, 88. AAA Springfield, IL.
1964 Interaction Spheres in Prehistory *In* Hopewellian Studies. J. Caldwell and R. Hall, eds. Pp. 133–143. *Scientific Papers*, 12(2). Illinois State Museum, Springfield.
n.d. Unpublished field notes on excavation at the Twenhofel site. Illinois State Museum, Springfield.

Callender, Charles
1962 Social Organization of the Central Algonkian Indians. *Publications in Anthropology*, 7. Milwaukee Public Museum, Milwaukee, WI.
1978a Great Lakes–Riverine Sociopolitical Organization. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 610–621. Smithsonian Institution Press, Washington, DC.
1978b The Fox. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 636–647. Smithsonian Institution Press, Washington, DC.
1978c The Shawnee. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 622–635. Smithsonian Institution Press, Washington, DC.
1978d The Sauk. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 648–655. Smithsonian Institution Press, Washington, DC.
1979 Hopewell Archaeology and American Ethnology. In *Hopewell Archaeology: The Chillicothe Conference*.

D. S. Brose and N. Greber, eds. Pp. 254–257. Kent State University Press, Kent, OH.

1994 Central Algonkian Moieties. In *North American Indian Anthropology: Essays on Society and Culture*. R. J. DeMallie and A. Ortiz, eds. Pp. 108–124. University of Oklahoma Press, Norman.

Callender, Charles, Richard K. Pope, and Susan M. Pope

1978 Kickapoo. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 656–667. Smithsonian Institution Press, Washington, DC.

Cannon, Aubrey

1989 The Historical Dimension in Mortuary Expressions of Status and Sentiment. *Current Anthropology* 30(4):437–447.

Canuto, Marcello A., and Jason Yaeger, eds.

2000 *The Archaeology of Communities: A New World Perspective*. Routledge, London/New York.

Capasso, Luigi, K. A. R. Kennedy, and C. A. Wilczek

1999 Atlas of Occupational Markers in Human Remains. *Journal of Paleontology, Monograph Publication 3*. Edigrafital S.p.A., Taramo, Italy.

Carithers, Michael, Steven Collins, and Steven Lukes, eds.

1985 *The Category of the Person*. Cambridge University Press, Cambridge, UK.

Carpenter, Edmund

1956 Irvine, Cornplanter and Corydon Mounds, Warren County, Pennsylvania. *Pennsylvania Archaeologist* 26:89–115.

Carr, Christopher

1982a A Functional and Distributional Study of Surface Artifacts from the Crane Site. In *Soil Resistivity Surveying*. Pp. 183–351. Center for American Archaeology, Evanston, IL.

1982b *Soil Resistivity Surveying*. Center for American Archaeology, Evanston, IL.

1984 The Nature of Organization of Intrasite Archaeological Records and Spatial Analytic Approaches to Their Investigation. In *Advances in Archaeological Method and Theory*. Pp. 103–222. Academic Press, New York.

1985 Getting into Data: Philosophy and Tactics for the Analysis of Complex Data Structures. In *For Concordance in Archaeological Analysis: Bridging Data Structure, Quantitative Technique, and Theory*. C.Carr, ed. Pp. 18–44. Westport Publishers, Kansas City, MO.

1991 Left in the Dust: Contextutal Information in Model-Focused Archaeology. In *The Interpretation of Spatial Patterns within Stone Age Archaeological Sites*. T.D. Price and E.M. Kroll. eds. Pp. 221–256. Plenum Publishers, New York.

1992a Modeling the Evolution of Alliance Strategies as Systems Regulators in Egalitarian Societies. In *Reports for 1990 and 1991: Fifteenth Anniversary Issues*. P. 147. Wenner–Gren Foundation for Anthropological Research, New York.

1992b Ohio Hopewell Household Integration and Ceramic Exchange. Paper presented at the 37th Midwest Archaeological Conference, Grand Rapids, MI.

1995a A Unified Middle-Range Theory of Artifact Design. In *Style, Society, and Person: Archaeological and Ethnological Perspectives*. C. Carr and J. Neitzel, eds. Pp. 171–258. Plenum Press, New York.

1995b Mortuary Practices: Their Social, Philosophical-Religious, Circumstantial, and Physical Determinants. *Journal of Archaeological Method and Theory* 2(2):105–200.

1997 Adena Tablets and Reel-Shaped Gorgets Revisited: Continuity and Change in Ohio and Eastern Woodlands Indian Cosmology. Paper presented at the Ohio Archaeological Council, Chillicothe, OH.

1998 An Overview of Some Essential World View Themes and Specific Beliefs Expressed in Ohio Hopewell Art and Burial Practices. Paper presented at the Annual Midwest Archaeological Conference, Muncie, IN.

1998/1999 *Reconstructing the Cosmology of Prehistoric Ohio Hopewell Peoples, and Its Role in the Development of Supralocal Leadership (50* B.C.–A.D. *350)*. Wenner–Gren Foundation for Anthropological Research, Biennial Report for 1998–1999. Wenner-Gren, New York.

1999a Continuity and Change in the Representation, Use, and Meaning of the World Axis in Pre-Contact, Eastern Woodlands Material Culture. Paper presented at the Biennial Meeting of the Native American Art Studies Association, Victoria, B.C., Canada.

1999b The Adena Tablets of Ohio, Kentucky, and West Virginia: Continuity and Change in the Cosmology of Woodland Native Americans. Paper presented at the Annual Meeting of the Society for American Archaeology, Chicago, IL.

2000a Ohio Hopewellian Cosmology and Art. Paper presented at the Tenth Annual Woodland Conference, sponsored by the Museums at Prophetstown and Hopewell Culture National Historical Park, National Park Service, Chillicothe, OH.

2000b Ohio Hopewellian Cosmology and Its Material, Symbolic Representations. Paper presented at Perspectives on Middle Woodland at the Millenium, Center for American Archaeology, Pere Marquette Park, IL.

2000c Development of High-Resolution, Digital, Color and Infrared Photographic Methods for Preserving Imagery on Hopewellian Copper Artifacts. Funded grant proposal to the National Park Service, National Center for Preservation Technology and Training, Natchitoches, LA.

2000d Artworks on Ohio Hopewellian Copper Artifacts. Paper presented at the Annual Meeting of the Society for American Archaeology, Philadelphia, PA.

n.d. Possible Social Roles in Which Ohio Hope-wellian Artifact Classes Were Used. *In* The Ohio

Hopewell Mortuary Record: An Archaeological and Bioarchaeological Inventory. D. T. Case and C. Carr, eds. Manuscript in progress.
Carr, Christopher, and D. Troy Case
1995 Ohio Hopewell Cosmology, Beliefs, and Their Symbols. Paper presented at the Annual Meeting of the Southeastern Ceremonial Complex Study Group, Maya Meetings, University of Texas, Austin.
1996 Souls in Flight: World View and Images of the Ohio Hopewell, 150 B.C.–A.D. 350. Paper presented at the Annual Meeting of the Society for American Archaeology, New Orleans, LA.
Carr, Christopher, and Beau J. Goldstein
n.d. Functional Assignments of Ohio Hopewellian Artifacts. *In* The Ohio Hopewell Mortuary Record: An Archaeological and Bioarchaeological Inventory. D. T. Case and C. Carr, eds. Manuscript in progress.
Carr, Christopher, and Herbert Haas
1996 Beta-Count and AMS Radiocarbon Dates of Woodland and Fort Ancient Period Occupations in Ohio, 1350 B.C.–A.D. 1650. *West Virginia Archaeologist* 48(1, 2):19–36.
Carr, Christopher, and Kathryn King
n.d. Morphological data on Hopewellian copper earspools from the Southeastern United States. On file with C. Carr, Department of Anthropology, Arizona State University, Tempe.
Carr, Christopher, and Jean-Christophe Komorowski
1995 Identifying the Mineralogy of Rock Temper in Ceramics Using X-Radiography. *American Antiquity* 60(4):723–749.
Carr, Christopher, and Andrew D. W. Lydecker
1998 Exploring the Possibility of Artwork on Ohio Hopewell Copper Artifacts (ca. 50 B.C.–A.D. 350) with High-Resolution Digital Photography, Image Enhancement, and Electron Microprobe Chemical Analysis. Unpublished final report to Eastern National Parks and Monuments Association. On file at Hopewell Culture National Historical Park, Chillicothe, and Ohio Historical Center, Columbus.
Carr, Christopher, Andrew D. W. Lydecker, Douglas Pride, Steven Hoffman, Jeffery A. Colwell, and John Mitchell
2000 Artworks on Ohio Hopewell Copper Artifacts. Paper presented at the annual meeting of the Society for American Archaeology, Philadelphia, PA, April.
Carr, Christopher, and Robert F. Maslowski
1995 Cordage and Fabrics: Relating Form, Technology, and Social Processes. In *Style Society, and Person: Archaeological and Ethnological Perspectives*. Pp. 297–343. Plenum Press, New York.
Carr, Christopher, and Jill E. Neitzel
1995a Integrating Approaches to Material Style in Theory and Philosophy. In *Style, Society, and Person*. C. Carr and J. E. Neitzel, eds. Pp. 3–29. Plenum, New York.
1995b Future Directions for Material Style Studies. In *Style, Society, and Person: Archaeological and Ethnological Perspectives*. C. Carr and J. E. Neitzel, eds. Pp. 437–459. Plenum Press, New York.
1995c Style in Complex Societies. In *Style, Society, and Person: Archaeological and Ethnological Perspectives*. C. Carr and J. Neitzel, eds. Pp. 389–392. Plenum Press, New York.
Carr, Christopher, and Derek Sears
1985 Toward an Analysis of the Exchange of Meteoritic Iron in the Middle Woodland. *Southeastern Archaeology* 4(2):79–92.
Carr, Christopher, A. D. W. Lydecker, E. Kopala, J. S. Nicoll, J. A. Colwell, S. M. Hoffman, J. Mitchell, A. Yates, D. Pimentell, D. Simpson, and J. Barron
2002 Technical Studies of Artworks on Ohio Hopewell Copper Artifacts. Paper presented at the Midwestern Archaeological Conference, Columbus, OH.
Carskadden, Jeff, and James Morton
1996 The Middle Woodland–Late Woodland Transition in the Central Muskingum Valley of Eastern Ohio: A View from the Philo Archaeological District. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology*. P. J. Pacheco, ed. Pp. 316–338. Ohio Archaeological Council, Columbus.
Case, D. Troy, and Christopher Carr, eds.
n.d. The Ohio Hopewell Mortuary Record: An Archaeological and Bioarchaeological Inventory. Manuscript in progress.
Chaffin, D. B., and G. B. J. Anderson
1991 *Occupational Biomechanics*. John Wiley & Sons, New York.
Chagnon, Napoleon A.
1979 Is Reproductive Success Equal in Egalitarian Societies? In *Evolutionary Biology and Human Social Behavior: An Anthropological Perspective*. N. A. Chagnon and W. Irons, eds. Pp. 374–401. Duxbury Press, North Scituate, MA.
1983 *The Yanomamo: The Fierce People*. Holt, Rinehart and Winston, New York.
Chamay, A., and P. Tschantz
1971 Mechanical Influences in Bone Remodeling: Experimental Research on Wolff's Law. *Journal of Biomechanics* 5:173–180.
Chapman, Jefferson
1973 The Icehouse Bottom Site, 40MR23. *Report of Investigations*, 13. Department of Anthropology, University of Tennessee, Knoxville.
Chapman, Jefferson, and Bennie C. Keel
1979 Candy Creek–Connestee Components in Eastern Tennessee and Western North Carolina and Their Relationship with Adena-Hopewell. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 157–161. Kent State University Press, Kent, OH.

Chapman, R. C., and K. Randsborg
1981 Approaches to the Archaeology of Death. In *The Archaeology of Death*. R. C. Chapman, I. Kinnes, and K. Randsborg, eds. Pp. 1–24. Cambridge University Press, Cambridge.
Charles, Douglas K.
1985 Corporate Symbols: An Interpretive Prehistory of Indian Burial Mounds in Westcentral Illinois. Unpublished doctoral dissertation, Northwestern University.
1992 Woodland Demographic and Social Dynamics in the American Midwest: Analysis of a Burial Mound Survey. *World Archaeology* 24:175–197.
1995 Diachronic Regional Social Dynamics: Mortuary Sites in the Illinois Valley/American Bottom Region. In *Regional Approaches to Mortuary Analysis*. L. A. Beck, ed. Pp. 77–99. Plenum, New York.
Charles, Douglas K., and Jane E. Buikstra
1983 Archaic Mortuary Sites in the Central Mississippi drainage. In *Archaic Hunters and Gatherers in the American Midwest*. J. Phillips and J. A. Brown, eds. Pp. 117–122. Academic Press, New York.
2002 Siting, Sighting, and Citing the Dead. *In* The Space and Place of Death. H. Silverman and D. Small, eds. Pp. 1–21. *Archaeological Papers*, 11. American Anthropological Association, Arlington, VA.
Charles, Douglas, Leigh Steven, and Jane E. Buikstra, eds.
1988 The Archaic and Woodland Cemeteries at the Elizabeth Site in the Lower Illinois Valley. *Kampsville Archaeological Center Research Series* 7, Kampsville, IL.
Charles, Douglas K., and Jane E. Buikstra
n.d. *Recreating Hopewell: New Perspectives on Middle Woodland in Eastern North America*. Book in progress.
Charles, Douglas K., and Juliana L. Shortell
2002 Pots as Tools: Using Sherd and Vessel Distributions to Examine Site Structure. Poster presented at the Annual Meeting of the Society for American Archaeology, Denver, CO.
Chase, David W.
1998 Swift Creek: Lineage and Diffusion. In *A World Engraved: Archaeology of the Swift Creek Culture*. M. Williams and D. T. Elliott, eds. Pp. 48–60. University of Alabama Press, Tuscaloosa.
Chaudhuri, Jean, and Joyotpaul Chaudhuri
2001 *A Sacred Path: The Way of the Muscogee Creeks*. UCLA American Indian Studies Center, Los Angeles, CA.
Childe, V. Gordon
1945 Directional Changes in Funerary Practices during 50,000 years. *Man* 4:13–19.
Chisholm, Michael
1962 *Rural Settlement and Land Use: An Essay in Location*. Hutchinson University Library, London.
Church, Flora, and Annette Ericksen
1995 *The Results of Data Recovery at Site 33 Pk 153 for the PIK-SR.32-13.5 Project, Seal Township, Pike County, Ohio*. Archaeological Services Consultants, Columbus, OH.
1997 Beyond the Scioto Valley: Middle Woodland Occupations in the Salt Creek Drainage. In *Ohio Hopewell Community Organization*. W. S. Dancey and P. J. Pacheco, eds. Pp. 331–360. Kent State University Press, Kent, OH.
Claassen, C., and R. A. Joyce
1997 *Women in Prehistory: North America and Mesoamerica*. University of Pennsylvania Press, Philadelphia.
Clark, David E., and Barbara A. Purdy
1982 Early Metallurgy in North America. In *Early Pyrotechnology: The Evolution of the First Fire-Using Industries*. Theodore A. Wertime and Steven F. Wertime, eds. Pp. 45–58. Smithsonian Institution Press, Washington, DC.
Clark, Geoffrey A.
1982 Quantifying Archaeological Research. *Advances in Archaeological Method and Theory* 5:217–273.
Clark, John E.
2000 Towards a Better Explanation of Hereditary Inequity: A Critical Assessment of natural and Historic Human Agents. In *Agency in Archaeology*, M.-A. Dobres and J. E. Robb, eds. Pp. 92–112. Routledge, London.
Clarke, David L.
1968 *Analytical Archaeology*. Methuen, London.
Clark, John E., and Michael Blake
1994 The Power of Prestige: Competitive Generosity and the Emergence of Rank Societies in Lowland Mesoamerica. In *Factional Competition and Political Development in the New World*. E.M. Brumfiel and J.W. Fox. eds. Pp. 17–30. Cambridge University Press, Cambridge, U.K.
Clay, R. Berle
1986 Adena Ritual Spaces. In *Early Woodland Archaeology*. B. K. B. Farnsworth and T. E. Emerson, eds. Pp. 581–595. Center for American Archaeology, Kampsville, IL.
1987 Circles and Ovals: Two Types of Adena Space. *Southeastern Archaeology* 6(1):46–56.
1991 Essential Features of Adena Ritual. Glenn A. Black Labortaory of Archaeology Research Reports No. 13, Bloomington, IN.
1992 Chiefs, Big Men, or What? Economy, Settlement Patterns, and Their Bearing on Adena Political Models. *In* Cultural Variability in Context. M. F. Seeman, eds. Pp. 77–80. *Mid-Continental Journal of Archaeology*, Special Paper 7. Kent State University Press, Kent, OH.
Clifton, James A.
1978 Potawatomi. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 725–742. Smithsonian Institution Press, Washington, DC.

Cohen, Anthony P.
1985 *The Symbolic Construction of Community*. Ellis Horwood/Tavistock, Chichester/London/New York.
Cohen, Ronald
1978 Ethnicity: Problem and Focus in Anthropology. *Annual Review of Anthropology* 7:379–403.
Cooper-Cole, Faye, and Thorne Deuel
1937 *Rediscovering Illinois: Archaeological Explorations in and around Fulton County*. University of Chicago Press, Chicago.
Cole, Gloria G.
1981 The Murphy Hills Site (1Ms300): The Structural Study of a Copena Mound and Comparative Review of the Copena Mortuary Complex. *Publications in Anthropology*, 31. Tennessee Valley Authority.
Collaer, Paul
1973 *Music of the Americas: An Illustrated Music Ethnology of Eskimo and American Indian Peoples*. Praeger Press, New York.
Collier, Jane F. and Michelle Z. Rosaldo
1981 Politics and Gender in Simple Societies. In *Sexual Meanings: The Cultural Construction of Gender and Sexuality*. S. B. Ortner and H. Whitehead, eds. Pp. 276–329. Cambridge University Press, Cambridge.
Collins, Henry
1926 Archaeological and Anthropological and Anthropometric Work in Mississippi. 1st edition. *Smithsonian Miscellaneous Collections*, 78. Smithsonian Institution Press, Washington, DC.
Collins, Patricia Hill
1990 *Black Feminist Thought: Knowledge, Consciousness, and the Politics of Empowerment*. Routledge, New York.
Conard, N. D., D. Asch, N. Asch, D. Elmore, H. Grove, M. Rubin, J. Brown, M. Wiant, K. B. Farnsworth, and T. Cook
1984 Accelerator Radiocarbon Dating of Evidence for Prehistoric Horticulture in Illinois. *Nature* 308:443–446.
Conkey, M. W., and J. M. Gero
1991 Tensions, pluralities, and engendering archaeology: An introduction to women and prehistory. In *Engendering Archaeology: Women and Prehistory*. M. W. Conkey and J. M. Gero, eds. Pp. 3–30. Basil Blackwood, Oxford.
Conkey, Margaret, and Janet D. Spector
1984 Archaeology and the Study of Gender. In *Advances in Archaeological Method and Theory*, vol. 7. Pp. 1–38. Academic Press, Orlando, FL.
Connolly, Robert P.
1996 Prehistoric Land Modification at the Fort Ancient Hilltop Enclosure: A Model of Formal and Accretive Development. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology*. P. Pacheco, ed. Pp. 258–273. Ohio Archaeological Council, Columbus.
1997 The Evidence for Habitation at the Fort Ancient Earthworks, Warren County, Ohio. In *Ohio Hopewell Community Organization*. W. Dancey and P. Pacheco, eds. Pp. 251–281. Kent State University Press, Kent, OH.
Converse, Robert
1979 *The Glacial Kame Indians*. Special Publication. Archaeological Society of Ohio, Columbus.
1993 The Troyer Site: A Hopewell Habitation Site, and a Secular View of Hopewell Villages. *Ohio Archaeologist* 43(3):4–12.
Conway, T.
1992 Ojibway Oral History Relating to 19th Century Rock Art. *American Indian Rock Art* 15:1–26.
1993 *Painted Dreams: Native American Rock Art*. North Word Press, Minocqua.
Cook, Thomas Genn
1976 Koster: An Artifact Analysis of Two Archaic Phases in Westcentral Illinois. *Prehistoric Records*, 1. Northwestern University Archeological Program, Evanston, IL.
Coon, Matthew S.
2002 Variations in Ohio Hopewell Political Economy. Paper presented at the Midwestern Archaeological Conference, Columbus, OH.
Cordy-Collins, Alana
1980 An Artistic Record of the Chavin Hallucinatory Experience. *The Masterkey* 54(3):84–93.
Cotkin, Spencer J., Christopher Carr, Mary Louise Cotkin, Alfred E. Dittert, and Daniel T. Kremser
1999 Analysis of Slips and Other Inorganic Surface Materials on Woodland and Early Fort Ancient Ceramics, South–Central Ohio. *American Antiquity* 64(2):316–342.
Cotter, John L., and John M. Corbett
1951 Archaeology of the Bynum Mounds, Mississippi. *Archaeological Research Series*, 1. National Park Service, U.S. Department of the Interior, Washington, DC.
Cotton, M. Aylwin
1955 British Camps with Timber-laced Ramparts. *Archaeological Journal* 111:26–105.
Coughlin, Sean, and Mark F. Seeman
1997 Hopewell Settlements at the Liberty Earthworks, Ross County, Ohio. In *Ohio Hopewell Community Organization*. W. S. Dancey and P. J. Pacheco, eds. Pp. 231–250. Kent State University Press, Kent, OH.
Counts, David R.
1979 The Good Death in Kaliai: Preparation for Death in Western New Britain. In *Death and Dying: Views from Many Cultures*. R. A. Kalish, ed. Pp. 39–44. Baywood, Farmingdale, NY.
Cowan, Frank L.
n.d. A Mobile Hopewell?: Questioning Assumptions of Ohio Hopewell Sedentism. In *Recreating Hopewell: New Perspectives on Middle Woodlands in Eastern North America*. D.K. Charles and J.E. Buikstra. eds. Book in progress.
Cowan, Frank, Ted Sunderhaus, and Robert Genheimer
1998 Notes from the Field: An Update from the Stubbs

Earthworks Site. *The Ohio Archaeological Council Newsletter* 10(2):6–13.
1999a In the Shadow of the Earthworks: Architecture and Activities Outside Ohio Hopewell Earthworks. Paper presented at the Annual Meeting of the Eastern States Archaeological Federation, Lebanon, OH.
1999b Notes from the Field, 1999: More Hopewell "Houses" at the Stubbs Earthworks Site. *The Ohio Archaeological Council Newsletter* 11(2):11–16.
2001 Wooden Architecture in Ohio Hopewell Sites: Structural and Spatial Patterns at the Stubbs Earthworks Site. Paper presented at the Annual Meeting of the Society for American Archaeology, Philadelphia, PA.
2002 Earthwork Peripheries: Probing the Margins of the Fort Ancient Site. Paper presented at the Fort Ancient Symposium, Ohio Historical Society, Columbus, OH.

Cree, Beth
1992 Hopewell Panpipes: A Recent Discovery in Indiana. *Midcontinental Journal of Archaeology* 17(1):3–15.

Crown, Patricia L.
2000 *Women and Men in the Prehispanic Southwest: Labor, Power, and Prestige*. School of American Research Press, Sante Fe, NM.

Crown, Patricia L., and S. K. Fish
1996 Gender and Status in the Hohokam Pre-Classic Tradition. *American Anthropologist* 98(4):803–812.

Custer, Jay F.
1987 New Perspectives on the Delmarva Adena Complex. *Midcontinental Journal of Archaeology* 12:223–258.

Dablon, Father Claude
1666–1667, 1669–1670 In *The Jesuit Relations and Allied Documents: Travels and Explorations of the Jesuit Missionaries in New France, 1610–1791; The Original French, Latin, and Italian Texts, with English Translations and Notes*. 73 vols. Reuben Gold Thwaites, ed. Burrows Brothers, Cleveland, OH.

Dahlberg, F., ed.
1981 *Woman the Gatherer*. Yale University Press, New Haven, CT.

d'Alloue's, Father Claude Jean
1666–1667 In *The Jesuit Relations and Allied Documents: Travels and Explorations of the Jesuit Missionaries in New France, 1610–1791; The Original French, Latin, and Italian Texts, with English Translations and Notes*. 73 vols. Reuben Gold Thwaites, ed. Burrows Brothers, Cleveland, OH.

