Chapter **16**

Rethinking Interregional Hopewellian "Interaction"

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Fascination with Hopewellian peoples relates considerably to their movement of raw materials and, less frequently, finished artifacts over many hundreds of miles over North America. Conch shells from coastal Florida and along the Gulf of Mexico were brought as far north as Michigan and New York (Seeman 1977a:appendix B), and silver from Cobalt, Ontario, was taken as far south as Georgia and Mississippi (Spence and Fryer, Chapter 20). How did Hopewellian peoples succeed in these translocations, and equally tantalizing, who did so and why?

This chapter introduces Part IV, which addresses such questions about the movement of materials, artifacts, and styles over the Woodlands, and the kinds of cultural connections among distant peoples and places implied by these geographic linkages. Like introductory Chapters 3 and 12, this one reviews anthropological theory and ethnographic analogs that are relevant and necessary background to the chapters that follow. Also, past understandings and analyses that complement the studies of interregional Hopewellian activity presented in this book are summarized, in order to help place the latter in context and highlight their significance.

The chapter begins with the observation that Hopewellian activities at the interregional scale, which involved movements of raw materials, artifacts, styles, mortuary and other ceremonial practices, and ideas across the Eastern Woodlands, have often been interpreted as manifestations of some unitary kind of phenomenon. Examples include a trade network, a mortuary cult, a shared religion, and a network of peer polities. These and other previous, singular interpretations of interregional Hopewell are reviewed. An alternative, interpretive perspective is then offered, which sees interregional Hopewell as having been comprised instead of many distinct kinds of activities that led to varying geographic distributions of Hopewellian features of the same or different kinds. In this view, interregional Hopewell can be defined and understood only when it is resolved into its many component aspects.

The chapter goes on to introduce ten seldom or never cited possible forms of interregional activity. Many of these mechanisms are ceremonial and religious in nature, such as vision-power questing, pilgrimage to places in nature or to ceremonial centers, buying and selling of ceremonial prerogatives, and travels of rising social leaders to centers of learning to obtain esoteric, sacred knowledge and power. Other mechanisms are social, sociopolitical, or political–economic, sometimes with religious components, such as intermarriage or adoption

across cultural lines, valuables exchange among elite, and elite-orchestrated transference of religious cults. These distributive mechanisms are described in a grounded manner, in terms of social actors with personal and local motives. Ethnographic examples of each of the ten kinds of interregional activity are described to help understand their potential relevance to Hopewellian cases and to build a model of their discriminating material–archaeological correlates. Many kinds of interregional Hopewellian material patterns, expressed within chemical sourcing, distributional, and stylistic data, and coming from previous studies and those made in chapters in this book, are then systematized and sifted for their fit with the modeled forms of interregional activity. The most concrete result of this study is a listing of specific cases of particular means by which particular kinds of Hopewellian raw materials, artifacts, styles, practices, and ideas came to be spread and shared among regional traditions across the Woodlands—a deconstruction of the Hopewell Interaction Sphere into its diverse operational-level, cultural practices and historical events. The entire process of determining the archaeological correlates of particular kinds of activity, applying them to specific interregional Hopewell remains, and resolving interregional Hopewell into its many constituent kinds of practices and events is made possible by envisioning social actors with ethnologically known kinds of motives—that is, by taking the personalized, locally contextualized, and generative approach to understanding interregional Hopewell that is defined in Chapter 1.

Following this development of the interpretive framework and its application, and in light of them, the chapters in this part of the book are summarized for their particular contributions to deconstructing and reinterpreting interregional Hopewell. Seven contributions are highlighted, including: (1) the origins of Hopewellian ways in regional traditions other than the supposed Hopewellian core area, Ohio; (2) the distinct distributions of different "Hopewell Interaction Sphere" items in relation to their roles in different kinds and scales of interregional communication; (3) uniformity and variation across the Woodlands in the ideological meanings of artifact classes, (4) in the social roles in which they were used, and (5) in their ritual uses; (6) the degree to which finished artifacts, in contrast to raw materials, were transported across the Woodlands; and (7) variation over the Woodlands in the means of transport of even singular kinds of Hopewellian materials and artifact classes.

The chapter ends with an enumeration of some of the more important, singular kinds of phenomena that Interregional Hopewell has been posited to be, a summary of the empirical evidence that firmly contradicts these inferences, and a concluding reinterpretation of what Interregional Hopewell can be said to have been. The concluding view of Interregional Hopewell is multifaceted rather than unitary, historical, personalized with motivated actors in social roles, emphasizes local context, and generates interregional Hopewell from local concerns.