Dalton, G.
1968 Economic Theory and Primitive Society. In *Economic Anthropology: Readings in Theory and Analysis*. E. E. LeClair and H. K. Schneider, eds. Pp. 143–167. Holt, Rinehart and Winston, New York. (orig. 1961)
1977 Aboriginal Economies in Stateless Societies. In *Exchange Systems in Prehistory*. T. K. Earle and J. E. Ericson, eds. Pp. 191–229. Cambridge University Press, Cambridge.

Dancey, William S.
1988 The Community Plan of an Early Late Woodland Village in the Middle Scioto River Valley. *Midcontinental Journal of Archaeology*13(2):223–258.
1991 A Middle Woodland Settlement in Central Ohio: A Preliminary Report on the Murphy Site (33Li212). *Pennsylvania Archaeologist* 61:7–72.
1992 Village Origins in Central Ohio: The Results and Implications of Recent Middle and Late Woodland Research. *In* Cultural Variability in Context: Woodland Settlements of the Mid-Ohio Valley. M. Seeman, ed. Pp. 24–29. *Midcontinental Journal of Archaeology*, Special Publication 7. Kent State University Press, Kent, OH.
1995 Hopeton Settlement Archaeology, 1995. In *Hopewell Archaeology: The Newsletter of Hopewell Archaeology in the Ohio River Valley*, vol. 1(2). Mark J. Lynott and Bret J. Ruby, eds. National Park Service Midwest Archaeological Center and Hopewell Culture National Historical Park, Lincoln, NE, and Chillicothe, OH. Electronic version: http://www.cr.nps.gov/mwac/hopewell/v1n2/.
1996a Putting an End to Ohio Hopewell. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology*. P. J. Pacheco, ed. Pp. 394–405. Ohio Archaeological Council, Columbus.
1996b *Hopewell Earthwork Catchment Survey: Interim Report*. Report submitted to the National Park Service, Hopewell Culture National Historical Park, Chillicothe, OH.
1997 Interim Report on Archaeological Investigations Undertaken on the Overly Tract, Ross County, Ohio, March, 1995, to November, 1996. Report submitted to the National Park Service, Midwest Archeological Center and Hopewell Culture National Historical Park, Chillicothe, OH.

Dancey, William S., and Paul J. Pacheco
1997a A Community Model of Ohio Hopewell Settlement. In *Ohio Hopewell Community Organization*. W. S. Dancey and P. J. Pacheco, eds. Pp. 3–40. Kent State University Press, Kent, OH.
1997b *Ohio Hopewell Community Organization*. Kent State University Press, Kent, OH.

Darwin, Charles
1859 *The Origin of Species by Means of Natural Selection or the Preservation of Favoured Races in the Struggle for Life*. J. Murray, London.
1871 *The Descent of Man and Selection in Relation to Sex*. J. Murray, London.

DeBoer, Warren R.
1997 Ceremonial Centers from the Cayapas (Esmeraldas, Ecuador) to Chillicothe (Ohio). *Cambridge Archaeological Journal* 7(2):225–253.
2001 Little Bighorn on the Scioto. Paper presented at A Pre-Columbian World: Searching for a Unitary Vision of Ancient America, Washington, DC.

DeBoer, Warren R., and John Blitz
1991 Ceremonial Centers of the Chachi. *Expedition* 33(1):53–62.
Deetz, James
1965 *The Dynamics of Stylistic Change in Arikara Ceramics*. University of Illinois Press, Urbana.
de Rios, Marlene Dobkin
1977 Plant Hallucinogens, Out-of-Body Experiences, and New World Monumental Eathworks. In *Drugs, Rituals, and Altered States of Consciousness*. B. M. D. Toit, ed. Pp. 237–249. A. A. Balkema, Rotterdam.
Despelder, Lynne Ann, and Albert Lee Strickland
1999 *The Last Dance: Encountering Death and Dying*. Mayfield, Mountain View, CA.
Deuel, Thorne
1935 Basic Cultures of the Mississippi Valley. *American Anthropologist* 37(3):429–445.
1952 The Hopewellian Community. *In* Hopewellian Communities in Illinois. T. Deuel, ed. Pp. 249–265. *Scientific Papers*, 5. Illinois State Museum, Springfield.
Dewdney, Selwyn
1970 Ecological Notes on the Ojibway Shaman-Artist. *Artscanada* 27(4):17–24.
1975 *The Sacred Scrolls of the Southern Ojibway*. University of Toronto Press, Toronto.
Dillehay, T. D.
1990 Mapuche Ceremonial Landscape, Social Recruitment and Resource Rights. *World Archaeology* 22(2):223–241.
1992 Keeping Outsiders Out: Public Ceremony, Resource Rights, and Hierarchy in Historic and Contemporary Mapuche Society. In *Wealth and Hierarchy in the Intermediate Area*. F. Lange, ed. Pp. 379–422. Dumbarton Oaks Research Library, Washington, DC.
Dixon, Milfred J., and Frank J. Massey
1969 *Introduction to Statistical Analysis*. New York, McGraw–Hill.
Dixon, R. B.
1923 *The Racial History of Man*. Scribner's, New York.
Dobres, Marcia-Anne, and John E. Robb
2000a Agency in Archaeology: Paradigm or Platitude. In *Agency in Archaeology*. M.-A. Dobres and J. E. Robb, eds. Pp. 3–17. Routledge, London.
Dobres, Marcia-Anne, and John E. Robb, eds.
2000b *Agency in Archaeology*. Routledge, London.
Dornan, Jennifer, L.
2002 Agency and Archaeology: Past, Present, and Future Directions. *Journal of Archaeological Method and Theory* 9(4):303–329.
Dorsey, George A.
1905 *Traditions of the Caddo*. Carnegie Institution of Washington, Washington, DC.
Dossey, Larry
1988 The Inner Life of the Healer: The Importance of Shamanism for Modern Medicine. In *Shaman's Path: Healing, Personal Growth, and Empowerment*. G. Doore, ed. Pp. 89–99. Shambhala, Boston.
Douglas, Mary
1970 *National Symbols: Explorations in Cosmology*. Pantheon Books, New York.
Douglass, A., and D. M. Schaller
1993 Sourcing Little Colorado White Ware: A Regional Approach to the Compositional Analysis of Prehistoric Ceramics. *Geoarchaeology* 8(3):177–201.
Dragoo, Don W.
1963 Mounds for the Dead. *Annals of Carnegie Museum*, 37. Carnegie Museum, Pittsburg, PA.
Dragoo, Don W., and Charles F. Wray
1964 Hopewell Figurine Rediscovered. *American Antiquity* 30(2):195–199.
Driver, Harold
1969 *Indians of North America*. University of Chicago Press, Chicago.
Drooker, P. B.
1997 The View from Madisonville: Prehistoric Western Fort Ancient Interaction Patterns. *Memoirs of the Museum of Anthropology*, 31. University of Michigan, Ann Arbor.
Dunnell, Robert C.
1980 Evolutionary Theory and Archaeology. In *Advances in Archaeological Method and Theory*, vol. 3. Pp. 35–99. Academic Press, New York.
1989 Aspects of the Application of Evolutionary Theory in Archaeology. In *Archaeological Thought in America*. C. C. Lamberg-Karlovsky, ed. Pp. 35–49. Cambridge University Press, New York.
Durkheim, Emile
1947a *The Elementary Forms of Religious Life*. Free Press, New York.
1947b *The Division of Labor*. Free Press, New York.
Dutour, O.
1986 Enthesopathies (Lesions of Muscular Insertions) as Indicators of the Activities of Neolithic Saharan Populations. *American Journal of Physical Anthropology* 71:221–224.
Earle, Timothy
1982 The Ecology and Politics of Primitive Values. In *Culture and Ecology: Eclectic Perspectives*. J. Kennedy and R. Edgerton, eds. Pp. 65–83. American Anthropological Association, Special Publication, 15.
1990 Style and Iconography as Legitimization in Complex Chiefdoms. In *The Uses of Style*. M. Conkey and C. Hastorf, ed. Pp. 73–81. Cambridge University Press, Cambridge.
1997 *How Chiefs Come to Power*. Stanford University Press, Stanford, CA.
Eggan, Fred
1950 *Social Organization of the Western Pueblos*. University of Chicago Press, Chicago.
1955 *Social Organization of North American Tribes*. University of Chicago Press, Chicago.
1983 Comparative Social Organization. In *Handbook of North American Indians*, vol. 10. Southwest A.

Ortiz, ed. Pp. 723–742. Smithsonian Institution, Washington, DC.
Ehrenberg, M.
1989 *Women in Prehistory*. British Museum Publications, London.
Eliade, Mircea
1964 *Shamanism: Archaic Techniques of Ecstacy*. Princeton University Press, Princeton, NJ.
1972 *Shamanism: Archaic Techniques of Ecstasy*. 2nd edition. Princeton University Press, Princeton, NJ.
Elliott, Daniel T.
1998 The Northern and Eastern Expression of Swift Creek Culture: Settlement in the Tennessee and Savannah River Valleys. In *A World Engraved: Archaeology of the Swift Creek Culture*. M. Williams and D. T. Elliott, eds. Pp. 19–35. University of Alabama Press, Tuscaloosa.
El-Najjar, M. Y., B. Lozoff, and D. J. Ryan
1975 The Paleoepidemiology of Porotic Hyperostosis in the American Southwest: Radiological and Ecological Considerations. *American Journal of Roentgenology and Radium Therapy* 125:918–924.
El-Najjar, M. Y., D. J. Ryan, C. G. Turner II, and B. Lozoff
1976 The Etiology of Porotic Hyperostosis among the Prehistoric and Historic Anasazi Indians of the Southwestern United States. *American Journal of Physical Anthropology* 44:447–488.
Emerson, Thomas E.
1989 Water, Serpents, and the Underworld: An Exploration into Cahokia Symbolism. In *Southern Ceremonial Complex: Artifacts and Analysis. The Cottonlandia Conference*. P. Galloway, ed. Pp. 45–92. University of Nebraska Press, Lincoln.
Emerson, Thomas E., Randall E. Hughes, Mary R. Hynes, Kenneth B. Farnsworth, and Sarah U. Wisseman
2002 Hopewell Catlinite, Tremper Mound, and PIMA Technology. Paper presented at the Annual Midwestern Archaeological Conference, Columbus, OH.
Erzigian, Anthony J., Patricia A. Tench, and Donna J. Braun
1984 Prehistoric Health in the Ohio River Valley. In *Paleopathology at the Origins of Agriculture*. M. N. Cohen and G. J. Armelagos, eds. Pp. 347–366. Academic Press, New York.
Espiritu, Yen Le
2001 "We Don't Sleep Around Like White Girls Do": Family, Culture, and Gender in Filipina American Lives. *Signs* 26(2):415–440.
Evans-Pritchard, E. E.
1940 *The Nuer*. Oxford University Press, Oxford.
Fagan, Brian M.
1995a Middle Woodland and the Hopewellian. In *Ancient North America: The Archaeology of a Continent*. 2nd edition. Pp. 411–426. Thames and Hudson, London.
1995b *Ancient North America: The Archaeology of a Continent*. Thames and Hudson, New York.
Farnsworth, Kenneth B.
1973 An Archaeological Survey of the Macoupin Valley. *Reports of Investigation*, 26. Illinois State Museum, Springfield.
1990 The Evidence for Specialized Middle Woodland Camps in Western Illinois. In *The Archaeology of Short-Term Middle Woodland Sites in West-Central Illinois*. vol. 2(1, 2). Illinois Archaeology. James R. Yingst, ed. Pp. 109–132. Illinois Archaeology. Illinois Archaeological Survey, Urbana–Champaign.
1997 Illinois Platform Pipes, Copper Bangles, and Painted Pottery: A Consideration of Hopewell Ritual and Exchange. Paper presented at the Society for American Archaeology Annual Meeting, Nashville, TN.
Farnsworth, Kenneth B., and David L. Asch
1986 Early Woodland Chronology, Artifact Styles, and Settlement Distribution in the Lower Illinois Valley Region. In *Early Woodland Archeology*, vol. 2. Kampsville Seminars in Archeology. Kenneth B. Farnsworth and Thomas E. Emerson, eds. Pp. 326–457. Center for American Archeology, Kampsville Archeological Center, Kampsville, IL.
Farnsworth, Kenneth B., and Karen A. Atwell
2001 Documentation of Human Burials and Mortuary Remains Recovered from Test Excavations at Naples–Russell Mound #8, Ray Norbut Conservation Area, Pike County, Illinois. Illinois Historic Preservation Agency and Illinois Department of Transportation.
Farnsworth, Kenneth B., and Ann L. Koski
1985 Massey and Archie: A Study of Two Hopewellian Farmsteads in the Western Illinois Uplands. *Kampsville Archaeological Research Series*, 3. Center for American Archaeology, Kampsville, IL.
Farnsworth, Kenneth B., and Thomas E. Emerson, eds.
1986 *Early Woodland Archeology*. Kampsville Seminars in Archeology, 2. Center for American Archeology, Kampsville, IL.
Farquarson, R.
1876 Recent Archaeological Discoveries at Davenport, Iowa. *Proceedings of the Davenport Academy of Natural Sciences* V(1):117–143.
Feather, Eagle
1978 The Sweatlodge and the Sacred Rite of Purification. In *Sundancing at Rosebud and Pine Ridge*, T. E. Mails, ed. Pp. 87–96. Center for Western Studies, Augustana College, Sioux Falls, SD.
Fecht, William G.
1985 New Thoughts on the Piasa Bird Legend. *Central States Archaeological Journal* October:174–179.
Fedigan, L. M.
1986 The Changing Role of Women in Models of Human Evolution. *Annual Review of Anthropology* 15:25–66.
Feest, Christian F.
1978 Virginia Algonquians. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 253–270. Smithsonian Institution Press, Washington, DC.

Feinman, Gary
1995 The Emergence of Inequity: A Focus on Strategies and Processes. In *Foundations of Social Inequity*. T.D. Price and G.M. Feinman, eds. Pp. 255–279. Plenum Publishers, New York.
2000 Dual-processual Theory and Social Formations in the Southwest. In *Alternative Leadership Strategies in the Prehispanic Southwest*. B.J. Mills, ed. Pp. 207–224. University of Arizona Press, Tucson, AZ.
Feinman, Gary, and Jill Neitzel
1984 Too Many Types: An Overview of Sedentary Prestate Societies in the Americas. *Advances in Archaeological Method and Theory* 7:39–102.
Fenneman, Nevin Melancthon
1938 *Physiography of Eastern United States*. McGraw–Hill, New York.
Fenton, William N.
1978 Northern Iroquoian Culture Patterns. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 296–321. Smithsonian Institution Press, Washington, DC.
Fidlar, Marion M.
1948 Physiography of the Lower Wabash Valley. Bulletin 2. Indiana Geological Survey, Bloomington.
Fie, Shannon M.
n.d. Visiting in the Interaction Sphere: Ceramic Exchange in the Lower Illinois Valley. In *Recreating Hopewell: New Perspectives on Middle Woodland in Eastern North America*. D.K. Charles and J.E. Buikstra, eds. Book in progress.
2000 An Integrative Study of Ceramic Exchange during the Illinois Valley Middle Woodland Period. Unpublished doctoral dissertation, State University of New York, Buffalo.
Firth, Raymond
1936 *We, the Tikopia: Kinship in Primitive Polynesia*. American Book, New York.
1940 The Analysis of Mana: An Empirical Approach. *Journal of the Polynesian Society* 49:483–510.
1951 *Elements of Social Organization*. Beacon Press, Boston.
1955 The Fate of the Soul: An Interpretation of Some Primitive Concepts. In *Frazier Lecture 1955*. Pp. 3–45. Cambridge University Press, Cambridge.
Fischer, Fred William
1974 Early and Middle Woodland Settlement, Subsistence, and Population in the Central Ohio Valley. Unpublished doctoral dissertation, Washington University.
Fitting, James
1971 Rediscovering Michigan Archaeology: Notes on the 1885 Converse Mound Collection. *Michigan Archaeologist* 17(1):33–39.
Fitting, James E., and David S. Brose
1970 The Northern Periphery of Adena. In *Adena: The Seeking of an Identity*. J. B. K. Swartz, ed. Pp. 29–55. Ball State University, Muncie, IN.
Flannery, Kent V.
1967 The Olmec and the Valley of Oaxaca: A Model for Inter-regional Interaction in Formative Times. In *Dumbarton Oaks Conference on the Olmec*. E. P. Benson, ed. Pp. 79–110. Dumbarton Oaks Research Library and Collection, Washington, DC.
1972 The Cultural Evolution of Civilizations. *Annual Review of Ecology and Systematics* 3:399–426.
Flannery, Regina
1946 The Culture of the Northeastern Indian Hunters: A Descriptive Survey. In *Man in Northeastern North America*. F. Johnson, ed. Papers of the Robert J. Peabody Foundation for Archaeology, 3:236–271.
Fletcher, Alice C., and Francis La Flesche
1911 The Omaha Tribe. Twenty-Seventh Annual Report. Bureau of American Ethnology, Washington, DC.
Ford, James A.
1963 Hopewell Culture Burial Mounds Near Helena, Arkansas. *Anthropological Papers of the American Museum of Natural History* 50(1):5–55.
Ford, Richard I.
1974 Northeastern Archaeology: Past and Future Directions. *Annual Review of Anthropology* 3: 385–414.
1979 Gathering and Gardening: Trends and Consequences of Hopewell Subsistence Strategies. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 234–238. Kent State University Press, Kent, OH.
1987 Dating Early Maize in the Eastern United States. Paper presented at the annual meeting of the American Association for the Advancement of Science, Chicago, IL.
Fornaciari, G. and M. Torino
1995 Exploration of the Tomb of Pandolfo III of Malatesta (1370–1427), Prince of Fano (Central Italy). *Paleopathology Newsletter* 92:7–9.
Fortes, Meyer
1945 *The Dynamics of Clanship among the Tallensi*. Oxford University Press, Oxford.
Fowke, Gerard
1902 *Archaeological History of Ohio*. Ohio Archaeological and Historical Society, Columbus.
Fowler, Melvin K.
1952 The Clear Lake Site: Hopewellian Occupation. In *Hopewellian Communities in Illinois*. Thorne Deuel, ed. Pp. 131–174. *Scientific Papers*, 5(4). Illinois State Museum, Springfield.
1957 Rutherford Mound, Hardin County, Illinois. *Scientific Papers*, 7. Illinois State Museum, Springfield, Illinois.
Frankenstein, A. and M.J. Rowlands
1978 The Internal Structure and Regional Context of Early Iron Age Society in South-Western Germany. *Bulletin of the Institute of Archaeology* 15:73–112.

Frazer, James George
1935 *The Golden Bough: A Study in Magic and Religion*, 3rd edition, 12 vol. MacMillan and Company, London.
1959 *The New Golden Bough: A New Abridgement of the Classic Work by Sir James George Frazer*, edited by T.H. Gaster. Criterion Books, New York.
Freeman, Joan F.
n.d. Museum, State Historical Society of Wisconsin, Madison, MS on file.
Freestone, I. C.
1991 Extending Ceramic Petrology. *In* Recent Developments in Ceramic Petrology. A. P. Middleton and I. C. Freestone, eds. Pp. 399–410. *British Museum Occasional Papers*, 81. British Museum, London.
1995 Ceramic Petrography. *American Journal of Archaeology* 99:111–115.
Fried, Morton
1957 The Classification of Corporate Unilineal Descent Groups. *Journal of the Royal Anthropological Institute of Great Britain and Ireland* 87(1):1–29.
1960 On the Evolution of Social Stratification and the State. In *Culture in History*. S. Diamond, ed. Pp. 713–731. Columbia University Press, NewYork.
1967 *The Evolution of Political Society*. Random House, New York.
1968 On the Concept of "Tribe" and "Tribal Society." In *Essays on the Problem of Tribe*. J. Helm, ed. Pp. 3–20. Proceedings of the American Ethnological Association, Seattle, WA.
Friedman, Jonathon, and M.J. Rowlands
1977 Notes Toward an Epigenetic Model of the Evolution of a "Civilization." In *The Evolution of Social Systems*. J. Friedman and M.J. Rowlands, eds. Pp. 210–276. Duckworth, London.
Friedl, Erika
1989 *Women of Deh Koh: Lives in an Iranian Village*. Smithsonian Institution Press, Washington, DC.
Friedl, Ernestine
1975 *Women and Men: An Anthropologist's View*. Holt, Rinehart and Winston, New York.
Friedman, Jonathan
1975 Tribes, States, and Transformations. In *Marxist Analyses and Social Anthropology*. M. Block, ed. Pp. 161–165. Malaby Press, London.
Friedman, Jonathan, and M. J. Rowlands
1978 Notes towards an Epigentic Model of the Evolution of "Civilization". In *The Evolution of Social Systems*. J. Friedman and M. J. Rowlands, eds. Pp. 201–276. Duckwork, London.
Friedrich, Margaret Hardin
1970 Design Structure and Social Interaction: Archaeological Implications of an Ethnographic Analysis. *American Antiquity* 35:332–343.
Fulton, R., and S.W. Anderson
1992 The Amerindian "Man-Woman": Gender, Liminality, and Cultural Continuity. *Current Anthropology* 33(5):603–610.
Garniewicz, Rexford
1993 A Preliminary Report on Middle Woodland Animal Utilization at the Mann Site. *In* Current Research in Indiana Archaeology and Prehistory: 1991–1992. Brian G. Redmond, ed. Pp. 72–73. *Research Reports*, 14. Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington.
Gearing, Fred
1958 The Structural Poses of 18th Century Cherokee Villages. *American Anthropologist* 60:1148–1157.
Geertz, Clifford
1973 *The Interpretation of Cultures*. Basic Books, New York.
1975 On the Nature of Anthropological Understanding. *American Scientist* 63(1):47–53.
Gehlbach, Donald L.
1993 The Strait Site Revisited. *Ohio Archaeologist* 43(4):30–31.
General Electric Company
1997 *Hopewell in Mt. Vernon: A Study of the Mt. Vernon Site (12-po-885)*. General Electric Company, Mt. Vernon, IN.
Gero, Joan M., and Margaret W. Conkey
1991 *Engendering Archaeology: Women and Prehistory*. Oxford University Press, Oxford.
Gershom, Rabbi Yonassan
1987 Shamanism in the Jewish Tradition. In *Shamanism*. S. Nicholson, ed. Pp. 181–188. The Theosophical Publishing House, Wheaton, IL.
Giddens, Anthony
1984 *The Constitution of Society*. University of California Press, Berkeley.
Gilbert, William H.
1943 The Eastern Cherokees. Anthropological Paper No. 23. *Bureau of American Ethnology Bulletin* 133. Smithsonian Institution Press, Washington, DC.
Gill, Sam D.
1982 *Native American Religions: An Introduction*. Wadsworth, Belmont, CA.
1983 *Native American Traditions: Sources and Interpretations*. Wadsworth, Belmont, CA.
Gill, Sam D., and Irene F. Sullivan
1992 *Dictionary of Native American Mythology*. Oxford University Press, Oxford.
Gillespie, Susan D.
2001 Personhood, Agency, and Mortuary Ritual: A Case Study from the Ancient Maya. *Journal of Anthropological Archaeology* 20:73–112.
Gladney, Dru C., ed.
1998 *Making Majorities: Constituting the Nation in Japan, Korea, China, Malaysia, Fiji, Turkey, and the United States*. Stanford University Press, Stanford, CA.
Gluckman, Maxwell
1937 Mortuary Customs and the Belief in Survival After Death among the South-Eastern Bantu. *Bantu Studies* 11:117–136.

Goad, Sharon I.
1978 Exchange Networks in the Prehistoric Southeastern United States. Unpublished doctoral dissertation, University of Georgia.
1979 Middle Woodland Exchange in the Prehistoric Southeastern United States. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 239–246. Kent State University Press, Kent, OH.
1980 Copena Burial Practices and Social Organization. *Journal of Alabama Archaeology* 26:67–86.

Goddard, Ives
1978 Delaware. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 213–239. Smithsonian Institution Press, Washington, DC.

Goffman, Erving
1959 *The Presentation of the Self in Everyday Life*. Doubleday, Garden City, NY.
1969 *Strategic Interaction*. University of Pennsylvania Press, Philadelphia.

Goldman, Irving
1970 *Ancient Polynesian Society*. University of Chicago Press, Chicago.

Goldstein, Lynn
1980 Mississippian Mortuary Practices: A Case Study of Two Cemeteries in the Lower Illinois Valley. *Scientific Papers*, 4. Northwestern University Archeological Program, Evanston, IL.
1981 One Dimensional Archaeology and Multi-Dimensional People: Spatial Organisation and Mortuary Analysis. In *The Archaeology of Death*. R. Chapman, I. Kinnes, and K. Randsborg, eds. Pp. 53–69. Cambridge University Press, Cambridge.

Goodenough, Ward H.
1965 Rethinking 'Status' and 'Role': Toward a General Model of the Cultural Organization of Social Relationships. In *The Relevance of Models for Social Anthropology*. M. Gluckman and F. Eggan, eds. Pp. 311–330. Tavistock, London.

Goodman, Felicitas D.
1990 *Where the Spirits Ride the Wind: Trance Journeys and Other Ecstatic Experiences*. Indiana University Press, Bloomington.

Gordon, Robert B.
1969 The Natural Vegetation of Ohio in Pioneer Days. *Bulletin of the Ohio Biological Survey; New Series*, 3:No. 2. Ohio State University, Columbus.

Gordus, A. A., J. B. Griffin, and G. A. Wright
1971 Activation Analysis Identification of the Geologic Origins of Prehistoric Obsidian Artifacts. In *Science and Archaeology*. R. H. Brill, ed. Pp. 222–234. MIT Press, Cambridge, MA.

Gosden, Chris
1989 Debt, Production, and Prehistory. *Journal of Anthropological Archaeology* 8:355–387.

Gray, H.
1977 *Gray's Anatomy*. Gramercy Books, Avenel, NJ.

Gray, Henry H., William J. Wayne, and Charles E. Wier
1970 Geologic Map of the 1deg × 2deg Vincennes Quadrangle and Parts of Adjoining Quadrangles, Indiana and Illinois, Showing Bedrock and Unconsolidated Deposits. Indiana Department of Natural Resources, Geological Survey, Bloomington, in cooperation with Illinois State Geological Survey.

Greber, N'omi
1976 Within Ohio Hopewell: Analysis of Burial Patterns from Several Classic Sites. Unpublished doctoral dissertation, Case Western Reserve University.
1979a Variations in the Social Structure of Ohio Hopewell Peoples. *Mid-Continental Journal of Archaeology* 4(1):35–78.
1979b A Comparative Study of Site Morphology and Burial Patterns at Edwin Harness Mound and Seip Mounds 1 and 2. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 27–38. Kent State University Press, Kent, OH.
1983 Recent Excavations at the Edwin Harness Mound, Liberty Works, Ross County, Ohio. *Mid-Continental Journal of Archaeology*, Special Publication 5. Kent State University Press, Kent, OH.
1991 A Study of Continuity and Contrast Between Central Scioto Adena and Hopewell Adena Sites. *West Virginia Archeologist* 43:1–26.
1995 Some Archaeological Localities Recorded in the Seip Earthworks and Dill Mounds Historical District. Unpublished report. Hopewell Culture National Historical Park, Chillicothe, OH.
1996 A Commentary on the Contexts and Contents of Large to Small Ohio Hopewell Deposits. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology*. P. J. Pacheco, ed. Pp. 150–172. Kent State University Press, Kent, OH.
1997 Two Geometric Enclosures in the Paint Creek Valley: An Estimate of Possible Changes in Community Patterns through Time. In *Ohio Hopewell Community Organization*. W. S. Dancey and P. J. Pacheco, eds. Pp. 207–229. Kent State University Press, Kent, OH.
1998 From Simple to Complex: The Architectural Design of Strata Found in Ohio Hopewell Enclosure Walls. Paper presented at the Midwestern Archaeological Conference, Muncie, IN.
2000 Radiocarbon Dates. Listing of Twenty New Radiocarbon Dates from the Turner, Hopewell, Marietta, and Seip Earthworks. Distributed at Perspectives on the Middle Woodland at the Millenium, Pere Marquette State Park, IL, July.
2003 Chronological Relationships among Ohio Hopewell Sites: Few Dates and Much Complexity. In *Theory, Method, and Practice in Modern Archaeology*. R. Jeske and D. Charles, eds. Pp. 88–113. Praeger, Westport CT.

Greber, N'omi and Katharine Ruhl
1989 *The Hopewell Site: A Contemporary Analysis Based on the Works of Charles C. Willoughby.* Westview Press, Boulder, CO.

Greber, N'omi, Richard S. Davis, and Ann S. DuFresne
1981 The Micro Component of the Ohio Hopewell Lithic Technology: Bladelets. *Annals of the New York Academy of Sciences* 376:489–528.

Greber, N'omi B., Martha Potter Otto, and Anne B. Lee
2002 Revisiting the Structures Recorded Within the Seip Earthworks, Ross County, Ohio. Paper presented at the Annual Meeting of the Midwest Archaeological Conference, Columbus, OH.

Green, Thomas J.
1984 The Presettlement Vegetation of Posey and Gibson Counties, Southwestern Indiana. *In* Experiments and Observations on Aboriginal Wild Plant Food Utilization in Eastern North America. Patrick J. Munson, ed. Pp. 427–458. *Prehistory Research Series*, vol. 6. Indiana Historical Society, Indianapolis.

Green, Thomas J., and Cheryl A. Munson
1978 Mississippian Settlement Patterns in Southwestern Indiana. In *Mississippian Settlement Patterns*. Bruce D. Smith, ed. Pp. 293–325. Academic Press, New York.

Greenman, Emerson F.
1938 Hopewellian Traits in Florida. *American Antiquity* 3(4):327–332.
n.d. Fieldnotes of Excavation at the Esch Site. Ohio Historical Center, Columbus, unpublished MS.

Gregory, C.
1982 *Gifts and Commodities*. Academic Press, London.

Griffin, James B.
1946 Cultural Change and Continuity in Eastern United States Archaeology. *In* Man in Northeastern North America. F. Johnson, ed. Pp. 37–95. *Papers of the Peabody Foundation for Archaeology*, 3. Andover, MA.
1952a Some Early and Middle Woodland Pottery Types in Illinois. *In* Hopewellian Communities in Illinois. T. Deuel, ed. Pp. 93–129. *Scientific Papers*, 5. Illinois State Museum, Springfield.
1952b Culture Periods in Eastern United States Archeology. In *Archeology of Eastern United States*. J. B. Griffin, ed. Pp. 352–364. University of Chicago Press, Chicago.
1955 Observations on the Grooved Axe in North America. *Pennsylvania Archaeologist* 25:32–44.
1958 The Chronologic Position of the Hopewell Culture in the Eastern United States. *Anthropological Papers*, 12. University of Michigan, Museum of Anthropology, Ann Arbor.
1959 The Pursuit of Archeology in the United States. *American Anthropologist* 61(3):379–389.
1960 Climatic Change: A Contributory Cause of the Growth and Decline of Northern Hopewellian Culture. *The Wisconsin Archeologist* 41(2):21–33.
1961a Lake Superior Copper and the Indians: Miscellaneous Studies of Great Lakes Prehistory. *Anthropological Papers*, 17. University of Michigan, Museum of Anthropology, Ann Arbor.
1961b Early American Mining in the Upper Peninsula of Michigan and the First Recognition of Prehistoric Mining Activities. *In* Lake Superior Copper and the Indians: Miscellaneous Studies of Great Lakes Prehistory. J. B. Griffin, ed. Pp. 47–76. *Anthropological Papers*, 17. Museum of Anthropology, University of Michigan, Ann Arbor.
1961c Comments on Current and Recent "Folklore" and Misconceptions about the Lake Superior Prehistoric Copper and the Area in General. *In* Lake Superior Copper and the Indians: Miscellaneous Studies of Great Lakes Prehistory. J. B. Griffin, ed. Pp. 130–133. *Anthropological Papers*, 17. Museum of Anthropology, University of Michigan, Ann Arbor.
1965 Hopewell and the Dark Black Glass. *Michigan Archaeologist* 11(3–4):115–155.
1967 Eastern North American Archaeology: A Summary. *Science* 156:175–191.
1971 The Northeast Woodlands Area. In *Prehistoric Man in the New World*. J. D. Jennings and E. Norbeck, eds. Pp. 223–258. University of Chicago Press, Chicago.
1973 Hopewell Non-exchange of Obsidian. Paper presented at the Northwestern University Archaeological Research Program Lecture Series, Archaeology and the Natural Sciences, Kampsville, IL.
1978 The Midlands and Northeastern United States. In *Ancient Native Americans*. J. Jennings, ed. Pp. 221–279. W. H. Freeman, San Francisco.
1979 An Overview of the Chillicothe Hopewell Conference. In *Hopewell Archaeology*. D. Brose and N. Greber, eds. Pp. 266–279. Kent State University Press, Kent, OH.
1983 The Ceramic Complex. In *Recent Excavations at the Edwin Harness Mound, Liberty Works, Ross County, Ohio*. N. Greber, ed. Pp. 39–53. Cleveland Museum of Natural History, Cleveland, OH.
1984 A Short Talk about a Small Hopewell Site in Ohio. Paper presented at the Midwestern Archaeological Conference, Chicago, IL.
1996 The Hopewell housing shortage in Ohio, A.D. 1–350. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology*. P. J. Pacheco, ed. Pp. 6–15. Ohio Archaeological Council, Columbus.
1997 Interpretations of Ohio Hopewell 1845–1984 and the Recent Emphasis on the Study of Dispersed Hamlets. In *Ohio Hopewell Community Organization*. W. Dancey and P. Pacheco, eds. Pp. 405–426. Kent State University Press, Kent, OH.

Griffin, James B., and George I. Quimby
1961 Prehistoric Copper Pits on the Eastern Side of Lake Superior. *In* Lake Superior Copper and the Indians: Miscellaneous Studies of Great Lakes

Prehistory. J. B. Griffin, ed. Pp. 77–82. *Anthropological Papers*, 17. Museum of Anthropology, University of Michigan, Ann Arbor.

Griffin, James B., A. A. Gourdus, and G. A. Wright
1969 Identification of the Sources of Hopewellian Obsidian in the Middle West. *American Antiquity* 34(1):1–14.

Griffin, James B., Richard E. Flanders, and Paul F. Titterington
1970 The Burial Complex of the Knight and Norton Mounds in Illinois and Michigan. *Memoirs*, 2. University of Michigan, Museum of Anthropology, Ann Arbor.

Grim, John A.
1983 *The Shaman: Patterns of Siberian and Ojibway Healing*. University of Oklahoma Press, Norman.

Grove, David L.
1997 Olmec Archaeology: A Half Century of Research and Its Accomplishments. *Journal of World Prehistory* 11(1):51–101.

Gruenbaum, Ellen
2001 *The Female Circumcision Controversy: An Anthropological Perspective*. University of Pennsylvania Press, Philadelphia.

Gundersen, James, and James A. Brown
2002 The Ceramics of Hopewellian Shamanic Display. Paper presented at the Annual Meetings of the Society for American Archaeology, Denver, CO.

Haberstein, Robert W., and William M. Lamers, eds.
1960 *Funeral Customs the World Over*. National Funeral Directors Association of the United States, Milwaukee, WI.

Haley, James L.
1997 *Apaches: A History and Culture Portrait*. University of Oklahoma Press, Norman.

Halifax, Joan
1979 *Shamanic Voices: A Survey of Visionary Narratives*. E. P. Dutton, New York.

Hall, Robert L.
1973 An Interpretation of the Two Climax Model of Illinois Prehistory. Paper presented at the 9th International Congress of Anthropological and Ethnological Sciences, Chicago, IL.
1976 Ghosts, Water Barriers, Corn, and Sacred Enclosures in the Eastern Woodlands. *American Antiquity* 41(3):360–364.
1977 An Anthropocentric Perspective for Eastern United States Prehistory. *American Antiquity* 42(4):499–518.
1979 In Search of the Ideology of the Adena-Hopewell Climax. In *Hopewll Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 258–265. Kent State University Press, Kent, OH.
1980 An Interpretation of the Two-Climax Model of Illinois Prehistory. In *Early Native Americans: Prehistoric Demography, Economy, and Technology*. D. Broman, ed. Pp. 401–462. Mouton, The Hague.
1983 The Evolution of the Calumet-Pipe. *In* Prairie Archaeology: Papers in Honor of David A. Baerreis. G. E. Gibbon, ed. Pp. 37–52. *University of Minnesota Publications in Anthropology*, 3. Minneapolis.
1987 Calumet Ceremonialism, Mourning Ritual, and Mechanisms of Inter-tribal Trade. In *Mirror and Metaphor: Material and Social Constructions of Reality*. D. W. Ingersoll and G. Bronitski, eds. Pp. 29–43. University Press of America, Lanham.
1989 The Cultural Background of Mississippian Symbolism. In *The Southeastern Ceremonial Complex: Artifacts and Analyses*. P. Galloway, ed. Pp. 239–278. University of Nebraska Press, Lincoln, NE.
1997 *An Archaeology of the Soul: North American Indian Beliefs and Ritual*. University of Illinois Press, Urbana.
1998 A Comparison of Some North American and Mesoamerican Cosmologies and Their Ritual Expressions. In *Explorations in American Archaeology: Essays in Honor of Wesley R. Hurt*. M.G. Plew, ed. Pp. 56–58. University Press of America, Lanham, MD.

Hallowell, A. Irving
1926 Bear Ceremonialism in the Northern Hemisphere. *American Anthropologist* 28:1–175.
1960 Ojibwa Ontology, Behavior, and World View. In *Culture in History: Essays in Honor of Paul Radin*. S. Diamond, ed. Pp. 19–52. Columbia University Press, New York.

Hamill, J., and K. M. Knutzen
1995 *Biomechanical Basis of Human Motion*. Williams & Wilkins, Baltimore.

Hammel, George R.
1986/1987 Strawberries, Floating Islands and Rabbit Captains: Mythical Realities and European Contact in the Northeast during the Sixteenth and Seventeenth Centuries. *Journal of Canadian Studies* 21(4):72–94.
1987 Mythical Realities and European Contact in the Northeast during the Sixteenth and Seventeenth Centuries. *Man in the Northeast* 33:63–87.

Hammerschlag, Carl A., and Howard D. Silverman
1997 *Healing Ceremonies: Creating Personal Rituals for Spiritual, Emotional, Physical, and Mental Health*. Berkeley Publishing Group, Berkeley, CA.

Hanson, N. R.
1972 *Patterns of Discovery.* Cambridge University Press, Cambridge.

Haray, Frank
1959 Status and Contrastatus. *Sociometry* 22:23–43.

Harms, Richard H., and John R. Halsey
1988 Wright L. Coffinberry: A Renaissance Man in Western Michigan. *Michigan History* 72(5):24–32.

Harner, Michael
1980 *The Way of the Shaman: A Guide to Power and Healing*. Harper & Row, San Francisco.
1988a Shamanic Counseling. In *Shaman's Path: Healing, Personal Growth, and Empowerment*. G. Doore, ed. Pp. 179–187. Shambhala, Boston.

1988b What Is a Shaman? In *Shaman's Path: Healing, Personal Growth, and Empowerment*. G. Doore, ed. Pp. 7–15. Shambhala, Boston.
Harris, Marvin
1968 *The Rise of Anthropological Theory*. Thomas Y. Crowell, New York.
Harrison, Jack L., and Haydn H. Murray
1964 Clays and Shales of Indiana. *Geological Survey Bulletin* 31. Indiana Department of Conservation, Bloomington.
Hartwig, Frederick, and Brian E. Dearing
1979 *Exploratory Data Analysis.* Sage, Berverly Hills, CA.
Hassan, Fekri
1977 The Dynamics of Agricultural Origins in Palestine. In *Origins of Agriculture*. C. A. Reed, ed. Pp. 589–609. Mouton Publishers, The Hague.
Hatch, James W., Joseph W. Michels, Christopher M. Stevenson, Barry E. Scheetz, and Richard A. Geidel
1990 Hopewell Obsidian Studies: Behavioral Implications of Recent Sourcing and Dating Research. *American Antiquity* 55(3):461–479.
Hauser, Raymond
2000 The Berdache and the Illinois Indian Tribe during the Last Half of the 17th Century. In *American Encounters: Natives and Newcomers from European Contact to Indian Removal, 1500–1850*. P. C. Mancall and J. H. Merrell, eds. Pp. 119–136. Rutledge, New York.
Hawkes, Jacquette
1968 The Proper Study of Mankind. *Antiquity* 42:255–262.
Hawkey, Diane E.
1988 Use of Upper Extremity Enthesopathies to Indicate Habitual Activity Patterns. Unpublished Master's thesis, Arizona State University.
Hawkey, Diane E., and Charles F. Merbs
1995 Activity-Induced Musculoskeletal Stress Markers (MSM) and Subsistence Strategy Changes among Ancient Hudson Bay Eskimo. *International Journal of Osteoarchaeology* 5:324–338.
Hay, J. G., and J. G. Reid
1982 *The Anatomical and Mechanical Basis of Human Motion*. Prentice–Hall, Englewood Cliffs, NJ.
Hayden, Brian
1995 Pathways to Power: Principles for Creating Socioeconomic Inequities. In *Foundations of Social Inequity*. J.D. Price and G.M. Feinman, eds. Pp. 15–86. Plenum Publishing, New York.
Hays-Gilpin, Kelley, and David S. Whitley
1998 *Reader in Gender Archaeology*. Routledge, London.
Hegmon, Michelle
2003 Setting Theoretical Egos Aside: Issues and Theory in North American Archaeology. *American Antiquity* 68(2):213–243.
Heidenreich, Conrad E.
1978 Huron. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 368–388. Smithsonian Institution, Washington, DC.
Helms, Mary
1976 *Ancient Panama: Chiefs in Search of Power*. University of Texas Press, Austin.
1988 *Ulysses' Sail: An Ethnographic Odyssey of Power, Knowledge, and Geographic Distance*. Princeton University Press, Princeton, NJ.
1993 *Craft and the Kingly Ideal*. University of Texas Press, Austin.
Henderson, A.G., ed.
1992 Fort Ancient Cultural Dynamics in the Middle Ohio Valley. *Monographs in World Archaeology*, 8. Prehistory Press, Madison, WI.
Hengen, O. P.
1971 Cribra Orbitalia: Pathogenesis and Probable Etiology. *Homo* 22:57–75.
Henry, Michelle M.
1994 An Inventory of Hopewell Imagery, Their Spatial Relationships, and Possible Explanations from Native Amnerican Mythologies. Unpublished master's thesis. Arizona State University.
Henry, Michelle, Christopher Carr, and D. Troy Case
1994 Unity and Diversity in Ohio Hopewell Symbology and Cosmology. Paper presented at the Annual Meetings of the American Anthropological Association.
Herold, Elaine B.
1971 The Indian Mounds at Albany, Illinois. *Davenport Museum Anthropological Papers*, 1. Davenport Public Museum.
Hertz, Robert
1907 Contribution a une étude sur la representation collective de la mort. *Année Sociologique* 10:48–137.
1960a A Contribution to the Study of the Collective Representation of Death. In *Death and the Right Hand*. R. Needham and C. Needham, trans. Free Press, New York.
1960b *Death and the Right Hand*. R. Needham and C. Needham, trans. Free Press, Glencoe, IL. (orig. 1915)
Hewitt, J. N. B.
1894 The Iroquois Concept of the Soul. *Journal of American Folk-Lore* 7:107–116.
Hiatt, Joel W.
n.d. Account of Exploration of Mounds in Posey County. Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, unpublished MS.
Hickerson, Harold
1960 The Feast of the Dead among the Seventeenth Century Algonkians of the Upper Great Lakes. *American Anthropologist* 60:81–107.
Higgenbotham, C. Dean
1983 An Archaeological Survey of the Lower Wabash Valley in Gibson and Posey Counties in Indiana. Unpublished doctorol dissertation. Purdue University.

Hill, James N.
1968 Broken K. Pueblo: Patterns of Form and Function. In *New Perspectives in Archeology*. S. R. Binford and L. R. Binford, eds. Pp. 103–142. Aldine, Chicago.
Hinkle, Kathleen
1984 Ohio Hopewell Textiles: A Medium for the Exchange of Social and Stylistic Information. Unpublished master's thesis, University of Arkansas.
Hobsbawm, Eric
1983 Introduction: Inventing Traditions. In *The Invention of Tradition*. E. Hobsbawm and T. Ranger, eds. Cambridge University Press, New York.
Hobsbawm, Eric, and Terence Ranger, ed.
1983 *The Invention of Tradition*. Cambridge University Press, New York.
Hodder, Ian
1982a *Symbols in Action*. Cambridge University Press, Cambridge, England.
1982b Theoretical Archaeology: A Reactionary View. In *Symbolic and Structural Archaeology*. I. Hodder, ed. Pp. 1–16. Cambridge University Press, Cambridge.
2000 Agency and Individuals in Long-term Processes. In *Agency in Archaeology*. M.-A. Dobres and J. E. Robb, eds. Pp. 21–33. Routledge, London.
Hodder, Ian, ed.
1982c *Symbolic and Structural Archaeology*. Cambridge University Press, Cambridge.
1987 *Archaeology as Long-Term History*. Cambridge University Press, Cambridge, U.K.
Hoebel, E. Adamson
1966 *Anthropology: The Study of Man*. McGraw–Hill, New York.
Hoffman, Walter James
1888 Pictography and Shamanic Rites of the Ojibwa. *American Anthropologist* 1:209–229.
1891 The Mide'wiwin or "Grand Medicine Society" of the Ojibwa. In *7th Annual Report of the Bureau of American Ethnology for the Years 1885–1886*. Pp. 143–300. BAE, Washington, DC.
1896 The Menomini Indians. In *Fourteenth Annual Report of the Bureau of American Ethnology for the Years 1885–1886*. Pp. 3–328. Government Printing Office, Washington, DC.
Hofman, Jack L.
1980 Twenhafel Archaeology: The Southeastern Connection. *Tennessee Anthropologist* 5(2):185–201.
Hofstede, G.
1980 *Culture's Consequences*. Sage, Beverly Hills, CA.
Hogarth, A. C.
1972 Common Sense in Archaeology. *Antiquity* 46:301–304.
Hohmann, John W.
2001 A Study of Sinagua Mortuary Practices and Their Implications. In *Ancient Burial Practices in the American Southwest: Archaeology, Physical Anthropology, and Native American Perspectives*. D. R. Mitchell and J. L. Brunson-Hadley, eds. Pp. 97–122. University of New Mexico Press, Albuquerque.
Hollimon, Sandra E.
2001 The Gendered Peopling of North America: Addressing the Antiquity of Systems of Multiple Genders. In *The Archaeology of Shamanism*. N. Price, ed. Pp. 123–134. Routledge, London.
Holmes, William H.
1903 Aboriginal Pottery of the Eastern United States. *Annual Report 20*. Smithsonian Institution, Bureau of American Ethnology, Washington, DC.
1907 Games of the North American Indians. *Annual Report 24*. Smithsonian Institution, Bureau of American Ethnology, Washington, DC.
Hooton, Earnest
1922 The Skeletal Remains. *In* The Turner Group of Earthworks, Hamilton County, Ohio, by C. C. Willoughby. Pp. 99–132 *Papers of the Peabody Museum*, 8(3). Harvard University, Cambridge, MA.
Hooton, Earnest A. and Charles C. Willoughby
1920 Indian Village and Cemetery Near Madisonville Ohio. *Papers of the Peabody Museum of American Archaeology and Ethnology* 8(1).
Hopewell Culture National Historical Park
2003 Hopewell Mound Group. Electronic document. http://www.nps.gov/hocu/html/hopewell.htm. Retrieved January 5, 2003.
Howard, James H.
1960 When They Worship the Underwater Panther: A Prairie Potawatomi Bundle Ceremony. *Southwest Journal of Anthropology* 16:217–224.
1981 *Shawnee!: The Ceremonialism of a Native Indian Tribe and Its Cultural Background*. Ohio University Press, Athens.
Howell, T.
1995 Tracking Zuni Gender and Leadership Roles across the Contact Period. *Journal of Anthropological Research* 51:125–147.
Hudson, Charles
1976 *The Southeastern Indians*. University of Tennessee Press, Knoxville.
Hughes, Randall D., Thomas E. Berres, Dwain M. Moore, and Kenneth B. Farnsworth
1998 Revision of Hopewellian Trading Patterns in Midwestern North America Based on Mineralogical Sourcing. *Geoarchaeology: An International Journal* 13(7):709–729.
Hughes, Richard E.
1992 Another Look at Hopewell Obsidian Studies. *American Antiquity* 57(3):515–523.
1995 Source Identification of Obsidian from the Trowbridge Site (14WY1), a Hopewellian Site in Kansas. *Midcontinental Journal of Archaeology* 20(1):105–113.
2000 The Dark Black Glass, Thirty Years Later: Current Geochemical Research on Hopewellian Obsidian. Paper presented at the Perspectives on the Middle Woodland at the Millenium Conference, Pere Marquette State Park, IL.
n.d. The Sources of Hopewell Obsidian: Thirty Years After Griffin. In *Recreating Hopewell: New*

Perspectives on Middle Woodland in Eastern North America. D.K. Charles and J.E. Buikstra, eds. Book in progress.
Hughes, Richard E., and Andrew C. Fortier
1997 Identification of Geologic Sources of Obsidian Artifacts from Three Middle Woodland Sites in the American Bottom, Illinois. *Illinois Archaeology* 9(1, 2):79–92.
Hultkrantz, Aoke
1953 Conceptions of the Soul among North American Indians: A Study in Religious Ethnology. *Monograph Series*, 1. Ethnographical Museum of Sweden (Statens Etnografiska Museum), Stockholm.
Hume, David
1752 *Political Discourses*. R. Fleming for A. Kincaid and A. Donaldson, Edinburgh, Scotland.
Hunter, William A.
1978 History of the Ohio Valley. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 588–593. Smithsonian Institution Press, Washington, DC.
Huntington, Richard, and Peter Metcalf
1979 *Celebrations of Death*. Cambridge University Press, Cambridge.
Ingerman, Sandra
1991 *Soul Retrieval: Mending the Fragmented Self*. HarperCollins Publishers, New York.
Isaac, Glynn I.
1978 Food Sharing Behavior of Protohuman Hominids. *Scientific American* 238(4):90–108.
Iscan, M. E., and K. A. R. Kennedy
1989 *Reconstruction of Life from the Skeleton*. Wiley–Liss, New York.
Ivanov, S. V.
1978 Some Aspects of the Study of Siberian Shamanism. In *Shamanism in Siberia*. V. Dioszegi and M. Hoppal, eds. S. Simon, trans. Pp. 19–58. Akademiai, Budapest.
Izikowitz, Karl G.
1935 Musical and Other Sound Instruments of the South American Indians. Gotesberg Kugl. Vetenskapasoch Vitterkets-Samhalles Handlinger. Femtje Foldjen Ser. A, Ban 5, No.1.
Jamison, P. L.
1971 A Demographic and Comparative Analysis of the Albany Mounds (Illinois) Hopewell Skeletons. *In* The Indian Mounds of Albany, Illinois. E. B. Herold, ed. *Anthropological Papers*, 1. Davenport Museum.
Jeffries, Richard W.
1976 The Tunacunnhee Site: Evidence of Hopewell Interaction in Northwest Georgia. *Anthropological Papers*, 1. University of Georgia, Athens.
1979 The Tunacunnhee Site: Hopewell in Northwest Georgia. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 162–170. Kent State University Press, Kent, OH.
Jenkins, Ned J.
1979 Miller Hopewell of the Tombigbee Drainage. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 171–180. State University Press, Kent, OH.
Johannessen, Sissel
2003 Culturing the Landscape: Hopewell Farmers of Illinois. Paper presented at the Annual Meeting of the Society for American Archaeology, Milwaukee, WI.
Johnson, Alfred E.
1979 Kansas City Hopewell. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 86–93. State University Press, Kent, OH.
Johnson, A. and T. Earle
1987 *The Evolution of Human Societies*. Stanford University Press, Stanford, CA.
Johnson, Matthew
2000 Self-Made Men and the Staging of Agency. In *Agency in Archaeology*. M.-A. Dobres and J. E. Robb, eds. Pp. 213–231. Routledge, London.
Johnston, Basil
1991 The story of Gujek and Wabana. In *The Path of Life*, Legends of the Indians Series. Films for the Humanities and Sciences, Princeton, NJ.
Johnston, Cheryl A.
2002 *Culturally Modified Human Remains from the Hopewell Mound Group*. Unpublished doctoral dissertation, The Ohio State University.
Johnston, Richard B.
1968a Archaeology of Rice Lake, Ontario. *Anthropological Papers*, 19. National Museum of Canada, Ottawa.
1968b The Archaeology of the Serpent Mounds Site. *Occasional Paper*, 10. Royal Ontario Museum of Art and Archaeology.
Jones, T. E. H.
1981 The Aboriginal Rock Paintings of the Churchill River. *Anthropological Series* 4. Saskatchewan Museum of Natural History, Regina.
Joyce, Arthur A.
2000 The Founding of Monte Albán: Sacred Propositions and Social Practices. In *Agency in Archaeology*. M.-A. Dobres and J. E. Robb, eds. Pp. 71–91. Routledge, London.
Joyce, Arthur A., and M. Winter
1996 Ideology, Power, and Urban Society in Prehispanic Oaxaca. *Current Anthropology* 37:33–47.
Kantner, John, and Nancy M. Mahoney (editors)
2000 *Great House Communities across the Chacoan Landscape*. University of Arizona Press, Tucson.
Keel, Bennie C.
1976 *Cherokee Archaeology: A Study of the Appalachian Summit*. University of Tennessee Press, Knoxville.
n.d. Hopewell Influence in the Southern Appalachians. Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, unpublished MS.
Keene, Arthur S.
1981 *Prehistoric Foraging in a Temperate Forest*. Academic Press, New York.

Kehoe, Alice B.
2000 *Shamanism and Religion: An Anthropological Exploration in Critical Thinking*. Waveland Press, Prospect Heights, IL.

Kellar, James H.
1979 The Mann Site and "Hopewell" in the Lower Wabash–Ohio Valley. In *Hopewell Archaeology*. D. Brose and N. Greber, eds. Pp. 100–107. Kent State University Press, Kent, OH.

Kellar, James H., A. R. Kelly, and Edward V. McMichael
1962 The Mandeville Site in Southwest Georgia. *American Antiquity* 27(3):336–355.

Kelley, J. C., and J. L. Angel
1987 Life Stresses of Slavery. *American Journal of Physical Anthropology* 74:199–211.

Kennedy, Kenneth A. R.
1983 Morphological Variations in Ulnar Supinator Crests and Fossae, as Identifying Markers of Occupational Stress. *Journal of Forensic Science* 28(4):871–876.
1985 Importance of Markers of Occupational Stress on Bones and Teeth in Personal Identification Case Studies. Paper presented at the Annual Meeting of the American Academy of Forensic Sciences, Las Vegas, NV.
1989 Skeletal Markers of Occupational Stress. In *Reconstruction of Life from the Skeleton*. M. Y. Iscan and K. A. R. Kennedy, eds. Pp. 129–160. Wiley–Liss, New York.

Kennedy, Kenneth A. R., T. Plummer, and J. Chiment
1986 Identification of the Eminent Dead: Penpi, a Scribe of Ancient Egypt. In *Forensic Osteology: Advances in the Identification of Human Skeletal Remains*. K. J. Reichs, ed. Pp. 290–301. Charles C Thomas, Springfield, IL.

Kent, S.
1992 Anemia through the Ages: Changing Perspectives and Their Implications. In *Diet, Demography, and Disease: Changing Perspectives on Anemia*. P. Stuart-Macadam and S. Kent, eds. Pp. 1–33. Aldine de Gruyter, New York.

Kenyon, Walter
1986 Mounds of Sacred Earth. *Monograph 9*. Royal Ontario Museum of Archaeology.

Kimberlin, Jerome and John T. Wasson
1976 Comparison of Iron Meteoritic Material from Ohio and Illinois Hopewellian Burial Mounds. *American Antiquity* 41(4):489–493.

King, Serge
1987 The Way of the Adventurer. In *Shamanism*. S. Nicholson, ed. Pp. 189–203. Theosophical Publishing House, Wheaton, IL.

Kinietz, W. Vernon
1947 *Chippewa Village: The Story of Katikitegon*. Cranbrook Press, Bloomfield Hills, MI.

Kirsch, Paul V.
1980 Burial Structures and Social Ranking in Vava'u, Tonga. *Journal of the Polynesian Society* 89(3):291–308.

Knapp, A. Bernard, and Wendy Ashmore
1999 Archaeological Landscapes: Constructed, Conceptualized, Ideational. In *Archaeologies of Landscape: Contemporary Perspectives*. W. Ashmore and A. B. Knapp, eds. Pp. 1–30. Basil Blackwell, Oxford.

Knight, Vernon J., Jr.
1989 Symbolism of Mississippian Mounds. In *Powhatan's Mantle*. P. Wood, G. Waselkov, and M. T. Hatley, eds. Pp. 279–291. University of Nebraska Press, Lincoln, NE.
1990a Social Organization and the Evolution of Hierarchy in Southeastern Chiefdoms. *Journal of Anthropological Research* 46:1–23.
1990b Excavations of the Truncated Mound at the Walling Site. *Report of Investigations, 56*. University of Alabama, Alabama State Museum of Natural History, Division of Archaeology, Birmingham.

Kohl, J. G.
1860 *Kitchi-Gami*. Chapman and Hall, London.

Kolb, Michael J. and James E. Snead
1997 It's a Small World After All: Comparative Analyses of Community Organization in Archaeology. *American Antiquity* 62(4):609–628.

Konigsberg, L. M.
1985 Demography and Mortuary Practice at Seip Mound One. *Midcontinental Journal of Archaeology* 10(1):123–148.

Konigsberg, Lyle W., and Jane E. Buikstra
1995 Regional Approaches to the Investigation of Past Human Biocultural Structure. In *Regional Approaches to Mortuary Analysis*. L. A. Beck, ed. Pp. 191–219. Plenum Press, New York.

Kottak, Conrad
1974 *Anthropology*. Random House, New York.

Kozarek, Susan E.
1987 A Hopewellian Homestead in the Ohio River Valley. Unpublished Master's thesis, University of Cincinnati.
1997 Determining Sedentism in the Archaeological Record. In *Ohio Hopewell Community Organization*. W. S. Dancey and P. J. Pacheco, eds. Pp. 131–152. Kent State University Press, Kent, OH.

Kroeber, Alfred
1931 The Culture-Area and Age-Area Concepts of Clark Wissler. In *Methods in Social Science*. S. Rice, ed. Pp. 248–265. University of Chicago Press, Chicago.
1939 Cultural and Natural Areas of Native North America. *Publications in Archaeology and Ethnology*, 38. University of California Press, Berkeley.

Krogman, W. M., and M. Y. Iscan
1986 *The Human Skeleton in Forensic Medicine*. Charles C Thomas, Springfield, IL.

Kullback, S., M. Kupperman, and H. H. Ku
1962 An Application of Information Theory to the Analysis of Contingency Tables, with a Table of 2n ln

n, n = 1(1)10,000. *Journal of Research* 66B(4):217–233.

Kumar, S.
1995 Electromyography of Spinal and Abdominal Muscles during Garden Raking with Two Rakes and Rake Handles. *Ergonomics* 38(9):1793–1804.

Kuorinka, I., and L. Forcier
1995 *Work-Related Musculoskeletal Disorders (WMSDs): A Reference Book for Prevention*. Taylor and Francis, Bristol, PA.

Kuper, Hilda
1950 Kinship among the Swazi. In *African Systems of Kinship and Marriage*. D. Forde and A. R. Radcliffe-Brown, eds. Pp. 86–110. Oxford University Press, London.

Kut, Steven. T., and Jane. E. Buikstra
1998 Calibration of C-14 Dates in the Lower Illinois River Valley. Paper presented at the Annual Meeting of the Society for American Archaeology, Seattle, WA.

Kwais, Mary L., and Robert C. Mainfort, Jr.
1986 The Johnston Site: Precursor To Pinson Mounds? *Tennessee Anthropologist* 11(1):29–41.

Lacer, Charles, Jr.
n.d. *The Mann Site*. Glenn A. Black Laboratory of Archaeology, Indiana University, Bloomington, unpublished MS.

Ladd, Edmund J.
1979 Zuni Social and Political Organization. In *Handbook of North American Indians*, vol. 9. Southwest. A. Ortiz, ed. Pp. 482–491. Smithsonian Institution, Washington, DC.

Lahontan, Louis Armand
1905 *New Voyages to North America*. 2 vols. A. C. McClurg, Chicago. (orig. 1703)

Lamphere, Louise
1974 Strategies, Cooperation, and Conflict among Women in Domestic Groups. In *Woman, Culture, and Society*. M. Z. Rosaldo and L. Lamphere, eds. Pp. 97–112. Stanford University Press, Stanford, CA.

Landy, David.
1978 Tuscarora among the Iroquois. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 518–524. Smithsonian Institution Press, Washington, DC.

Lang, Sabine
1998 *Men as Women, Women as Men: Changing Gender in North American Cultures*. J. L. Vantine, trans. University of Texas Press, Austin.

Lankford, George E., III
1984 Saying Hello to the Timucua. *Mid-America Folklore* 12:7–23.
1987 *Native American Legends: Southeastern Legends: Tales from the Natchez, Caddo, Biloxi, Chickasaw, and Other Nations*. August House, Little Rock, AR.
1992 Red and White: Some Reflections on Southeastern Symbolism. *Southern Folklore* 50(1):53–80.

Lanyon, L. E., A. E. Goodship, C. J. Pye, and J. H. MacFie
1982 Mechanically Adaptive Bone Remodeling. *Journal of Biomechanics* 15(3):141–154.

Lawlis, Frank
1988 Shamanic Approaches in a Hospital Pain Clinic. In *Shaman's Path: Healing, Personal Growth, and Empowerment*. G. Doore, ed. Pp. 139–149. Shambhala, Boston.

Layton, Robert
2001 Ethnographic Study and Symbolic Analysis. In *Handbook of Rock Art Research*. D. S. Whitley, ed. Pp. 311–331. AltaMira Press, Walnut Creek, CA.

Lazazzera, Adrienne
2002 Middle Woodland Household Variation at the Fort Ancient Site. Paper presented at the Fort Ancient Symposium, Ohio Historical Society, Columbus, OH.

Leach, E. R.
1954 *Political Systems of Highland Burma*. Beacon Press, Boston.

Leader, Jonathon M.
1988 Technological Continuities and Specialization in Prehistoric Metalwork in the Eastern United States. Unpublished doctoral dissertation, University of Florida.

Leonard, Kathryn
2000 Directionality and Exclusivity of Plains-Pueblo Exchange in the Protohistoric Period (A.D. 1450-1700). Unpublished Master's thesis, Department of Anthropology, Arizona State University, Tempe, AZ.

Leone, Mark P.
1986 Symbolic, Structural, and Critical Archaeology. In *American Archaeology Past and Future: A Celebration of the Society for American Archaeology 1935–1985*, D. J. Meltzer, D. D. Fowler, and J. A. Sabloff, eds. Pp. 415–438. Society for American Archaeology, Washington, DC.

Lepper, Bradley, Dee Anne Wymer, and William Pickard
1992 Unpublished MS on file with B. Lepper. Ohio Historical Center, Columbus.

Levine, Mary Ann
1999 Native Copper in the Northeast: An Overview of Potential Sources Available to Indigenous Peoples. In *The Archaeological Northeast*. M. A. Levine, K. Sassaman, and M. Nassaney, eds. Pp. 183–199. Bergin and Garvey, London.

Levi-Strauss, Claude
1953 Social Structure. In *Anthropology Today: An Encyclopedic Inventory*. A. L. Kroeber, ed. Pp. 524–573. University of Chicago Press, Chicago.
1969a *The Elementary Structures of Kinship*. Beacon Press, Boston. (orig. 1949)
1969b *Mythologiques*, vol. 1. Harper and Row, New York.
1973 *Mythologiques*, vol. 2. Harper and Row, New York.
1978 *Mythologiques*, vol. 3. Harper and Row, New York.
1981 *Mythologiques*, vol. 4. Harper and Row, New York.

Levy, A. M., and M. L. Fuerst
1993 *Sports Injury Handbook*. John Wiley & Sons, New York.

Lewis, I. M.
1971 *Ecstatic Religion: An Anthropological Study of Spirit Possession and Shamanism*. Penguin Books, Middlesex, UK.

Lewis-Williams, J. D., and T. A. Dowson
1988 The Sign of All Times. *Current Anthropology* 29(2):201–213.

Limón, Jose E.
1994 *Dancing with the Devil: Society and Cultural Poetics in Mexican-American South Texas*. University of Wisconsin Press, Madison.

Linton, Ralph
1936 *The Study of Man*. Appleton–Century, New York.

Little, Barbra J., K. M. Lanphear, and D. W. Owsley
1992 Mortuary Display and Status in a Nineteenth Century Anglo-American Cemetery in Manassas, Virginia. *American Antiquity* 57:397–418.

Little, Elizabeth A.
1987 Inland Waterways in the Northeast. *Midcontinental Journal of Archaeology* 12(1): 55–76.

Locke, John
1690 *Two Treatises of Government*. Awnsham Churhill, London.

Locust, Carol
1986 *Apache Beliefs about Unwellness and Handicaps*. Native American Research and Training Center, University of Arizona, Tucson.

Loendorf, Chris
2001 Salado Burial Practices. In *Ancient Burial Practices in the American Southwest: Archaeology, Physical Anthropology, and Native American Perspectives*. D. R. Mitchell and J. L. Brunson-Hadley, eds. Pp. 123–148. University of New Mexico Press, Albuquerque.

Logan, G. A., and W. C. McKinney
1982 *Anatomic Kinesiology*. Wm. C. Brown, Dubuque, IA.

Longacre, William A.
1968 Some Aspects of Prehistoric Society in East-Central Arizona. In *New Perspectives in Archeology*. S. R. Binford and L. R. Binford, eds. Pp. 89–102. Aldine, Chicago.

Longerich, H., B. J. Fryer, and D. Strong
1987 Trace Analysis of Natural Alloys by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS): Application to Archeological Native Silver Artifacts. *Spectrochimica Acta* 42B:101–109.

Lorde, Audre
1984 Age, Race, Class, and Sex: Women Redefining Difference. In *Sister Outsider: Essays and Speeches by Audre Lorde*. Pp. 114–123. Crossing Press, Freedom, CA.

Loth, Susan R., and M. Henneberg
1996 Mandibular Ramus Flexure: A New Morphologic Indicator of Sexual Dimorphism in the Human Skeletal. *American Journal of Physical Anthropology* 99:473–485.

Lovis, William A.
1999 Clay Effigy Representations of the Bear and *Mishipishu*(?) from the Late Woodland Johnston Site, Cheboygan County, Michigan. Paper presented at the Midwest Archaeological Conference, Muncie, IN.

Loy, James D.
1968 A Comparative Style Analysis of Havana Series Pottery from Two Illinois Valley Sites. *In* Hopewell and Woodland Site Archaeology in Illinois. J. A. Brown, ed. Pp. 129–200. *Bulletin 6*. Illinois Archaeological Survey, Urbana.

Lurie, Nancy Oestreich
1978 Winnebago. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 690–707. Smithsonian Institution Press, Washington, DC.

Lynott, Mark J.
1998a Geophysical Surveys in the Mid-Continent: John Weymouth and the Midwest Archeological Center. In *Hopewell Archaeology: The Newsletter of Hopewell Archaeology in the Ohio River Valley*, vol. 31(2). Mark J. Lynott and Bret J. Ruby, eds. National Park Service Midwest Archaeological Center and Hopewell Culture National Historical Park, Lincoln, NE, and Chillicothe, OH. Electronic version: http://www.cr.nps.gov/mwac/hopewell/v3n1/.

1998b 1998 Research at Hopeton Earthworks. In *Hopewell Archaeology: The Newsletter of Hopewell Archaeology in the Ohio River Valley*, vol. 3(1). Mark J. Lynott and Bret J. Ruby, eds. National Park Service Midwest Archaeological Center and Hopewell Culture National Historical Park, Lincoln, NE, and Chillicothe, OH. Electronic version: http://www.cr.nps.gov/mwac/hopewell/v3n1/.

2001 Hopeton Earthworks: An Interim Report. In *Hopewell Archaeology: The Newsletter of Hopewell Archaeology in the Ohio River Valley*, vol. 4(2). Mark J. Lynott, ed. National Park Service Midwest Archaeological Center, Lincoln, NE. Electronic version: http://www.cr.nps.gov/mwac/hopewell/v4n2/index.html.

2002a Archaeological Research at the Hopeton Earthworks, Ross County, Ohio. Paper presented at the Annual Meeting of the Midwest Archaeological Conference, Columbus, OH.

2002b 2001 Investigations at the Hopeton Earthworks, Ross County, Ohio. Paper presented at the Annual Meeting of the Society for American Archaeology, Denver, CO.

Lynott, Mark J., and John W. Weymouth
2001a *Investigations at the Hopeton Earthwork, Ross County, Ohio, in the 2001 Season*. Unpublished MS.

2001b Preliminary Report, 2001 Investigations, Hopeton Earthworks. *Hopewell Archaeology* 5(1): 1–7.

Mack, Alexandra
2000 Collective Journeys and Segregated Sites: Pilgrimage to the Temples of Vijayanagara. Unpublished doctoral dissertation, Arizona State University.
MacKie, Euan W.
1976 The Vitrified Forts of Scotland. In *Hillforts. Later Prehistoric Earthworks in Britain and Ireland*. Derek William Harding, ed. Pp. 205–235. Academic Press, London.
MacNeish, Richard S.
1944 Middle Woodland Cultures. *Transactions of the Illinois State Academy of Science* 37:41–44.
Maggi, Wynne
2001 *Our Women Are Free: Gender and Ethnicity in the Hindukush*. University of Michigan Press, Ann Arbor.
Magrath, William H.
1945 The North Benton Mound: A Hopewell Site in Ohio. *American Antiquity* 11(1):40–47.
Mahar, Cheleen, Richard Harker, and Chris Wilkes
1990 The Basic Theoretical Position. In *An Introduction to the Work of Pierre Bourdieu*. R. Harker, C. Mahar, and C. Wilkes, eds. Pp. 1–25. Macmillan Press, Houndsmill, UK.
Mahoney, Nancy M.
2000 Redefining the Scale of Chacoan Communities. *In* Great House Communities Across the Chacoan Landscape. J. Kantner and N. M. Mahoney, eds. Pp. 19–27. *Anthropological Papers of the University of Arizona*, 64. University of Arizona Press, Tucson.
Mails, Thomas E.
1972 *The Mystic Warriors of the Plains*. Council Oak Books, Tulsa, OK.
1978 *Sundancing at Rosebud and Pine Ridge*. Center for Western Studies, Augustana College, Sioux Falls, SD.
1979 *Fools Crow*. University of Nebraska Press, Lincoln.
1991 *Fools Crow: Wisdom and Power*. Council Oak Books, Tulsa, OK.
Mainfort, Robert C., Jr.
1986 Pinson Mound: A Middle Woodland Ceremonial Center. *Research Series 7*. Tennessee Department of Conservation, Division of Archaeology, Nashville.
1988a Middle Woodland Mortuary Patterning at Helena Crossing, Arkansas. *Tennessee Anthropologist* 13(1):35–50.
1988b Middle Woodland Ceremonialism at Pinson Mounds, Tennessee. *American Antiquity* 53(1):158–173.
1996 Pinson Mounds and the Middle Woodland Period in the Midsouth and Lower Mississippi Valley. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology*. P. J. Pacheco, ed. Pp. 370–391. Ohio Archaeological Council, Columbus.
Mainfort, Robert C., Jr., John B. Broster, and Karen M. Johnson
1982 Recent Radiocarbon Determinations for the Pinson Mounds Site. *Tennessee Anthropologist* 7(1):14–19.
Mainfort, Robert C., Jr., and Richard Walling
1992 1989 Excavations at Pinson Mounds: Ozier Mound. *Midcontinental Journal of Archaeology* 17(1):112–135.
Mainfort, Robert C., Jr., James W. Cogswell, Michael J. O'Brien, Hector Neff, and Michael D. Glascock
1997 Neutron Activation Analysis of Pottery from Pinson Mounds and Nearby Sites in Western Tennessee: Local Production vs. Long-Distance Importation. *Midcontinental Journal of Archaeology* 22(1):43–68.
Malinowski, Bronislaw
1922a *Magic, Science, and Religion and Other Essays*. Doubleday, Garden City, NY.
1922b *Argonauts of the Western Pacific*. E. P. Dutton, New York.
1954 *Magic, Science, and Religion and Other Essays by Bronislaw Malinowski*. Doubleday Anchor Books, Garden City, NY.
Malthus, Thomas Robert
1798 *Essay on the Principle of Population as It Affects the Future Improvement of Society*. J. Johnson, London.
Marcus, Joyce, and Kent V. Flannery
1996 *Zapotec Civilization: How Urban Society Evolved in Mexico's Oaxaca Valley*. Thames and Hudson, London.
Marquette, Jacques
1966 *Voyages of Marquette in the Jesuit Relations, 59*. University Microfilms, Ann Arbor, MI.
Marsella, A.J., G. DeVos, and F.L.K. Hsu
1985 *Culture and the Self*. Tavistock, New York.
Martin, Frances P.
1954 A Vanderburgh County Site with Southern Affinities. *Proceedings of the Indiana Academy of Science for 1953* 63:57–58.
1958 Southern Affinities of the Ellerbusch Site, Warrick County, Indiana. *Proceedings of the Indiana Academy of Science* 67:90.
Martin, Susan R.
1999 *Wonderous Power: The Story of Ancient Copper Working in the Lake Superior Basin*. Wayne State University Press, Detroit.
Marx, Karl
1954 *Capital: A Critique of Political Economy* 1. Lawrence and Wisharf, London.
Marzke, Mary W., J. M. Longhill, and S. A. Rasmussan
1988 Gluteus Maximus Muscle Function and the Origin of Hominid Bipedality. *American Journal of Physical Anthropology* 77:519–528.
Marzke, Mary W., N. Toth, K. Schick, S. Reece, B. Steinberg, K. Hunt, R. L. Linscheid, and K.-N. An
1997 Hard Hammer Percussion Manufacture of Tools and Early Hominid Hand Morphology. *Journal of Human Evolution* 32(4):A11–A12.

Maslowski, Robert F., and Mark F. Seeman
1992 Woodland Archaeology in the Mid-Ohio Valley: Setting Parameters for Ohio Main Stem/Tributary Comparisons. *In* Cultural Variability in Context: Woodland Settlements of the Mid-Ohio Valley. M. F. Seeman, ed. Pp. 10–14. *Midcontinental Journal of Archaeology*, Special Paper No. 7. Kent State University Press, Kent, OH.
Mauer, Christopher, Dennis O'Boyle, and Thomas J. Riley
1976 A Trace Element Analysis of Several Middle Woodland Silver Artifacts and Native Silver Ores. Unpublished Ms. on file with Thomas J. Riley, Department of Anthropology, North Dakota State University, Fargo, ND.
Mauss, Marcel
1954 *The Gift: Forms and Functions of Exchange in Archaic Societies*. Free Press, New York. (orig. 1925)
1967 *The Gift: Forms and Functions of Exchange in Archaic Societies*. 2nd edition. W. W. Norton, New York. (orig. 1925)
1985 A Category of the Human Mind: The Notion of Person, the Notion of Self. In *The Category of the Person: Anthropology, Philosophy, History*. M. Carrithers, S. Collins, and S. Lukes, eds. W. D. Halls, trans. Pp. 1–25. Cambridge University Press, Cambridge.
Maxwell, Moreau S.
1947 A Summary of Illinois Archaeology. *The Wisconsin Archaeologist (New Series)* 28(2): 18–33.
McClain, Ernest G.
1979 Chinese Cyclic Tunings in Late Antiquity. *Ethnomusicology* 23(2):205–224.
McClintock, Walter
1935 The Blackfoot Beaver Bundle. Southwestern Museum Leaflets 2, 3. Reprinted from *The Masterkey* 2(1935):76–84, 108–117.
McCoid, Catherine Hodge, and LeRoy D. McDermott
1996 Toward Decolonizing Gender: Female Vision in the Upper Paleolithic. *American Anthropologist* 98(2):319–326.
McFarland, R. W.
1887 Ancient Work Near Oxford, Ohio. *Ohio State Archaeological and Historical Quarterly* 1:265–276.
McGimsey, Charles R., and Michael D. Wiant
1986 Woodland Period Culture History in the Lower Illinois River Valley. *In* Woodland Period Occupations of the Napoleon Hollow Site in the Lower Illinois Valley. M. D. Wiant and C. R. McGimsey, eds. Pp. 25–33. *Research Series*, 6. Kampsville Archaeological Center, Kampsville, IL.
McGregor, John C.
1952 The Havana Site. *In* Hopewellian Communities in Illinois. Thorne Deuel, ed. Pp. 43–91. *Scientific Papers*, 5. Illinois State Museum, Springfield.
1958 *The Pool and Irving Villages*. University of Illinois Press, Urbana.
McGuire, Randall
1988 Death, Society, and Ideology in a Hohokam Community. Office of Cultural Resources Management Report No. 68, Arizona State University, Tempe.
McKern, William C.
1931 A Wisconsin Variant of the Hopewell Culture. *Public Museum of the City of Milwaukee Bulletin* 10(2).
1934 Certain Culture Classification Problems in Middle Western Archaeology. Paper presented at the Annual Meeting of the American Anthropological Association, Central Section, Indianapolis, IN.
1939 The Midwestern Taxonomic Method as an Aid to Archaeological Culture Study. *American Antiquity* 4(4):301–313.
1945 Trait List of the Prehistoric Wisconsin Cultures: The Woodland Peoples. *The Wisconsin Archaeologist (New Series)* 26(4):66–79.
1946 A Cultural Perspective of Northeastern Area Archaeology. *In* Man in Northeastern North America. F. Johnson, ed. Pp. 33–36. *Robert S. Peabody Foundation for Archaeology Papers*, 3, Andover, MA.
McKern, William C., P. F. Titterington, and James B. Griffin
1945 Painted Pottery Figurines from Illinois. *American Antiquity* 3:295–302.
Mead, George H.
1934 *Mind, Self, and Society*. University of Chicago Press, Chicago.
Mehl, Lewis E.
1988 Modern Shamanism: Integration of Biomedicine with Traditional World Views. In *Shaman's Path: Healing, Personal Growth, and Empowerment*. G. Doore, ed. Pp. 127–138. Shambhala, Boston.
Meillassoux, C.
1978 The "Economy" in Agricultural Self-Sustaining Societies: A Preliminary Analysis. In *Relations of Production: Marxist Approaches to Economic Anthropology*. D. Seddon, ed. Pp. 127–157. Frank Cass Publications, London.
Menon, Shanti
1996 Male Authority and Female Autonomy: A Study of the Matrilineal Nayars of Kerala, South India. In *Gender, Kinship, and Power: A Comparative and Interdisciplinary History*. M. J. Maynes, ed. Pp. 131–146. Routledge, New York.
Mensforth, R. P.
2001 Warfare and Trophy Taking in the Archaic Period. In *Archaic Transition in Ohio and Kentucky Prehistory*. O. H. Prufer, S. E. Pedde, and R. S. Meindl, eds. Pp. 110–138. Kent State University Press, Kent, OH.
Merbs, Charles F.
1980 The Pathology of a La Jollan Skeleton from Punta Minitas, Baja, California. *Pacific Coast Archaeological Society Quarterly* 16:37–43.
1983 Patterns of Activity-Induced Pathology in a Canadian Inuit Population. Archaeological Survey of Canada Paper 19. National Museums of Canada, Ottawa.

1989 Orientation of Canadian Thule and Early Historic Burials: Seasonality and Choice of Heaven. Paper presented at the Annual Meetings of the Society for Historical Archaeology, Baltimore, MD.

Metcalf, Peter and Richard Huntington

1979 *Celebrations of Death*. Cambridge University Press, Cambridge.

1991 *Celebrations of Death: The Anthropology of Mortuary Ritual*. 2nd edition. Cambridge University Press, Cambridge.

Metz, C. L. and F. W. Putnam

1886 Explorations in Ohio. Eighteenth and Nineteenth Annual Report. *Peabody Museum Reports* 3:449–466.

Middleton, A. P., I. C. Freestone, and M. N. Leese

1985 Textural Analysis of Ceramic Thin Sections: Evaluation of Grain Sampling Procedures. *Archaeometry* 27(1):64–74.

Middleton, John

1982 Lugbara Death. In *Death and the Regeneration of Life*. M. Bloch and J. Parry, eds. Pp. 134–154. Cambridge University Press, Cambridge.

Midwestern Regional Climate Center

2000 Historical Climate Summaries for the Midwest. Electronic source: http://mcc.sws.uiuc.edu/summary/index.html. Accessed 5/25/2002.

Mill, John Stuart

1863 *Utilitarianism*. 15th (1907) edition. Longmans, Green, London.

Miller, Daniel, and Christopher Tilley, eds.

1984 *Ideology, Power, and Prehistory*. Cambridge University Press, Cambridge.

Mills, William C.

1902 Excavations of the Adena Mound. *Ohio Archaeological and Historical Society Publications* 10:452–485.

1904 Explorations of the Gartner Mound and Village Site. *Ohio Archaeological and Historical Quarterly* 13:129–189.

1906 Baum Prehistoric Village. *Ohio Archaeological and Historical Quarterly* 15:45–136.

1907a *Certain Mounds & Village Sites in Ohio*. F. J. Heer Press, Columbus, OH.

1907b Explorations of the Edwin Harness Mound. *Ohio Archaeological and Historical Quarterly* 16:113–193.

1909 Exploration of the Seip Mound. *Ohio Archaeological and Historical Quarterly* 18:269–321.

1914 *Archaeological Atlas of Ohio*. Ohio State Archaeological and Historical Society, Columbus.

1916 Exploration of the Tremper Mound. *Ohio Archaeological and Historical Quarterly* 25:262–398.

1917 Exploration of the Westenhaver Mound. *Certain Mounds and Village Sites in Ohio* 2(4):242–284.

1922 Exploration of the Mound City Group. *Ohio Archaeological and Historical Quarterly* 31:423–584.

Milner, George R.

1995 An Osteological Perspective on Prehistoric Warfare. In *Regional Approaches to Mortuary Analysis*. L. A. Beck, ed. Pp. 221–244. Plenum Press, New York.

1999 Warfare in Prehistoric and Early Historic Eastern North America. *Journal of Archaeological Research* 7:105–151.

Mitchell, Douglas R.

1992 Burial, Ritual, World View, and Shamanism: Toward an Understanding of the Hohokam World. In *The Pueblo Grand Project: An Analysis of Classic Hohokam Mortuary Practices at Pueblo Grande*. D. R. Michell, ed. Soil Systems, Phoenix.

Mitchell, Douglas R., and Judy L. Brunson-Hadley

2001 *Ancient Burial Practices in the American Southwest*. University of New Mexico Press, Albuquerque.

Moerman, Michael

1965 Ethnic Identification in a Complex Civilization: Who Are the Lue? *American Anthropologist* 67:1215–1230.

Molleson, Theya

1994 The Eloquent Bones of Abu Hureyra. *Scientific American* 271(2):70–75.

Montet-White, Anta

1963 Analytic Description of the Chipped-Stone Industry from Snyders site, Calhoun County, Illinois. *In* Miscellaneous Studies in Typology and Classification. Anta M. White et al., eds. Pp. 1–70. *Anthropological Papers*, 19. University of Michigan, Museum of Anthropology, Ann Arbor.

1968 The Lithic Industries of the Illinois Valley in the Early and Middle Woodland Period. *Anthropological Papers*, 35. Museum of Anthropology, University of Michigan, Ann Arbor.

Montgomery, Henry

1913 Recent Archaeological Investigations in Ontario. *Transactions of the Canadian Institute* 9:2–22.

Mooney, James

1975 *Historical Sketch of the Cherokee*. Aldine, Chicago.

Moore, Clarence B.

1896 Certain River Mounds of Duval County, Florida. *Journal of the Academy of Natural Sciences of Philadelphia* (Second Series) 10:449–516.

1902 Certain Aboriginal Remains of the Northwest Florida Coast, Part 2. *Journal of the Academy of Natural Sciences of Philadelphia* 12(2): 127–358.

1903 Certain Aboriginal Remains of the Florida Central West Coast. *Journal of the Academy of Natural Sciences of Philadelphia* 12(3):361–439.

1905 Certain Aboriginal Mounds on Mobile Bay and on Mississippi Sound. *Journal of the Academy of Natural Sciences of Philadelphia* (Second Series) 13:245–297.

Moore, D. M., and R. C. Reynolds Jr.

1989 *X-Ray Diffraction and the Identification and Analysis of Clay Minerals*. Oxford University Press, Oxford.

Moore, Henrietta
1988 *Feminism and Anthropology*. University of Minnesota Press, Minneapolis.
Moore, John H., and Michael E. Moseley
2001 How Many Frogs Does It Take to Leap Around the Americas? Comments on Anderson and Gillam. *American Antiquity* 66(3):526–529.
Moorehead, Warren K.
1890 *Fort Ancient, the Great Prehistoric Earthwork of Warren County, Ohio*. R. Clarke and Co., Cincinnati.
1892 *Primitive Man in Ohio*. G. P. Putnam's Sons, New York.
1895 The Metzger Mound. *Proceedings of the Academy of Natural Sciences* 47:314–321.
1899 Report of Field Work in Various Portions of Ohio. *Ohio Archaeological and Historical Quarterly* 7:110–203.
1922 The Hopewell Mound Group of Ohio. *Field Museum of Natural History, Publication 211. Anthropological Series* 6(5):73–184, plates 51–83.
Morgan, Lewis H.
1881 *Houses and House-Life of the American Aborigines. North American Ethnology IV.* U.S. Geographical and Geological Survey of the Rocky Mountains, Department of the Interior, Washington, DC.
1965 *Houses and House-Life of the American Aborigines*. University of Chicago Press, Chicago.
Morgan, Richard G.
1946 *Fort Ancient*. Ohio State Archaeological and Historical Society, Columbus.
1952 Outline of Cultures in the Ohio Region. In *Archeology of Eastern United States*. J. B. Griffin, ed. Pp. 83–98. University of Chicago Press, Chicago.
Morris, I.
1991 The Archaeology of Ancestors: The Saxe/Goldstein Hypothesis Revisited. *Cambridge Archaeological Journal* 1:147–169.
Morrison, Kenneth M
1999 The Cosmos as Intersubjective: Native American Other-Than Human Persons. Department of Religious Studies, Arizona State University, unpublished MS.
Morse, Craig
1995 Symbols to Power: Styles and Media in the Inka State. In *Style, Society, and Person: Archaeological and Ethnological Perspectives*. C. Carr and J. E. Neitzel, eds. Pp. 419–433. Plenum Press, New York.
Morton, James, and Jeff Carskadden
1987 Test Excavations at an Early Hopewellian Site Near Dresden, Ohio. *Ohio Archaeologist* 37:8–12.
Moseley, J. E.
1965 The Paleopathologic Riddle of "Symmetrical Osteoporosis." *American Journal of Roentgenology and Radium Therapy and Nuclear Medicine* 95(1):135–142.
Muller, Jon
1984 The Southern Cult. In *The Southeastern Ceremonial Complex: Artifacts and Analysis—The Connonlandia Conference*. P. Galloway, ed. Pp. 11–26. University of Nebraska Press, Lincoln.
Munson, Patrick J.
1988 Late Woodland Settlement and Subsistence in Temporal Perspective. *In* Interpretations of Culture Change in the Eastern Woodlands during the Late Woodland Period. R. W. Yerkes, ed. Pp. 7–16. *Occasional Papers in Anthropology*, 3. Ohio State University, Columbus.
Murdock, George P.
1949a *Social Structure*. Macmillan, Toronto.
1949b Comparative Data on the Division of Labor by Sex. *Social Forces* 15(4):551–553.
Murdock, George P., and Caterina Provost
1973 Factors in the Division of Labor by Sex: A Cross-Cultural Analysis. *Ethnology* 12:203–225.
Nabakov, Peter, and Robert Easton
1989 *Native American Architecture*. Oxford University Press, New York.
Nadel, S. F.
1957 *Theory of Social Structure*. Free Press, Glencoe, IL.
Nagy, Bethel L.
2000 The Life Left in Bones: Evidence of Habitual Activity Patterns in Two Prehistoric Kentucky Populations. Unpublished doctoral dissertation, Arizona State University.
Nanda, Serena
2000 *Gender Diversity: Crosscultural Variations*. Waveland Press, Prospect Heights, IL.
National Geographic Society
1983 *Field Guide to the Birds of North America*. National Geographic Society, Washington, DC.
Neihardt, John G.
1932 *Black Elk Speaks*. University of Nebraska Press, Lincoln.
Nerburn, Kent
1994 The Wisdom of the Great Chiefs: The Classic Speeches of Chief Red Jacket, Chief Joseph, and Chief Seattle. New World Library, San Rafael, CA.
Netting, Robert McC.
1972 Sacred Power and Centralization: Aspects of Political Adaptation in Africa. In *Population Growth: Anthropological Implications*. B. Spooner, ed. Pp. 219–244. MIT Press, Cambridge, MA.
1993 *Smallholders, Householders: Farm Families and the Ecology of Intensive, Sustainable Agriculture*. Stanford University Press, Stanford, CA.
Neumann, George K.
1950 Racial Differentiation in the American Indian. Unpublished doctoral dissertation, University of Chicago.
1952 Archaeology and Race in the American Indian. In *Archaeology of Eastern United States*. J. B. Griffin, ed. Pp. 13–34. University of Chicago Press, Chicago.
1970 A Re-examination of the Question of the Middle Western Origin of the Delaware Indians. *Proceedings of the Indiana Academy of Sciences for 1969* 79:60–61.

Neumann, George K., and Melvin L. Fowler
1952 Hopewell Sites in the Lower Wabash Valley in Hopewellian Communities in Illinois. *Illinois State Museum Scientific Papers* 5:43–92.
Niquette, Charles M., R. Berle Clay, and Matthew M. Walters
1988 *Phase III Excavations of the Kirk (46Ms112) and Newman Mounds (46Ms110), Gallipolis Locks and Dam Replacement Project, Mason County, West Virginia*. Cultural Resource Analysts, Lexington, KY.
Noll, Richard
1987 The Presence of Spirits in Magic and Madness. In *Shamanism*. S. Nicholson, ed. Pp. 47–61. Theosophical Publishing House, Wheaton, IL.
Norris, Rae
1985 Excavation of the Toepfner Mound. *Archaeology of Eastern North America* 13:128–137.
Nowaczyk, Ronald
1988 *Introductory Statistics for Behavioral Research*. Holt, Rinehart and Winston, New York.
n.d. Accession List for the Tremper Mound. On file at Ohio Historical Center, Columbus.
Ohio Department of Transportation
1993 Phase III Re-Examination of Selected Prehistoric Resources and Phase II Testing of Flood Prone Areas Impacted By the Proposed PIK-32-13.55 Project in Seal Township, Pike County, Ohio (PID. 7563)—Addendum Report. Cultural Resources Unit, Bureau of Environmental Services, Ohio Department of Transportation.
Ortner, Sherry B.
1984 Theory in Anthropology Since the Sixties. *Comparative Studies in Society and History* 26:126–166.
1990 Gender Hegemonies. *Cultural Critique* 14:35–80.
1995 The Problem of "Women" as an Analytic Category. In *Making Gender: The Politics and Erotics of Culture*. S. B. Ortner, ed. Pp. 116–138. Beacon Press, Boston.
Ortner, Sherry B. and Harriet Whitehead
1981 Introduction: Accounting for Sexual Meanings. In *Sexual Meanings: The Cultural Construction of Gender and Sexuality*. S. B. Ortner and H. Whitehead, eds. Pp. 1–27. Cambridge University Press, Cambridge.
Osburn, Mary Hubbell
1946 Prehistoric Musical Instruments in Ohio. *Ohio State Archaeological and Historical Quarterly* 55(1):12–20.
O'Shea, John M.
1981 Social Configurations and the Archaeological Study of Mortuary Practices: A Case Study. In *The Archaeology of Death*. R. Chapman, I. Kinnes, and K. Randsborg, eds. Pp. 39–52. Cambridge University Press, Cambridge.
1984 *Mortuary Variability: An Archaeological Investigation*. Academic Press, Orlando, FL.
Otto, Martha Potter
1975 A New Engraved Adena Tablet. *Ohio Archaeologist* 25(2):31–36.
1979 Hopewell Antecedents in the Adena Heartland. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. D. Greber, eds. Pp. 9–14. Kent State University Press, Kent, OH.
1980 *Ohio's Prehistoric Peoples*. Ohio Historical Society, Columbus.
1984 Masterworks in Pipestone: Treasure from Tremper Mound. *Timeline* 1:18–33.
1992 A Prehistoric Menagerie: Ohio Hopewell Effigy Pipes. *In* Proceedings of the 1989 Smoking Pipe Conference: Selected Papers. C. F. Hayes III, C. C. Bodner, and M. L. Sempowski, eds. Pp. 1–11. *Rochester Museum & Science Center Research Records*, 22. Rochester, NY.
Owsley, Douglas W., C. E. Orser Jr., R. W. Mann, P. H. Moore-Jansen, and R. L. Montgomery
1987 Demography and Pathology of an Urban Slave Population from New Orleans. *American Journal of Physical Anthropology* 74:185–197.
Pacheco, Paul J.
1988 Ohio Middle Woodland Settlement Variability in the Upper Licking River Drainage. *Journal of the Steward Anthropological Society* 18(1/2): 87–117.
1989 The Spatial Distribution of Mounds along the Muskingum River: An Application of Linear Nearest Neighbor Analysis. *In* Anthropology: Unity in Diversity. M. Sidky, J. Foradas, and P. Pacheco, eds. Pp. 20–33. *Occasional Papers in Anthropology*, 4. Department of Anthropology, Ohio State University, Columbus.
1993 Ohio Hopewell Settlement Patterns: An Application of the Vacant Center Model to Middle Woodland Period Intracommunity Settlement Variability in the Upper Licking River Valley. Unpublished doctoral dissertation, Ohio State University.
1996 Ohio Hopewell Regional Settlement Patterns. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology*. P. J. Pacheco, ed. Pp. 16–35. Ohio Archaeological Council, Columbus.
1997 Ohio Middle Woodland Intracommunity Settlement Variability: A Case Study from the Licking Valley. In *Ohio Hopewell Community Organization*. W. S. Dancey and P. J. Pacheco, eds. Pp. 41–84. Kent State University Press, Kent, OH.
Pacheco, Paul J., and William S. Dancey
n.d. Integrating Mortuary and Settlement Data on Ohio Hopewell Society. In *Recreating Hopewell: New perspectives on Middle Woodland in Eastern North America*. D.K. Charles and J.E. Buikstra, eds. Book in progress.
Park, W. Z.
1938 Shamanism in Western North America. *Northwestern University Studies in the Social Sciences*, 2. Northwestern University, Evanston, IL.

Parker, Arthur C.
1923 *Seneca Myths and Folk Tales*. Buffalo Historical Society, Buffalo, NY.

Parmalee, Paul W.
1965 The Vertebrate Fauna. *In* The McGraw Site: A Study in Hopewellian Dynamics. O. Prufer, D. H. McKenzie, O. Pi-Sunyer, H. C. Cutler, R. A. Yarness, P. W. Parmalee, and D. H. Stansbery, eds. Pp. 115–118. *Scientific Publications, New Series*, 4(1). Cleveland Museum of Natural History.

Parmalee, Paul W., Andreas A. Paloumpis, and Nancy Wilson
2000 Animals Utilized by Woodland Peoples Occupying the Apple Creek Site, Illinois. *Reports of Investigation 23*. Illinois State Museum, Springfield.

Parsons, Talcott
1949 *The Structure of Social Action*. Free Press, New York.

Paterek, Josephine
1994 *Encyclopedia of American Indian Costume*. W.W. Norton and Company, New York.

Patterson, Clair C.
1971 Native Copper, Silver and Gold Accessible to Early Metallurgists. *American Antiquity* 36(3):286–321.

Pauketat, Timothy R.
2000 The Tragedy of the Commoners. In *Agency in Archaeology*. M.-A. Dobres and J. E. Robb, eds. Pp. 113–129. Routledge, London.
2001a Practice and History in Archaeology. *Anthropological Theory* 1(1):73–98.
2001b A New Tradition in Archaeology. In *The Archaeology of Traditions: Agency and History Before and After Columbus*. T. Pauketat, ed. Pp. 1–16. University of Florida Press, Gainesville, FL.
2001c Concluding Thoughts on Tradition, History, and Archaeology. In *The Archaeology of Traditions: Agency and History Before and After Columbus*. Pp. 253–256. University of Florida Press, Gainesville.

Pauketat, Timothy R., ed.
2001d *The Archaeology of Traditions*. University of Florida Press, Gainesville.

Pauketat, Timothy R., and Thomas E. Emerson
1990 The Ideology of Authority and the Power of the Pot. *American Anthropologist* 93:919–935.

Pearson, Michael Parker
1982 Mortuary Practices, Society, and Ideology: An Ethnoarchaeological Study. In *Symbolic and Structural Archaeology*. I. Hodder, ed. Pp. 99–113. Cambridge University Press, Cambridge.
1999 *The Archaeology of Death and Burial*. Texas A&M University, College Station.

Pearson, Mike, and Colin Richards
1994 Ordering the World: Perceptions of Architecture, Space, and Time. In *Architecture and Order: Approaches to Social Space*. M. Pearson and C. Richards, eds. Pp. 1–37. Routledge, New York.

Pederson, Jennifer and Jarrod Burks
2000 Recent Land Acquisition and Archaeological Field Work at Hopewell Culture National Historical Park, Ross County, Ohio. Paper presented at the Summary Presentations Made at the Fall Meeting of the Ohio Archaeological Council, Ohio Historical Center, Columbus, OH.

Pederson, Jennifer, Jarrod Burks, and William Dancey
2002a Hopewell Mound Group: Data Collection in 2001. *Ohio Archaeological Council Newsletter* 14(1):17–19.
2002b Hopewell Mound Group: Data Collection at the Hopewell Type Site, 2001. Paper presented at the Annual Meeting of the Midwest Archaeological Conference, La Crosse, WI.

Peebles, Christopher S.
1971 Moundville and Surrounding Sites: Some Structural Considerations of Mortuary Practices II. *In* Approaches to the Social Dimensions of Mortuary Practices. J. A. Brown, ed. Pp. 68–91. *Memoirs of the Society for American Archaeology*, 25. SAA, Washington, DC.
1974 *Moundville: The Organization of a Prehistoric Community and Culture*. Unpublished doctoral dissertation, University of California.
1977 Biocultural Adaptation in Prehistoric America: An Archaeologist's Perspective. *In* Sociocultural Adaptations in Prehistoric America. R. L. Blakely, ed. Pp. 115–130. *Southern Anthropological Society Proceedings*, 11. University of Georgia Press, Athens.

Peebles, Christopher S., and Susan Kus
1977 Some Archaeological Correlates of Ranked Societies. *American Antiquity* 42(3):421–448.

Pen-li, Chuang
1963 Panpipes of Ancient China. *Monographs, 4*. Institute of Ethnology, Academia Sinica, Nankang, Taipei, Taiwan, ROC.

Penney, David W.
1980 The Adena Engraved Tablets: A Study of Art Prehistory. *Mid-Continental Journal of Archaeology* 5(1):3–38.
1982 Middle Woodland Period: The Birth of a North American Iconographic Tradition. Paper presented at the Douglas Fraser Memorial Symposium on Primitive and Pre-Columbian Art, Columbia University, New York, NY.
1983 Imagery of the Middle Woodland Period: The Birth of a North American Iconographic Tradition. Paper presented at the Douglas Fraser Memorial Symposium on Primitive and Precolumbian Art, Columbia University, New York, NY.
1985 Continuities of Imagery and Symbolism in the Art of the Woodlands. In *Ancient Art of the American Woodland Indians*. D. S. Brose, J. A. Brown, and D. W. Penney, eds. Pp. 147–198. Harry Abrams, New York.
1989 *Hopewell Art*. Unpublished doctoral dissertation, Columbia University.

Penney, David W., and Gary Carriveau
1983 Source Analysis of Ohio Pipestone. Archaeological Collections, Ohio Historical Society, Columbus, unpublished MS and neutron activation analysis data.
1985 Trace Element Analysis of Prehistoric Pipestone for Provenience Information. Paper presented at the Annual Meeting of the American Association of Museums, Detroit, MI.

Perino, Gregory H.
1955 The Bedford Mounds. Thomas Gilcrease Institute of American History and Art, Tulsa, OK, unpublished MS.
1968 The Pete Klunk Mound Group, Calhoun County, Illinois: The Archaic and Hopewell Occupations (with an Appendix on the Gibson Mound Group). *In* Hopewell and Woodland Site Archaeology in Illinois. J. A. Brown, ed. Pp. 9–124. *Illinois Archaeological Survey Bulletin*, University of Illinois, Urbana.
1970 Certain Hopewell and Late Woodland Sites in West Central Illinois. Museum of Red River, Idabel, OK, unpublished MS.
n.d. Hopewellian Sites in Western Illinois. Library of James B. Griffin, University of Michigan, Museum of Anthropology, and The Thomas Gilcrease Institute of American History and Art, Tulsa, OK.

Peters, L., and D. Price-Williams
1980 Toward an Experiential Analysis of Shamanism. *American Ethnologist* 7:397–418.

Peterson, Drexel A.
1979 An Archaeological Survey and Assessment of the Wolf River Watershed. Unpublished report submitted to the U.S. Department of Agriculture, Soil Conservation Service, Nashville, TN.

Peterson, Jane
1994 *Changes in the Sexual Division of Labor in the Prehistory of the Southern Levant*. Unpublished doctoral dissertation, Arizona State University.

Peterson, Jane and Diane E. Hawkey
1998 Preface: Special Issue on Activity Patterns and Musculoskeletal Stress Markers. *International Journal of Osteoarchaeology* 8(5):303–304.

Peterson, L., and P. Renstrom
1986 *Sports Injuries: Their Prevention and Treatment*. Martin Dunitz, London.

Phagan, Carl J.
n.d.a Preliminary Summary of an Intensive Archaeological Survey. Delaware County Sewerage Improvement Project, Contract S73-1, Treatment Facility Location.
n.d.b *DECCO-1 Field Notes and Laboratory Records*.
1977 Intensive Archaeological Survey of the S.R. 315 Wastewater Treatment Facility Location, Known as the DECCO-1 Site (33-Dl-28). Progress Report to the Board of County Commissioners, Delaware County, OH.
1979 Field and laboratory notes on the DECCO site, 33-Di-28. Ohio Historical Center, Columbus.

Phillips, Philip
1970 Archaeological Survey in the Lower Yazoo Basin, Mississippi, 1949–1955. *Papers of the Peabody Museum of Archaeology and Ethnology*, 60. Peabody Museum, Cambridge, MA.

Phillips, Phillip, and James A. Brown
1978 *Pre-Columbian Shell Engravings from the Craig Mound at Spiro, Oklahoma, Part I*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, MA.
1984 *Pre-Columbian Shell Engravings from the Craig Mound at Spiro, Oklahoma, Part II*. Peabody Museum of Archaeology and Ethnology, Harvard University, Cambridge, MA.

Pickard, William H.
1996 1990 Excavations at Capitolium Mound (33Wn13) Marietta, Washington County, Ohio: A Working Evaluation. In *A View from the Core*. Paul J. Pacheco, ed. Pp. 274–285. Ohio Archaeological Council, Columbus.

Piddocke, Stuart
1969 The Potlatch System of the Southern Kwakiutl: A New Perspective. In *Environment and Cultural Behavior*. A. P. Vayda, ed. Pp. 130–156. Natural History Press, Garden City, NY.

Pilling, Arnold R.
1997 Cross-Dressing and Shamanism among Selected Western North American Tribes. In *Two-Spirit People: Native American Gender Identity, Sexuality and Spirituality*. S.-E. Jacobs, W. Thomas, and S. Lang, eds. Pp. 69–99. University of Illinois Press, Chicago.

Powell, Bruce B.
1957 Hopewellian Pottery of the Lower Illinois Valley: The Snyders Site Ceramics. *Papers of the Michigan Academy of Science, Arts and Letters* 42:219–224.

Powell, P.
1991 Skeletal Evidence of Changes in Subsistence Activites Between the Archaic and Mississippian Time Periods in Northwestern Alabama. In *What Mean these Bones?* M. Powell, P. Bridges, and A. Minis, eds. Pp. 89–101. University of Alabama Press, Tuscaloosa.

Praemer, A., S. Furner, and D. P. Rice
1992 *Musculoskeletal Conditions in the United States*. American Academy of Orthopedic Surgeons, IL.

Preucel, Robert W.
2000 Making Pueblo Communities: Architectural Discourse at Kotyiti, New Mexico. In *The Archaeology of Communities: A New World Perspective*, M. A. Canuto and J. Yaeger, eds. Pp. 58–77. Routledge, London, New York.

Price, Neil S.
2001 An Archaeology of Altered States: Shamanism and Material Culture Studies. In *The Archaeology of Shamanism*. N. Price, ed. Pp. 3–16. Routledge, London.

Price, T. Douglas, and Gary M. Feinman, eds.
1995 *Foundations of Social Inequity.* Plenum Press, New York.
Prufer, Olaf H.
1961a The Hopewell Complex of Ohio. Unpublished doctoral dissertation, Harvard University.
1961b Prehistoric Hopewell Meteorite Collecting: Context and Implications. *Ohio Journal of Science* 61:341–352.
1962 Prehistoric Hopewell Meteorite Collecting: Further Evidence. *Ohio Journal of Science* 62:314–316.
1964a The Hopewell Complex of Ohio. *In* Hopewellian Studies. J. Caldwell and R. Hall, eds. Pp. 35–83. *Scientific Papers*, 12. Illinois State Museum, Springfield.
1964b The Hopewell Cult. *Scientific American* 211(6):90–102.
1967 The Scioto Valley Archaeological Survey. In *Studies in Ohio Archaeology.* O. H. Prufer and D. K. McKenzie, eds. Pp. 267–328. Western Reserve University Press, Cleveland.
1968 Ohio Hopewell Ceramics: An Analysis of the Extant Collections. *Anthropological Papers*, 63. Museum of Anthropology, University of Michigan, Ann Arbor.
1997a Fort Hill 1964: New Data and Reflections on Hopewell Hilltop Enclosures in Southern Ohio. In *Ohio Hopewell Community Organization.* William S. Dancey and Paul J. Pacheco, eds. Pp. 311–327. Kent State University Press, Kent, OH.
1997b The Ilif Riddle Sites. In *Ohio Hopewell Community Organization.* W. S. Dancey and P. J. Pacheco, eds. Pp. 361–363. Kent State University Press, Kent, OH.
1997c How to Construct a Model: A Personal Memoir. In *Ohio Hopewell Community Organization.* William S. Dancey and Paul J. Pacheco, eds. Pp. 105–128. Kent State University Press, Kent, OH.
Prufer, Olaf H., and Douglas H. McKenzie
1965 Ceramics. *In* The McGraw Site: A Study in Hopewellian Dynamics. O. H. Prufer, ed. Pp. 16–57. *Scientific Publications*, 4(1). Cleveland Museum of Natural History, Cleveland.
1975 *Studies in Ohio Archaeology, Appendix of Radiocarbon Dates*. Kent State University Press, Kent, OH.
Prufer, Olaf H., Douglas H. McKenzie, Oriol Pi-Sunyer, Hugh C. Cutler, Richard A. Yarness, Paul W. Parmalee, and Ldavid H. Stansbery
1965 The McGraw Site: A Study in Hopewellian Dynamics. *Cleveland Museum of Natural History, Scientific Publications* n.s. 4(1).
Pryor, John, and Christopher Carr
1995 Basketry of Northern California Indians: Interpreting Style Hierarchies. In *Style, Society, and Person.* Christopher Carr and J. Neitzel, eds. Pp. 259–296. Plenum Press, New York.
Putnam, Frederick W.
1882 Notes on Copper Objects from North and South America, Contained in the Collections of the Peabody Museum. *Collections of the Peabody Museum, 15th Annual Report* 3:83–148.
1883 Iron from the Ohio Mounds. *Proceedings of the American Antiquarian Society* (n.s.) 2:349–363.
Quimby, George I.
1941 The Goodall Focus: An Analysis of Ten Hopewellian Components in Michigan and Indiana. *Prehistory Research Series*, 2(2). Indiana Historical Society, Indianapolis.
1944 Some New Data on the Goodall Focus. *Papers of the Michigan Academy of Science, Arts and Letters* 29:419–443.
1960 *Indian Life in the Upper Great Lakes: 11,000 B.C. to A.D. 1800*. University of Chicago Press, Chicago.
Rackerby, Frank
1969 Preliminary Report on the Macoupin Site: A Lower Illinois Valley Middle Woodland Settlement. Paper presented at the Annual Meeting of the Society for American Archaeology, Milwaukee, WI.
1982 Macoupin: A Havana-Hopewell Site in the Lower Illinois Valley. Paper presented at the Annual Meeting of the Midwest Archaeological Conference, Cleveland, OH.
Radcliffe-Brown, A. R.
1952a *Structure and Function in Primitive Society*. Free Press, New York.
1952b On Social Structure. In *Structure and Function in Primitive Society.* Pp. 188–204. Free Press, New York.
Radcliffe-Brown, A. R., and Daryll Forde
1950 *African Systems of Kinship and Marriage*. Oxford University Press, London.
Radin, Paul
1945 *The Road of Life and Death: A Ritual Drama of the American Indians*. Pantheon Books, New York.
1948 Winnebago Hero Cycles: A Study in Aboriginal Literature. *Memoirs of the International Journal of American Linguistics* 14(3).
1970 *The Winnebago Tribe*. University of Nebraska Press, Lincoln. (Originally, in *Thirty-seventh Annual Report of the Bureau of American Ethnology*, Government Printing Office, Washington, DC, 1923.)
1972 *The Trickster: A Study in American Indian Mythology.* Schocken Books, New York. (Reprint of the 1956 edition.)
Rafferty, Janet
1983 A New Map of the Ingomar Mounds Site. *Mississippi Archaeology* 18(2):18–27.
1987 The Ingomar Mounds Site: Internal Structure and Chronology. *Midcontinental Journal of Archaeology* 12(2):147–173.
Rainey, Katharine
2003 Using Ecology and Ethnography of Historic Eastern U.S. Swidden Practices to Interpret Ohio Hopewell Farming. Paper presented at the Annual

Meeting of the Society for American Archaeology, Milwaukee, WI.

Ranney, D., R. Wells, and A. Moore
1995 The Anatomical Location of Work-Related Chronic Musculoskeletal Disorders in Selected Industries Characterized by Repetitive Upper-Limb Activity. *Ergonomics* 38(7):1408–1423.

Rapp, George, Jr., Eiler Henrickson, and James Allert
1990 Native Copper Sources of Artifact Copper in Pre-Columbian North America. *Geological Society of American Centennial Special Volume* 4:479–498.

Rappaport, Roy A.
1968 *Pigs for the Ancestors*. Yale University Press, New Haven, CT.
1971 Nature, Culture, and Ecological Anthropology. In *Man, Culture, and Society.* H. L. Shapiro, ed. Pp. 237–266. Oxford University Press, Oxford.
1979 *Ecology, Meaning, and Ritual*. North Atlantic Books, Richmond, CA.

Rasmussen, Knud
1929 Intellectual Culture of the Iglulik Eskimos. *Report of the Fifth Thule Expedition, 1921–1924*, 7(1). Gyldendalske Boghandel, Copenhagen.

Rathbun, T. A.
1987 Health and Disease from a South Carolina Population. *American Journal Physical Anthropology* 74:239–253.

Redman, Charles L.
1977 Man, Domestication, and Culture in Southwestern Asia. In *Origins of Agriculture*. C. A. Reed, ed. Pp. 523–567. Mouton, The Hague.

Redmond, Brian G.
1990 The Yankeetown Phase: Emergent Mississippian Cultural Adaptation in the Lower Ohio River Valley. Unpublished doctoral dissertation. Indiana University.

Reece, Sandra, B. Steinberg, M. W. Marzke, N. Toth, K. Schick, K. Hunt, R. L. Linscheid, and K.-N. An
1997 Sidescraping, Endscraping, and the Hominid Hand. Paper presented at the Annual Meeting of the Paleoanthropological Society, St. Louis, MO.

Reichel-Dolmatoff, Gerardo
1971 *Amazonian Cosmos: The Sexual and Religious Symbolism of the Tukano Indians*. University of Chicago Press, Chicago.
1978 Desana Animal Categories, Food Restrictions, and the Concept of Color Energies. *Journal of Latin American Lore* 4:243–291.
1987 *Shamanism and the Art of the Eastern Tukanoan Indians*. Brill, Leiden.

Reichs, Kathleen J.
1974 Biological Variability and the Hopewell Phenomenon. Unpublished doctoral dissertation, Northwestern University.
1984 Pearls or People: A Biometric Analysis of Interregional Exchange during Hopewell Times. *Central Issues in Anthropology* 5(2):47–65.

Rein, Judith S.
1974 *The Complicated Stamped Pottery of the Mann Site, Posey County, Indiana*. Unpublished master's thesis, Indiana University.

Renfrew, Colin
1986 Introduction: Peer Polity Interaction and Socio-Political Change. In *Peer Polity Interaction and Socio-Political Change*. C. Renfrew and J. Cherry, eds. Pp. 1–18. Cambridge University Press, Cambridge.

Renfrew, Colin and Paul Bahn
1991a What Contact Did They Have? Trade and Exchange. In *Archaeology: Theories, Methods, and Practice*. Thames and Hudson, New York.
1991b *Archaeology: Theories, Methods, and Practice*. Thames and Hudson, New York.

Renfrew, Colin, and Stephen Shennan
1982 *Ranking, Resource, and Exchange*. Cambridge University Press, Cambridge.

Ricardo, David
1817 *On the Principles of Political Economy and Taxation*. 1819 edition. Joseph Milligan, Georgetown, DC.

Rice, Glen E.
1998 War and Water: An Ecological Perspective on Hohokam Irrigation. *Kiva* 63(3):263–301.
2000 The Segmentary Organization of the Salado and Hohokam. In *Salado*. J. Dean, ed. Pp. 143–166. University of New Mexico Press, Albuquerque.

Richmond, Michael D.
2001 A National Register Evaluation of Sites 15Mm137, 15Mm139 and 15Mm140 and Deep Testing along Sycamore Creek in Montgomery County, Kentucky. Submitted to Contract Publication Series 01-106. Cultural Resource Analysts.

Richmond, Michael D. and Jonathan P. Kerr
2002 Archaeological Investigations at 15Mm137: Evidence for Middle Woodland Ritualism in the Bluegrass Region of Kentucky. Paper presented at the Annual Midwest Archaeological Conference, Columbus, OH.

Riordan, Robert V.
1995 A Construction Sequence for a Middle Woodland Hilltop Enclosure. *Midcontinental Journal of Archaeology* 20(1):62–104.
1996 The Enclosed Hilltops of Southern Ohio. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology.* Paul J. Pacheco, ed. Pp. 242–256. Ohio Archaeological Council, Columbus.
1998 Boundaries, Resistance, and Control: Enclosing the Hilltops in Middle Woodland Ohio. In *Ancient Earthwork Enclosures of the Eastern Woodlands.* J. R. C. Mainfort and L. P. Sullivan, eds. Pp. 68–84. University of Florida Press, Gainesville.
2002 Fire, Smoke and Stone at the Pollock Works. *Ohio Archaeological Council Newsletter* 14(1):23.

Ritchie, William A.
1937 Culture Influences from Ohio in New York Archaeology. *American Antiquity* 2(3):182–194.
1938 Certain Recently Explored New York Mounds and their Probable Relation to the Hopewell Culture.

Research Records, 4. Rochester Museum of Arts and Sciences, Rochester, NY.
1969 *The Archaeology of New York State*. Revised edition. Natural History Press, Garden City, NY.
Ritzenthaler, Robert E.
1978 Southeastern Chippewa. In *Handbook of North American Indians*, vol. 15. Northeast. B. Trigger, ed. Pp. 743–759. Smithsonian Institution Press, Washington, DC.
Ritzer, George and P. Gindoff
1994 Agency-Structure, Micro-Macro, Individualism-Holism-Relationism: A Metatheoretical Explanation of Theoretical Convergence between the United States and Europe. In *Agency and Structure: Reorienting Social Theory.* Piotr Sztompka, ed. Pp. 3–23. Gordon and Breach, Yverdon, Switzerland.
Robb, John E.
1999 Secret Agents: Culture, Economy, and Social Reproduction. In *Material Symbols: Culture and Economy in Prehistory*. J. E. Robb, ed. Pp. 3–15. Center for Archaeological Investigations, Southern Illinois University, Carbondale.
Roe, Peter
1979 Marginal Men: Male Artists among the Shipibo Indians of Peru. *Anthropologica* 2(2):187–221.
1995 Style, Society, Myth, and Structure. In *Style, Society, and Person: Archaeological and Ethnological Perspectives.* C. Carr and J. Neitzel, eds. Pp. 27–76. Plenum Press, New York.
Rogers, J. D., and B. D. Smith, eds.
1995 *Mississippian Communities and Households*. University of Alabama Press, Tuscaloosa.
Romain, William F.
2000 *Mysteries of the Hopewell: Astronomers, Geometers, and Magicians of the Eastern Woodlands*. University of Akron Press, Akron, OH.
2001 Lost Worlds of the Hopewell. Compact disk produced by the author, Olmstead Township, OH.
2004 Hopewell Geometric Enclosures: Gatherings of the Fourfold. Unpublished doctoral dissertation. Department of Anthropology, University of Leicester, England.
Roper, Donna C.
1979 The Method and Theory of Site Catchment Analysis: A Review. *Advances in Archaeological Method and Theory* 2:119–140.
Rosaldo, M. Z., and L. Lamphere, eds.
1974 *Woman, Culture, and Society*. Stanford University Press, Stanford, CA.
Roscoe, Will
1998 *Changing Ones: Third and Fourth Genders in Native North America*. St. Martin's Press, New York.
1999 *Changing Ones: Third and Fourth Graders in Native North America.* St. martin's Press, New York.
Roseman, Marina
1995 *Dream Songs and Healing Sounds in the Rainforests of Malaysia*. Smithsonian Folkways Recordings, Smithsonian Institution, Washington, DC.
Rosenthal, Beryl
1995 Iroquois False face Masks: The Multiple Causes of Style. In *Style, Society, and Person: Archaeological and Ethnological Perspectives*. C. Carr and J.E. Neitzel, eds. Pp. 345–367. Plenum Press, New York.
Rosman, Abraham, and Paula Rubel
1971 *Feasting with Mine Enemy: Rank and Exchange among Northwest Coast Societies*. Columbia University Press, New York.
Rothschild, N.
1979 Mortuary Behavior and Social Organization at Indian Knoll and Dickson Mounds. *American Antiquity* 44(4):658–675.
Rouse, Irving
1967 Seriation in Archaeology. In *American Historical Anthropology: Essays in Honor of Leslie Spier.* C. Riley and W. Taylor, eds. Pp. 153–195. Southern Illinois University Press, Carbondale.
Rozario, Santi
1991 Ethno-religious Communities and Gender Divisions in Bangladesh: Women as Boundary Markers. In *Intersexions: Gender/Class/Culture/Ethnicity.* G. Bottomley, M. de Lepervanche, and J. Martin, eds. Pp. 14–32. Allen and Unwin, North Sydney.
Ruby, Bret J.
1993 An Archaeological Investigation of Mann Phase Settlement Patterns in Southwestern Indiana. *Glenn A. Black Laboratory of Archaeology Reports of Investigations*, 93-18, Indiana University, Bloomington.
1996 Hopewellian Centers in Context: Intensive Survey in the Vicinity of the Hopeton Works, Hopewell Culture National Historical Park, Ross County, Ohio. Paper presented at the Annual Meeting of the Midwest Archaeological Conference, Beloit, WI.
1997a The Mann Phase: Hopewellian Subsistence and Settlement Adaptations in the Wabash Lowlands of Southwestern Indiana. Unpublished doctoral dissertation, Indiana University.
1997b Current Research at Hopewell Culture National Historical Park. *Hopewell Archeology: The Newsletter of Hopewell Archaeology in the Ohio River Valley* 2(2):1–6.
1997c Beyond the Walls: Recent Research at the Hopeton Works, Hopewell Culture National Historical Park. Paper presented at the Annual Meeting of the Ohio Archaeological Council, Columbus, OH.
1997d Field School Excavations at the Hopeton Earthworks. *The Falcon, Newsletter of Hopewell Culture National Historical Park*. Fall issue.
1997e The Mann Phase: Hopewellian Community Organization in the Wabash Lowlands. Paper presented at the Annual Meetings of the Society for American Archaeology, Nashville, TN.
1998 An Archeological and Historical Evaluation of the Nature, Integrity and Significance of the Spruce Hill Works, Ross County, Ohio. *Reports of*

Investigations, 98–1. Hopewell Culture National Historical Park, Chillicothe, IL.

Ruby, Bret J., and Scott J. Troy
1997 An Archeological Reconnaissance and Assessment of Effect Regarding the Installation of Boundary Fence at the Hopeton Works (33–Ro-28), Ross County, Ohio. Hopewell Culture National Historical Park, Chillicothe, IL.

Ruby, Bret J., Janis K. Kearney, and William R. Adams
1993 Faunal Remains from the Grabert Site (12 Po 248): A Middle Woodland Occupation in Posey County, Indiana. *In* Current Research in Indiana Archaeology and Prehistory: 1991–1992. Brian G. Redmond, ed. 14: Pp. 46–48. *Research Reports, Glenn A. Black Laboratory of Archaeology*, 14. Indiana University, Bloomington.

Rudolph, Teresa P.
1981 The Distribution of Late Woodland Sites in the Black Bottom Area, Pope and Massac Counties, Illinois. Unpublished Master's thesis. Southern Illinois University.

Ruhl, Katharine C.
1992 Copper Earspools From Ohio Hopewell Sites. *Midcontinental Journal of Archaeology* 17:46–79.
1996 Copper Earspools in the Hopewell Interaction Sphere: The Temporal and Social Implications. Unpublished master's thesis, Kent State University.

Ruhl, Katharine C., and Mark F. Seeman
1998 The Temporal and Social Implications of Ohio Hopewell Copper Ear Spool Design. *American Antiquity* 63:651–662.

Russell, Israel
1907 The Surface Geology of Portions of Menominee, Dickinson and Iron Counties, Michigan. *In* Report of the State Board of Geological Survey of Michigan for the Year 1906. Pp. 1–91.

Sahlins, Marshal
1958 *Social Stratification in Polynesia*. University of Washington Press, Seattle.
1968 Poor Man, Rich Man, Big Man, Chief: Political Types in Melanesia and Polynesia. In *Peoples and Culture of the Pacific.* A. P. Vayda, ed. Pp. 157–176. Natural History Press, Garden City, NY.
1972 *Stone Age Economics*. Aldine–Atherton, Chicago.

Saitta, Dean J.
1994 Agency, Class, and Archaeological Interpretation. *Journal of Anthropological Arcaheology* 13:201–227.

Sallade, Jane K., and David P. Braun
1982 Spatial Organization of Peasant Agricultural Subsistence Territories: Distance Factors and Crop Location. In *Ethnology by Archaeologists.* Elisabeth Tooker, ed. Pp. 19–41. American Ethnological Society, Washington, DC.

Sanday, P.
1973 Toward a Theory of the Status of Women. *American Anthropologist* 75:1682–1700.

Sanders, William T.
1956 The Central Mexican Symbiotic Region: A Study of Prehistoric Settlement Patterns. *In* Prehistoric Settlement Patterns in the New World. G. R. Willey, ed. Pp. 15–127. *Viking Fund Publications in Anthropology*, 23. Viking, New York.

Sanders, William T., and Barbara J. Price
1968 *Mesoamerica: The Evolution of a Civilization*. Random House, New York.

Sassaman, Kenneth E.
2000 Agents of Change in Hunter-Gatherer Technology. In *Agency in Archaeology.* M.-A. Dobres and J. E. Robb, eds. Pp. 148–168. Routledge, London.

Saxe, Arthur A.
1970 Social Dimensions of Mortuary Practices in a Mesolithic Population from Wadi Halfa, Sudan. Unpublished doctoral dissertation, University of Michigan.

Schneider, H. J., A. Y. King, J. L. Bronson, and E. H. Miller
1974 Stress Injuries and Developmental Changes of Lower Extremities of Ballet Dancers. *Radiology* 113:627.

Schoolcraft, Henry Rowe
1853–1857 *Information Respecting the History, Condition and Prospects of the Indian Tribes of the United States*, vol. 1. Bureau of Indian Affairs, Washington, DC.

Schroder, David L., and Katherine C. Ruhl
1968 Metallurgical Characteristics of North American Prehistoric Copper Work. *American Antiquity* 33(2):162–169.

Sciulli, Paul W., and Michael C. Mahaney
1986 Evidence for Local Biological Continuity for an Ohio Hopewell Complex Population. *Mid-Continental Journal of Archaeology* 11(2):181–199.

Sciulli, Paul F., Bruce W. Aument, and Leonard R. Piotrowski
1982 The Williams (33WO7a) Red Ochre Cemetery: Preliminary Descriptive and Comparative Analysis of Acquired Dental Pathologies. *Pennsylvania Archaeologist* 53(2):17–24.

Sciulli, Paul W., Cheryl A. Johnston, D. Troy Case, Teresa Cadiente, and Robert Pickering
n.d. Methods Used to Age and Sex Ohio Hopewell Skeletal Remains and an Evaluation of the Assignments. *In* The Ohio Hopewell Mortuary Record: An Archaeological and Bioarchaeological Inventory. D. T. Case and C. Carr, eds. Department of Anthropology, Arizona State University, unpublished MS and databank.

Seeman, Mark F.
1977a The Hopewell Interaction Sphere: The Evidence for Interregional Trade and Structural Complexity. Unpublished doctoral dissertation, Indiana University.
1977b Stylistic Variation in Middle Woodland Pipe Styles: The Chronological Implications. *Mid-Continental Journal of Archaeology* 2:47–66.

1979a The Hopewell Interaction Sphere: The Evidence for Inter-Regional Trade and Structural Complexity. *Indiana Historical Society, Prehistoric Research Series* 5(2):237–438.
1979b Feasting with the Dead: Ohio Hopewell Charnel House Ritual as a Context for Redistribution. In *Hopewell Archaeology: The Chillicothe Conference*, D. S. Brose and N. Greber, eds. Pp. 39–46. Kent State University Press, Kent, OH.
1981a An Archaeological Survey of the Hopewell Site (33Ro27) and Vicinity, Ross County, Ohio. Department of Sociology and Anthropology, Kent State University, Kent, OH.
1981b The Questions of "Villages" at the Hopewell Site: An Archaeological Survey of the Hopewell Site (33Ro27) and Vicinity, Ross County, Ohio. Paper presented at the Midwestern Archaeological Conference.
1986 Adena "Houses" and the Implications for Early Woodland Settlement Models in the Ohio Valley. In *Early Woodland Archeology.* K. B. Farnsworth and T. E. Emerson, eds. Pp. 564–580. Center for American Archaeology Press, Kampsville, IL.
1988 Ohio Hopewell Trophy Skull Artifacts as Evidence for Competition in Middle Woodland Societies Circa 50 B.C.–A.D. 350. *American Antiquity* 53(3):565–577.
1992 Report on the Age, Affiliation and Significance of the GE Site (12 Po 885). Submitted to the United States Attorney's Office.
1995 When Words Are Not Enough: Hopewell Interegionalism and the Use of Material Symbols at the GE Mound. In *Native American Interactions: Multiscalar Analyses and Interpretation in the Eastern Woodlands.* M. S. Nassenay and K. E. Sassaman, eds. Pp. 122–143. University of Tennessee Press, Knoxville.
1996 The Ohio Hopewell Core and Its Many Margins: Deconstructing Upland and Hinterland Relations. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology.* P. J. Pacheco, ed. Pp. 304–315. Ohio Archaeological Council, Columbus.

Seeman, Mark F., and James L. Branch
n.d. The Mounded Landscapes of Ohio: Hopewell Patterns and Placements. In *Recreating Hopewell: New Perspectives on Middle Woodland in Eastern North America*. D.K. Charles and J.E. Buikstra, eds. Book in progress.

Seeman, Mark F., and William S. Dancey
2000 The Late Woodland Period in Southern Ohio: Basic Issues and Prospects. In *Late Woodland Societies: Tradition and Transformation across the Midcontinent.* T. E. Emerson, D. L. McElrath, and A. C. Fortier, eds. Pp. 583–611. University of Nebraska Press, Lincoln.

Seeman, Mark F., and Frank Soday
1980 The Russell Brown Mounds: Three Hopewell Mounds in Ross County, OH. *Mid-Continental Journal of Archaeology* 5(1):73–116.

Seltzer, Frank M.
1933 Pottery of the Hopewell Type from Louisiana. *Proceedings of the United States National Museum* 82(22):1–21.

Senior, Louise M.
1994 Babes in the Hood: Concepts of "Personhood" and the Spatial Segregation of Infants from Adults in Archaeological Burial Practices. Paper presented at the Annual Meetings of the Society for American Archaeology, Anaheim, CA.

Sered, Susan Starr
1994 *Priestess, Mother, Sacred Sister: Religions Dominated by Women*. Oxford University Press, New York.

Service, Elman
1962 *Primitive Social Organization: An Evolutionary Perspective*. Random House, New York.
1971 *Primitive Social Organization*. Random House, New York.

Shackley, M. Steven
1997 Source Provenance of Obsidian Artifacts from the Mount Vernon Hopewell Period Site (12-PO-885), Posey County, Indiana: An Energy Dispersive X-Ray Fluorescence (EDXRF) Study. In *Hopewell in Mt. Vernon: A Study of the Mt. Vernon Site (12-PO-885).* G. E. Company, ed. Pp. 175–183. General Electric, Mt. Vernon, IN.

Shetrone, Henry C.
1925 Exploration of the Ginther Mound: The Miesse Mound. *Ohio Archaeological and Historical Quarterly* 40:343–509.
1926 Exploration of the Hopewell Group of Prehistoric Earthworks. *Ohio Archaeological and Historical Quarterly* 35:1–227.
1930 *The Mound Builders.* Appleton, New York.
1936 *The Mound Builders.* Appleton–Century, New York.

Shetrone, Henry C., and Emerson F. Greenman
1931 Explorations of the Seip Group of Prehistoric Earthworks. *Ohio Archaeological and Historical Quarterly* 40:343–509.

Shriner, Christine
1999 Ceramic Technology at Lerna, Greece in the Third Millennium B.C.: Social and Economic Implications. Unpublished doctoral dissertation, Indiana University.

Shriner, Christine, and M. J. Dorais
1999 A Comparative Electron Microprobe Study of Lerna III and IV Ceramics and Local Clay-Rich Sediments. *Archaeometry* 41(1):25–49.

Shryock, Andrew J.
1987 Wright Mound Reexamined: Generative Structures and the Political Economy of a Simple Chiefdom. *Mid-Continental Journal of Archaeology* 12(2):243–268.

Shweder, R.A., and R.A. LeVine
1984 *Culture Theory: Essays on Mind, Self, and Emotion*. Cambridge University Press, New York.

Siegel, Peter
1996 Ideology and Culture Chagne in Prehistoric

Puerto Rico: A View from the Community. *Journal of Field Archaeology* 23(3):313–333.
Sigstad, J. S.
1972 The Age and Distribution of Catlinite and Red Pipestone. Unpublished doctoral dissertation, University of Missouri.
Skinner, Alanson B.
1915 Associations and Ceremonies of the Menomini Indians. *Anthropological Papers* 13(2):167–215.
1920 Medicine Ceremonies of the Menomini, Iowa, and Wahpeton Dakota. *Indian Notes and Monographs* 4:15–188. Museum of the American Indian, Heye Foundation, NewYork, NY.
1921 Material Cultue of the Menominee. *Indian Notes and Monographs, Miscellaneous Series*, 20(1). Museum of the American Indian, Heye Foundation, New York.
1923 Societies of the Iowa, Kansa, and Ponca Indians. *American Museum of Natural History Anthropological Papers*, 9.
Slobodkin, Lawrence B., and Anatol Rapoport
1974 An Optimal Strategy of Evolution. *Quarterly Review of Biology* 49(3):181–200.
Smith, Adam
1776 *An Inquiry into the Nature and Causes of the Wealth of Nations*. 1789 edition. Thomas Dobson, Philadelphia.
Smith, Betty A.
1979 The Hopewell Connection in Southwest Georgia. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 181–187. Kent State University Press, Kent, OH.
1998 Neutron Activation Analysis of Ceramics from Mandeville and Swift Creek. In *A World Engraved: Archaeology of the Swift Creek Culture*. M. Williams and D. T. Elliott, eds. Pp. 112–129. University of Alabama Press, Tuscaloosa.
Smith, Bruce D.
1975 Middle Mississippian Exploitation of Animal Populations. *Anthropological Papers*, 57. Museum of Anthropology, University of Michigan, Ann Arbor.
1986 The Archaeology of the Southeastern United States: From Dalton to de Soto, 10,500–500 B.P. *Advances in World Archaeology* 5:1–92.
1992 Hopewellian Farmers of Eastern North America. In *Rivers of Change: Essays on Early Agriculture in Eastern North America*. B.D. Smith, M.P. Hoffman, and C.W. Cowan, eds. Pp. 201–248. Smithsonian Institution Press, Washington, DC.
Smith, John M., and Haydn H. Murray
1957 The Clay Minerals in Some Glacial Lacustrine Sediments of Indiana. *Proceedings of the Indiana Academy of Science* 66:179–187.
Smith, Sandra
1984 Panpipes for Power, Panpipes for Play: The Social Management of Cultural Expression in Kuna Society. University Microfilms, Ann Arbor, MI.
Snow, Charles E.
1957 Adena Portraiture. In *The Adena People*, vol. 2. W. S. Webb and R. S. Baby. Pp. 47–60. Ohio Historical Society, Columbus.
Snow, Frankie
1998 Swift Creek Design Investigations: The Hartford Case. In *A World Engraved: Archaeology of the Swift Creek Culture*. M. Williams and D. T. Elliott, eds. Pp. 61–98. University of Alabama Press, Tuscaloosa.
Snow, Frankie, and Keith Stephenson
1998 Swift Creek Designs: A Tool for Monitoring Interaction. In *A World Engraved: Archaeology of the Swift Creek Culture*. M. Williams and D. T. Elliott, eds. Pp. 99–111. University of Alabama Press, Tuscaloosa.
Snyder, J. F.
1898 A Group of Illinois Mounds. *The Archaeologist* 3(4):109–113.
Speck, Frank G.
1909 Ethnology of the Yuchi Indians. *Anthropological Publications of the University of Pennsylvania* 5(2):83–95.
Spence, Michael W., and Brian Fryer
1990 The Exchange of Silver in the Middle Woodland Period. Paper presented at the Annual Meeting of the Ontario Archaeological Society, Toronto, Canada.
1996 *Hopewell Silver Analysis: A Report on Wenner–Gren Foundation for Anthropological Research Grant-in-Aid No. 3201*. On file at the Department of Anthropology, University of Western Ontario, and with the Wenner–Gren Foundation, New York.
Spence, Michael W., and J. Russell Harper
1968 The Cameron's Point Site. *Occasional Paper* 12. Royal Ontario Museum Art and Archaeology.
Spence, Michael W., Robert Pihl, and J. E. Molto
1984 Hunter-Gatherer Social Group Identification: A Case Study from Middle Woodland Southern Ontario. In *Exploring the Limits: Frontiers and Boundaries in Prehistory*. S. D. Atley and F. Findlow, eds. Pp. 117–142. British Archaeological Reports International Series, 223. BAR, Oxford.
Spielmann, Katharine A.
2002 Feasting, Craft Specialization, and the Ritual Model of Production in Small-Scale Societies. *American Anthropologist* 104(1):195–207.
Spindler, Louise S.
1978 Menominee. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 708–724. Smithsonian Institution Press, Washington, DC.
Spriggs, Matthew, ed.
1984 *Marxist Perspectives in Archaeology*. Cambridge University Press, Cambridge.
Squier, Ephraim G., and Edwin H. Davis
1848 Ancient Monuments of the Mississippi Valley Comprising the Results of Extensive Original Surveys and Explorations. *Smithsonian Contributions to Knowledge*, 1. Smithsonian Institution, Washington, DC.

Squire, Ephraim G., and Edwin H. Davis.
1998 *Ancient Monuments of the Mississippi Valley.* D. J. Meltzer, ed. Smithsonian Institution Press, Washington, DC. (orig. 1848)

Stafford, Barbara D., and Mark B. Sant
1985 Smiling Dan: Structure and Function at a Middle Woodland Settlement in the Illinois Valley. *Research Series* 2. Kampsville Archaeological Center, Kampsville, IL.

Stanislawski, Michael B.
1979 Hopi-Tewa. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Smithsonian Institution, Washington, DC.

Steward, Julian
1955 *Theory of Culture Change*. University of Illinois Press, Urbana.

Stirland, Ann
1988 Diagnosis of Occupationally Related Paleopathology: Can it Be Done? In *Human Paleopathology: Current Synthesis and Future Options*. D. J. Ortner and A. Aufderheide, eds. Pp. 40–51. Smithsonian Institution Press, Washington, DC.

Stoltman, James B.
1979 Middle Woodland Stage Communities of Southwestern Wisconsin. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 122–139. Kent State University Press, Kent, OH.
2000 A Petrographic Evaluation of Ceramic Variability within Ohio Hopewell Culture. Paper presented at the Annual Meeting of the Society for American Archaeology, Philadephia, PA.

Stoltman, James B., and Robert C. Mainfort Jr.
1999 Elements and Minerals: Reconciling the Differential Findings of Neutron Activation and Petrography on the Compositional Analysis of Ceramics from Pinson Mounds. Paper presented at the Annual Meetings of the Society for American Archaeology, Chicago, IL.
2002 Minerals and Elements: Using Petrography to Reconsider the Findings of Neutron Activation in the Compositional Analysis of Ceramics from Pinson Mounds, Tennessee. *Mid-Continental Journal of Archaeology* 27(1):1–33.

Stoltman, James B., and Frankie Snow
1998 Cultural Interaction within Swift Creek Society: People, Pots and Paddles. In *A World Engraved: Archaeology of the Swift Creek Culture*. M. Williams and D. T. Elliott, eds. Pp. 130–153. University of Alabama Press, Tuscaloosa.

Stone, Glenn Davis
1991 Agricultural Territories in a Dispersed Settlement System. *Current Anthropology* 32:343–353.

Stone, R. J., and J. Stone
1990 *Atlas of Skeletal Muscles*. C. Brown, Dubuque, IA.

Strathern, Marilyn
1981 Self-Interest and the Social Good: Some Implications of Hagen Gender Imagery. In *Sexual Meanings: The Cultural Construction of Gender and Sexuality*. S. B. Ortner and H. Whitehead, eds. Pp. 166–191. Cambridge University Press, Cambridge

Straw, W. T., Henry H. Gray, and Richard L. Powell
1977 Environmental Geology of the Evansville Area, Southwestern Indiana. Environmental Study 12. State of Indiana, Department of Natural Resources, Geological Survey, Bloomington.

Strong, W. D.
1935 An Introduction to Nebraska Archeology. *Smithsonian Miscellaneous Collections*, 93(10). Smithsonian Institution, Washington, DC.

Struever, Stuart
1960 The Kamp Mound Group and a Hopewell Mortuary Complex in the Lower Illinois Valley. Unpublished master's thesis, Northwestern University.
1961 Further Excavations at the Snyders Site: An Analysis of Snyders Ceramics. *Central States Archaeological Journal* 8(3):94–100.
1964 The Hopewell Interaction Sphere in Riverine–Western Great Lakes Culture History. *In* Hopewellian Studies. J. Calwell and R. L. Hall, eds. Pp. 86–106. *Scientific Papers*, 12. Illinois State Museum, Springfield.
1965 Middle Woodland Culture History in the Great Lakes Riverine Area. *American Antiquity* 31(2):211–223.
1968a Woodland Subsistence-Settlement Systems in the Lower Illinois Valley. In *New Perspectives in Archaeology*. S. R. Binford and L. R. Binford, eds. Pp. 285–312. Aldine, Chicago.
1968b A Re-examination of Hopewell in Eastern North America. Unpublished doctoral dissertation, University of Chicago.

Struever, Stuart, and Gail L. Houart
1972 An Analysis of the Hopewell Interaction Sphere. *In* Social Exchange and Interaction. E. N. Wilmsen, ed. Pp. 47–147. *Anthropological Papers*, 46. University of Michigan Museum of Anthropology, Ann Arbor.

Stuart-Macadam, P.
1989 Porotic Hyperostosis: Relationship between Orbital and Vault Lesions. *American Journal of Physical Anthropology* 80:187–193.

Stuiver, Minze, and Paula J. Reimer
1993 Extended 14C Data Base and Revised CALIB 3.0 14C Age Calibration Program. *Radiocarbon* 35(1):215–230.

Stuiver, M., P. J. Reimer, E. Bard, J. W. Beck, G. S. Burr, K. A. Hughen, B. Kromer, F. G. McCormac, J. v. d. Plicht, and M. Spurk
1998 1998 INTCAL98 Radiocarbon Age Calibration, 24000-0 Cal BP. *Radiocarbon* 40:1041–1083.

Styles, Bonnie Whatley
1981 Faunal Exploitation and Resource Selection: Early Late Woodland Subsistence in the Lower Illinois Valley. *Scientific Papers*, 3. Northwestern University Archaeological Program, Evanston, IL.

Styles, Bonnie W., and James R. Purdue
1986 Middle Woodland Faunal Exploitation. *In* Woodland Period Occupations of the Napoleon Hollow Site in the Lower Illinois Valley. Michael D. Wiant and Charles R. McGimsey, eds. Pp. 513–526. *Research Series*, 6. Center for American Archeology, Kampsville Archeological Center, Kampsville, IL.
1991 Ritual and Secular Use of Fauna by Middle Woodland Peoples in Western Illinois. *In* Beamers, Bobwhites and Blue-Points: Tributes to the Career of Paul W. Parmalee. James R. Purdue et al., eds. Pp. 421–436. *Scientific Papers*, 23. Illinois State Museum, Springfield.

Sutherland, L. D., and J. M. Suchey
1991 Use of the Ventral Arc in Pubic Sex Determination. *Journal of Forensic Sciences* 36(2):501–511.

Suttles, Wayne
1960 Affinal Ties, Subsistence, and Prestige among the Coast Salish. *American Anthropologist* 62:296–305.

Swan, Jim
1987 Rolling Thunder at Work. In *Shamanism*. S. Nicholson, ed. Pp. 145–157. Theosophical Publishing House, Wheaton, IL.
1988 Sacred Places in Nature: One Tool in the Shaman's Medicine Bag. In *Shaman's Path*. G. Doore, ed. Pp. 151–159. Shambhala, Boston.

Swanton, John R.
1911 Indian Tribes of the Lower Mississippi Valley and Adjacent Coast of the Gulf of Mexico. *Bureau of American Ethnology Bulletin* 43, Washington, DC.
1928 Social Organization and Social Usages of the Indians of the Creek Confederacy. In *Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1924–25*. Pp. 23–472, vol. 42. Smithsonian Institution, Washington, D.C.
1931 Source Material for the Social and Ceremonial Life of the Choctaw Indians. *Bureau of American Ethnology Bulletin* 103. Smithsonian Institution, Washington, D.C.
1942 Source Material on the History and Ethnology of the Caddo Indians. *Bureau of American Ethnology Bulletin* 132. Smithsonian Institution, Washington, DC.
1946 Indians of the Southeastern United States. *Bureau of American Ethnology Bulletin* 137. Smithsonian Institution, Washington, DC.

Swartz, B. K., Jr.
1971 Archaeological Report No. 8. Department of Sociology–Anthropology, Ball State University, mimeograph.
n.d.a Hopewell Anthropomorphous Portraiture. Ball State University, unpublished MS.
n.d.b A Survey of Adena B (Scioto) Hopewell Anthropomorphic Portraiture. Ball State University, unpublished MS.

Tainter, Joseph A.
1975a The Archaeological Study of Social Change: Woodland Systems in West-Central Illinois. Unpublished doctoral dissertation, Northwestern University.
1975b Social Inference and Mortuary Practices: An Experiment in Numerical Classification. *World Archaeology* 7(1):1–15.
1977 Woodland Social Change in West–Central Illinois. *Mid-Continental Journal of Archaeology* 2(1):67–98.
1978 Mortuary Practices and the Study of Prehistoric Social Systems. *Advances in Archaeological Method and Theory* 4:105–141.
1980 Behavior and Status in a Middle Woodland Mortuary Population from the Illinois Valley. *American Antiquity* 45(2):308–313.

Tatarek, Nancy B., and Paul W. Sciulli
2000 Comparison of Population Structure in Ohio's Late Archaic and Late Prehistoric Periods. *American Journal of Physical Anthropology* 112:363–376.

Taylor, Walter W.
1948 A Study of Archaeology. *Memoirs of the American Anthropological Association*, 69.

Tax, Sol
1937 The Social Organization of the Fox Indians. In *Social Anthropology of North American Tribes*. F. Eggan, ed. Pp. 243–282. University of Chicago Press, Chicago.

Tedlock, Dennis
1979 Zuni Religion and World View. In *Handbook of North American Indians*, vol. 9. Southwest. A. Ortiz, ed. Pp. 499–508. Smithsonian Institution, Washington, DC.

Thew, Heather
n.d. The Analysis of the "Great Cache" of Modified Mandibles of the Tremper Mound. Unpublished report. Ohio Historical Center.

Thomas, Cyrus
1885 Silver from a Pennsylvania Mound. *Science* 120:419–420.
1894 Report on the Mound Exploration of the Bureau of Ethnology. 12th Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1890–91.

Thomas, David Hurst
1972 A Computer Simulation Model of Great Basin Shoshonean Subsistence and Settlement Patterns. In *Models in Archaeology*. D. L. Clarke, ed. Pp. 671–704. Methuen, London.

Tilley, Christopher
1982 Social Formation, Social Structures, and Social Change. In *Symbolic and Structural Archaeology*. I. Hodder, ed. Pp. 26–38. Cambridge University Press, Cambridge.

Titiev, Mischa
1944 Old Oraibi: A Study of the Hopi Indians of Third Mesa. *Peabody Museum of American Archaeology and Ethnology Papers*, 22(1). Harvard University, Cambridge, MA.

Tomak, Curtis H.
1990 The Mount Vernon Site: A Hopewell Ceremonial/Burial Site in Posey County, Indiana.

Report submitted to the Indiana Department of Transportation, Indianapolis.
1994 The Mount Vernon Site: A Remarkable Hopewell Mound in Posey County, Indiana. *Archaeology of Eastern North America* 22:1–46.
Tooker, Elisabeth
1978 Iroquois Since 1820. In Handbook of North American Indians, vol. 15. Northeast. B. G. Trigger, ed. Pp. 449–465. Smithsonian Institution, Washington, DC.
Toth, Alan
1974 Archaeology and Ceramics at the Marksville Site. *Anthropological Papers*, 56. Museum of Anthropology, University of Michigan, Ann Arbor.
1979 The Marksville Connection. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 200–208. Kent State University Press, Kent, OH.
1988 Early Marksville Phases in the Lower Mississippi Valley: A Study of Culture Contact Dynamics. Archaeological Report 21. Mississippi Department of Archives and History, Jackson.
Townsend, Joan
1997 Shamanism. In *Anthropology of Religion: A Handbook*. S.D. Glazier, ed. Pp. 429–469. Greenwood Press, Westport, CN.
Trevelyan, Amelia Margaret
1987 Prehistoric Native American Copperwork from the Eastern United States. Unpublished doctoral dissertation, University of California.
Triandis, Harry C.
1989 The Self and Social Behavior in Differing Cultural Contexts. *Psychological Review* 96(3):506–520.
Trigger, Bruce G.
1969 The Huron Farmers of the North. Holt, Rinehart and Winston, New York.
1978 *Handbook of North American Indians*, vol. 15 Northeast. Smithsonian Institution, Washington, DC.
Tringham, Ruth E.
1972 Introduction: Settlement Patterns and Urbanization. In *Man, Settlement and Urbanism*. Peter J. Ucko et al., eds. Pp. xix–xxviii. Duckworth, London.
1991 Households with Faces: The Challenge of Gender in Prehistoric Architectural Remains. In *Engendering Archaeology: Women and Prehistory*. J. M. Gero and M. W. Conkey, eds. Pp. 93–131. Blackwell, Oxford.
Trinkaus, Erik
1975 Squatting Facets among Neandertals: A Problem in the Behavioral Interpretation of Skeletal Morphology. *Journal of Archaeological Sciences* 2:327–351.
Trowbridge, C. C.
1938 Meearmeear Traditions. *Occasional Contributions from the Museum of Anthropology of the University of Michigan*, 7. University of Michigan Press, Ann Arbor.
1939 Shawnee Traditions. *Occasional Contributions from the Museum of Anthropology of the University of Michigan*, 9. University of Michigan Press, Ann Arbor.
Troy, Scott J.
2002 Hopewell Lithics from the Gartner Village and Mound (33ro19), Ross County, Ohio: The Gerald Parker Collection. Paper presented at the Annual Meeting of the Midwest Archaeological Conference, Columbus, OH.
Troy, Scott J., and Peter J. Ucko
1969 Ethnography and Archaeological Interpretation of Funerary Remains. *World Archaeology* 1(2): 262–280.
Tuan, Mia
1998 *Forever Foreigners or Honorary Whites? The Asian Ethnic Experience Today*. Rutgers University Press, New Brunswick.
Tukey, John. W.
1977 *Exploratory Data Analysis*. Addison–Wesley, Reading, MA.
1980 We Need Both Exploratory and Confirmatory. *American Statistician* 34(1):23–25.
Tukey, John W., and M. B. Wilk
1970 Data Analysis and Statistics: Techniques and Approaches. In *The Quantitative Analysis of Social Problems*. E. R. Tufte, ed. Pp. 370–390. Addison–Wesley, Reading, MA.
Turff, Gina M.
1997 A Synthesis of Middle Woodland Panpipes in Eastern North America. Unpublished master's thesis, Trent University.
Turner, Christopher S.
1983 An Astronomical Interpretation of the Hopeton Earthworks. Hopewell Culture National Historical Park, Chillicothe, IL, unpublished MS.
1999 Calendrical Sightlines at the Hopeton Earthworks. Paper presented at the Annual Meeting of the Eastern States Archaeological Federation. King's Island, OH.
2000 Hopewell Subsistence Scheduling: The Ohio Geometric Earthworks As Calendrical Devices. Poster presented at the Perspectives on the Middle Woodland at the Millennium Conference, Center for American Archaeology, Grafton, IL.
Turner, Jonathan H.
1991 *The Structure of Sociological Theory*. Wadsworth, Belmont, CA.
Turner, Ralph H.
1962 Role-Taking: Processes versus Conformity. In *Human Behavior and Social Processes*. A. Rose, ed. Pp. 20–40. Houghton Miffin, Boston, MA.
Turner, Victor
1969 *The Ritual Process*. Cornell University Press, Ithaca, NY.
Ubelaker, Douglas H.
1989 Human Skeletal Remains: Excavation, Analyses, and Interpretation. *Manuals on Archeology*, 2. Taraxacum, Washington, DC.

1992 Porotic Hyperostosis in Prehistoric Ecuador. In *Diet, Demography, and Disease: Changing Perspectives on Anemia*. P. Stuart-Macadam and S. Kent, eds. Pp. 201–217. Aldine de Gruyter, New York.

U.S. Department of Agriculture

1978 General Soil Map, Posey County, Indiana. United States Department of Agriculture, Soil Conservation Service, Purdue University Agricultural Experiment Station.

U.S. Geological Survey

1957 Caborn Quadrangle, Indiana–Kentucky. 7.5 Minute Series (Topographic). United States Department of Interior, Geological Survey.

1970 *The National Atlas of the United States of America*. United States Department of the Interior, Washington, DC.

van Gennep, Arnold

1909 *Les Rites de Passage*. Emile Nourry, Paris.

1960 *The Rites of Passage*. M. B. Vizedom and B. L. Caffee, trans. University of Chicago Press, Chicago. (orig. 1909)

Varien, Mark D.

1999 *Sedentism and Mobility in a Social Landscape*. University of Arizona Press, Tucson.

2000 Communities and the Chacoan Regional System. *In* Great House Communities across the Chacoan Landscape. John Kantner and Nancy M. Mahoney, eds. Pp. 149–156. *Anthropological Papers of the University of Arizona*, 64. University of Arizona Press, Tucson.

Vayda, Andrew P.

1968 Economic Systems in Ecological Perspective: The Case of the Northwest Coast. In *Readings in Anthropology*, vol. 2. M. H. Fried, ed. Pp. 172–178. Crowell, New York.

Venum, Thomas Jr.

1982 The Ojibway Dance Drum: Its History and Construction. *Smithsonian Folklife Studies*, 2. Smithsonian Institution, Washington, DC.

Vizenor, Gerald

1981 *Summer in the Spring: Ojibwe Lyric Poems and Tribal Stories*. Nodin Press, Minneapolis.

Voegelin, Erminie Wheeler

1944 Mortuary Customs of the Shawnee and Other Eastern Tribes. *Prehistoric Research Series* 2(4):227–444. Indiana Historical Society, Indianapolis.

von Gernet, Alexander, and Peter Timmins

1987 Pipes and Parakeets: Constructing Meaning in an Early Iroquoian Context. In *Archaeology as Long-Term History*. I. Hodder, ed. Pp. 31–42. Cambridge University Press, Cambridge.

Voss, Jerome A.

1980 Tribal Emergence during the Neolithic of Northwestern Europe. Unpublished doctoral dissertation, University of Michigan.

1982 A Study of Western TRB Social Organization. *Berichten van de Rijksdienst voor het Oudheidkundige Bodemonderzoek* 32:9–102.

Voss, Jerome A., and Robert L. Young

1995 Style and the Self. In *Style, Society, and Person: Archaeological and Ethnological Perspectives*. C. Carr and J. Neitzel, eds. Pp. 77–99. Plenum, New York.

Wallace, Anthony

1966 *Religion: An Anthropological View*. Random House, New York.

Walsh, Roger N.

1990 *The Spirit of Shamanism*. Jeremy P. Tarcher, Los Angeles.

Walthall, John A.

1973 Copena: A Tennessee Valley Middle Woodland Culture. Unpublished doctoral dissertation, University of North Carolina.

1979 Hopewell and the Southern Heartland. In *Hopewell Archaeology: The Chillicothe Conference*. D. Brose and N. Greber, eds. Pp. 200–208. Kent State University Press, Kent.

1980 Prehistoric Indians of the Southeast. University of Alabama Press, University.

1981 Galena and Aboriginal Trade in Eastern North America. *Scientific Papers*, 17. Illinois State Museum, Springfield.

Walthall, John A., Stephen H. Stow, and Marvin J. Karson

1979 Ohio Hopewell Trade: Galena Procurement and Exchange. In *Hopewell Archaeology: The Chillicothe Conference*. D. S. Brose and N. Greber, eds. Pp. 247–253. Kent State University Press, Kent.

Walthall, John A., S. H. Stow, and M. J. Karson

1980 Copena Galena: Source Identification and Analysis. *American Antiquity* 45(1):21–42.

Waring, Antonio J., Jr.

1949 "Hopewellian" Elements in Northern Georgia. *American Antiquity* 11:119–120.

Waring, Antonio J., and Preston Holder

1945 A Prehistoric Ceremonial Complex in the Southeastern United States. *American Anthropologist* 47(1):1–34.

Wasson, J. T., and S. P. Sedwick

1969 Possible Sources of Meteoric Material from Hopewell Indian Burial Mounds. *Nature* 222: 22–24.

Watson, P. J., and M. C. Kennedy

1991 The Development of Horticulture in the Eastern Woodlands: Women's Role. In *Engendering Archaeology*. J. M. Gero and M. W. Conkey, eds. Pp. 255–275. Basil Blackwell, Oxford.

Wayne, William J.

1966 Ice and Land: A Review of the Tertiary and Pleistocene History of Indiana. In *Natural Features of Indiana*. A. A. Lindsey, ed. Pp. 21–39. Indiana Academy of Science, Indianapolis.

Weaver, Sally M.

1978 Six Nations of the Grand River, Ontario. In *Handbook of North American Indians*, vol. 15. Northeast. B. G. Trigger, ed. Pp. 525–536. Smithsonian Institution, Washington, DC.

Webb, William S.
1941 The Morgan Stone Mound, Site 15, Bath County, Kentucky. *Reports in Anthropology and Archaeology*, 4(3). University of Kentucky, Lexington.
Webb, William S., and Raymond S. Baby
1957 *The Adena People*. Ohio State University Press and Ohio Historical Society, Columbus.
Webb, William S., and Charles E. Snow
1945 The Adena People. *Reports in Anthropology and Archaeology*, 6. University of Kentucky, Lexington.
1974 *The Adena People*. University of Tennessee Press, Knoxville.
Wedel, W. R.
1943 Archaeological Investigations in Platte and Clay Counties, Missouri. *United States National Museum Bulletin*, 183, U.S. National Museum, Washington, DC.
Weineck, J.
1990 *Functional Anatomy in Sports*. Mosby Year Book, St. Louis, MO.
Weiss, Kenneth M.
1973 Demographic Models for Anthropology. *Memoirs of the Society for American Archaeology*, 27. SAA, Washington, DC.
Weist, Katherine M.
1973 Giving Away: The Ceremonial Distribution of Goods among the Northern Cheyenne of Southeastern Montana. *Plains Anthropologist* 18:97–103.
Weymouth, John W.
1996 Geophysical Surveys on the Overly Tract, Ross County, Ohio and Correlation with Test Excavations. Report submitted to the Midwest Archeologial Center, National Park Service, Lincoln, NE. in fulfillment of Purchase Order No. 1443PX611595063.
1998a Three Geophysical Surveys of the Hopeton Earthworks: The Second Season. National Park Service, Midwest Archeological Center, Lincoln, NE.
1998b Magnetic Anomalies of Interest at the Hopeton Site, 1997. Hopewell Culture National Historical Park, Chillicothe, IL.
2002 Geophysical Exploration of Hopeton Earthworks, Ross County, Ohio. Paper presented at the Annual Meeting of the Midwest Archaeological Conference, Columbus, OH.
Whallon, Robert L., and James A. Brown
1982 *Essays on Archaeological Typology*. Kampsville Seminars in Archeology, 1. Center for American Archeology, Kampsville, IL.
Whallon, Robert, Jr.
1968 Investigations of Late Prehistoric Social Organization in New York State. In *New Perspectives in Archeology*. S. R. Binford and L. R. Binford, eds. Pp. 223–244. Aldine, Chicago.
Wheatley, David
1996 The Use of GIS to Understand Regional Variation in Neolithic Wessex. In *New Methods, Old Problems: Geographic Information Systems in Modern Archaeological Research*. D. G. Maschner, ed. Pp. 75–103 Southern Illinois University Press, Carbondale.
Wheeler, R. E. Mortimer
1950 What Matters in Archaeology. *Antiquity* 24:122–130.
Whitaker, John O., Jr.
1980 *National Audubon Society Field Guide to North American Mammals*. Alfred A. Knopf, New York.
White, Anta M.
1963 Analytic Description of the Chipped Stone Industry from Snyders Site, Calhoun County, Illinois. *In* Miscellaneous Studies in Typology and Classification, Anta M. White et al., eds. Pp. 1–70. *Anthropological Papers*, 19. Museum of Anthropology, University of Michigan, Ann Arbor.
White, Karen J.
1994 Shamanic Roles and Mythical Themes in Northern San Rafael Fremont Rock Art. Unpublished master's thesis, Arizona State University.
Whitehead, Harriet
1981 The Bow and the Burdenstrap: A New Look at Institutionalized Homosexuality in Native North America. In *Sexual Meanings: The Cultural Construction of Gender and Sexuality*. S. B. Ortner and H. Whitehead, eds. Pp. 80–115. Cambridge University Press, Cambridge.
Whitley, David S.
1998 Following the Shaman's Path: A Walking Guide to Little Petroglyph Canyon Coso Range, California. Publication 13. Maturango Museum, Indian Wells Valley, Ridgecrest, CA.
2001 Handbook of Rock Art Research. AltaMira Press, Walnut Creek, CA.
Wiant, Michael D.
n.d. Hopewell and the Dark Black Glass Revisited. In *Recreating Hopewell: New Perspectives on Middle Woodland in Eastern North America*. D.K. Charles and J.E. Buikstra, eds. Book in progress.
2000 Hopewell and the Dark Black Glass Revisited. Paper presented at the Perspectives on the Middle Woodland at the Millenium Conference, Pere Marquette State Park, IL.
Wiant, Michael, and Charles R. McGimsey
1986 Woodland Period Occupations of the Napoleon Hollow Site in the Lower Illinois Valley. *Research Series*, 6. Kampsville Archaeological Center, Kampsville, IL.
Wiessner, Polly, and Akii Tumu
1998 *Historical Vines: Enga Networks of Exchange, Ritual, and Warfare in Papua New Guinea*. Smithsonian Institution Press, Washington, DC.
1999 A Collage of Cults. Unpublished MS.
2002 The Vines of Complexity. *Current Anthropology* 43(2):233–269.

Wilber, Ken
1979 *No Boundary*. Shambhala, Boston, MA.
1993 *The Spectrum of Consciousness*. Quest Books, Theosophical Publishing House, Wheaton, IL.

Wilkinson, J. B.
1840 *Annals of Binghamton and of the County Connected with It from the Earliest Settlement*. Cooke and Davis, Binghamton, NY.

Willey, Gordon R.
1949 Archaeology of the Florida Gulf Coast. *Smithsonian Miscellaneous Collections*, 113. Smithsonian Institution, Washington, DC.
1956 Problems concerning prehistoric settlement patterns in the Maya lowlands. *In* Prehistoric Settlement Patterns in the New World. G. R. Willey, ed. Pp. 107–114. *Viking Fund Publications in Anthropology*, vol. 23. Viking, New York.
1962 The Early Great Styles and the Rise of the Pre-Columbian Civilizations. *American Anthropologist* 64(1):1–14.
1971 *Introduction to American Archaeology 1: North and Middle America*. Prentice–Hall, Engelwood Cliffs, NJ.

Willey, Gordon R., and Jeremy A. Sabloff
1980 *A History of American Archaeology*. W. H. Freeman, San Francisco.

Williams, Brackette F.
1989 A Class Act: Anthropology and the Race to Nation Across Ethnic Terrain. *Annual Review of Anthropology* 18:401–444.

Williams, Mark, and Daniel T. Elliott
1998 Swift Creek Research: History and Observations. In *A World Engraved: Archaeology of the Swift Creek Culture*. M. Williams and D. T. Elliott, eds. Pp. 1–11. University of Alabama Press, Tuscaloosa.

Williams, Stephen
1989 Forward. In *The Hopewell Site: A Contemporary Analysis Based on the Works of Charles Willoughby*. By N. Greber and K. Ruhl. Pp. xxiii–xxv. Westview Press, Boulder, CO.

Willoughby, Charles C.
1903 Primitive Metal Working. *American Anthropologist* (n.s.) 5:55–57.
1916 The Art of the Great Earthwork Builders of Ohio. In *Annual Report*. Pp. 489–500. Smithsonian Institution, Washington, DC.

Willoughby, Charles C., and Ernest A. Hooton
1922 The Turner Group of Earthworks, Hamilton County, Ohio. *Papers of the Peabody Museum*, 8(3). Harvard University, Boston.

Wilson, K.
1979 *A History of Textiles*. Westview Press, Boulder, CO.

Winkelman, Michael J.
1989 A Cross-Cultural Study of Shamanic Healers. *Journal of Psychoactive Drugs* 2(1):17–24.
1990 Shamans and Other "Magico-Religious" Healers: A Cross-Cultural Study of Their Origins, Nature, and Social Transformations. *Ethos* 18(3):308–352.
1992 Shamans, Priests, and Witches: A Crosscultural Study of Magico-Religious Practitioners. *Anthropological Research Papers*, 44. Arizona State University, Tempe.
2000 *Shamanism: The Neural Ecology of Consciousness and Healing*. Bergin and Garvey, Westport, CN.

Winn, Thomas, Barbara Crowe, and Joseph J. Moreno
1989 Shamanism and Music Therapy. *Music Therapy Perspectives* Fall:67–71.

Winship, G. P., ed.
1905 *Sailors Narratives of Voyages along the New England Coast, 1524–1624*. Houghton–Mifflin, Boston

Winters, Howard D.
1968 Value Systems and Trade Cycles of the Late Archaic in the Midwest. In *New Perspectives in Archaeology.* S. R. Binford and L. R. Binford, eds. Pp. 175–221. Aldine, Chicago.
1969 The Riverton Culture: A Second Millennium Occupation in the Central Wabash Valley. *Reports of Investigations*, 13. Illinois State Museum and Illinois Archaeological Survey, Springfield.
1981 Excavating in Museums: Notes on Mississippian Hoes and Middle Woodland Copper Gouges and Celts. *In* The Research Potential of Anthropological Collections. Special issue. *Annals of the New York Academy of Sciences* 376:17–34.

Wisseman, Sarah U., Duane M. Moore, Randall E. Hughes, Mary R. Hynes, and Thomas E. Emerson
2002 Mineralogical Approaches to Sourcing Pipes and Figurines from the Eastern Woodlands, U.S.A. *Geoarchaeology: An International Journal* 17(7):689–715.

Wissler, Clark
1926 *The Relations of Nature to Man in Aboriginal America*. Oxford University Press, New York.

Wittoft, John, and James Miller
1952 Grooved Axes of Eastern Pennsylvania. *Pennsylvania Archaeologist* 12:81–94.

Wobst, Martin
1974 Boundary Conditions for Paleolithic Social Systems: A Simulation Approach. *American Antiquity* 39:147–178.

Wolf, Eric R.
1990 Distinguished Lecture: Facing Power—Old Insights, New Questions. *American Anthropologist* 92:586–596.
1999 *Envisioning Power: Ideologies of Dominance and Crisis*. University of California Press, Berkeley.

Wolf, Margery
1972 *Women and the Family in Rural Taiwan*. Stanford University Press, Stanford, CA.

Wray, Donald, and Richard S. MacNeish
1961 The Hopewell and Weaver Occupations of the Weaver Site, Fulton County, Illinois. *Scientific Papers*, 7. Illinois State Museum, Springfield.

Wylie, A.
1992 The Interplay of Evidential Constraints and Political Interests: Recent Archaeological Research on Gender. *American Antiquity* 57(1):15–35.
Wymer, DeeAnne
1987a The Paleoethnobotanical Record of Central Ohio—100 B.C. to A.D. 800: Subsistence Continuity and Cultural Change. Unpublished doctoral dissertation, Ohio State University.
1987b The Middle Woodland–Late Woodland Interface in Central Ohio. In *Emergent Horticultural Economies of the Eastern Woodlands.* W. F. Keegan, ed. Pp. 201–216. Southern Illinois University Center for Archaeological Investigations, Carbondale.
1996 The Ohio Hopewell Econiche: Human–Land Interaction in the Core Area. In *A View from the Core: A Synthesis of Ohio Hopewell Archaeology.* P. J. Pacheco, ed. Pp. 36–52. Ohio Archaeological Council, Columbus.
1997 Paleoethnobotany in the Licking River Valley, Ohio: Implications for Understanding Ohio Hopewell. In *Ohio Hopewell Community Organization.* W. S. Dancey and P. J. Pacheco, eds. Pp. 153–171. Kent State University Press, Kent, OH.
2003 Growing the World in Their Image: The Evolutionary Trajectory of Hopewell Plant Utilization. Paper presented at the Annual Meeting of the Society for American Archaeology, Milwaukee, WI.
Wymer, DeeAnne, and Sissel Johannessen
2002 Growing the World in Their Image: The Evolutionary Trajectories of Hopewell Farming, East and West. Paper presented at the Midwestern Archaeological Conference, Columbus, OH.
Yeatts, Michael L.
1990 A Chemical Characterization of the Ceramics from the McGraw Site in Ohio with the Electron Microprobe. Unpublished master's thesis, Arizona State University.
Yerkes, Richard W.
1988 The Woodland and Mississippian Traditions in the Prehistory of Midwestern North America. *Journal of World Prehistory* 2:307–358.
1990 Using Microwear Analysis to Investigate Domestic Activities and Craft Specialization at the Murphy Site, a Small Hopewell Settlement in Licking County, OH. In *The Interpretive Possibilities of Microwear Studies.* K. Knutsson and J. Taffinder, eds. Pp. 167–176. Societas Archaeologica Upsaliensi, Aun 14, Uppsala, Sweden.
Young, Gloria A.
1970 Reconstruction of an Arkansas Hopewellian Panpipe. *Arkansas Academy of Science Proceedings* 29:28–32.
1976 A Structural Analysis of Panpipe Burials. *Tennessee Archaeologist* 31:1–10.
Young, Gregory
1991 2000 Yr. Old Panpipe: Wood Identification. Canadian Conservation Institute. Analytical Research Report ARS 2979.
Zawacki, April Allison, and Glenn Hausfater
1969 Early Vegetation of the Lower Illinois Valley. *Reports of Investigation*, 17. Illinois State Museum, Springfield.
Zemp, Hugo
1981 Melanesian Solo Polyphonic Panpipe Music. *Ethnomusicology* 25(3):383–418.