PERSPECTIVES ON INTERREGIONAL HOPEWELLIAN TRAVEL, PROCUREMENT, AND INTERACTION, AND THEIR ANALYSIS

Historically, a broad range of phenomena has been equated with interregional Hopewell. Earlier in the 20th Century, interregional Hopewell was envisioned as a single culture that had spread from Ohio by conquest or diffusion (Shetrone 1931:304–306, 322), a biological stock of long-headed people (Hooton 1922; Neumann 1950, 1952; Prufer 1961a; for a summary see Buikstra 1979), a series of cultures that had developed alike from a common ancestral culture in the Southeastern United States through intercultural contacts (Seltzer 1933:6–7), and a "loose confederation" of contemporaneous, "cooperating" peoples tied together by trade, genealogy, and colonization from Ohio (Deuel 1952:255–256). Today, these interpretations are no longer held, but the range of opinions on the identity of interregional Hopewell is still very wide. Hopewell has recently been called, and is still discussed in conversation as:

- a wide network of *trade* of raw materials and exchange of ideas (Struever 1964; Struever and Houart 1972; see Griffin 1965 and Seeman 1979a for rebuttals).

- a specific *mortuary cult* (Prufer 1964b; see Caldwell 1964 and Struever 1964 for rebuttals).
- a shared *religion* (Caldwell 1964; Maxwell 1947:25).
- a *worldview* (Carr 1998, 1999b, 2000a; Carr and Case 1996; Romain 2000).
- a *Sprachbund* (Seeman 1995).
- a multiregional *artistic style* (Prufer 1968; Willey 1971).
- a *Great Tradition* of religious-based interaction and innovation (Caldwell 1964).
- a *social organization* of a complex kind interwoven with a symbol–ideological system for marking and claiming leadership and prestige (Seeman 1995).
- a network of *peer polities* involved in competitive display (Braun 1986; Dancey and Pacheco 1997a:9–10, Pacheco and Dancey n.d.).
- an *ecological adaptation* (Braun 1986; Dancey 1996a).

Historically, most of these ideas have been presented as satisfactory explanations of interregional Hopewell in and of themselves. Typically this has been done without reference to the alternatives or serious evaluation of the relative merits or complementarity of the alternatives (but see Struever 1964:88). Thus, attempts have been made to explain the entire expanse and content of interregional Hopewell by some single phenomenon.

Deconstructing Interregional Hopewell

The position taken here, and in the other chapters of this book, is that interregional Hopewell is a multidimensional and composite phenomenon, and can be understood only when it is resolved or "deconstructed"[1] into its diverse aspects and causes. There are at least two levels of deconstruction that are required. At the broadest level, it is essential to realize that the concept of interregional Hopewell, as defined here, and the related concept of the Hopewell Interaction Sphere, as found in archaeological literature, embrace three closely intertwined subjects. These subjects are: (1) the cultural and material content shared across regions of the Woodlands, including raw materials, classes of artifacts, artifact styles, mortuary and other cultural practices, and ideas; (2) the geographic regions over which these things were shared to varying degrees; and (3) the cultural mechanisms by which these things came to be widely distributed (see Hall [1997:156] for a similar partitioning). From this viewpoint, it can be seen that the understandings of interregional Hopewell listed above are not equivalent in nature. Some are shared cultural content (e.g., religion, art style), one is a geographic distribution (i.e., a *Sprachbund*), and some are mechanisms of interaction (e.g., trade, competitive display). In this regard, certain of the above interpretations are logically and phenomenalogically alternative and complementary rather than competing. Such complementary interpretations, depending on their empirical veracity, could be integrated into a multidimensional understanding of interregional Hopewell. In fact, explanatory completeness would demand this.

A second, narrower level of deconstruction applies to each of the above-listed understandings of interregional Hopewell individually. It is necessary to entertain the possibility that the one kind of cultural content or one geographic area or one kind of distributing mechanism thought to comprise interregional Hopewell might itself be heterogeneous. Consider the subject of geographic area. Struever (1964:88) postulated the existence over the Eastern United States of an interregional logistics network, within which raw materials, stylistic concepts, and their ideological rationalizations had moved. This network over this whole area was initially implied by him to be of a single kind: "The Hopewell Interaction Sphere simply refers to relations of a still to be determined *nature*" (Struever, p. 88; emphasis added). However, through time, empirically detailed distributional studies (Seeman 1979a; Struever and Houart 1972), raw material sourcing analyses (e.g., Spence and Fryer, Chapter 20; Carr and Sears 1985; Goad 1978, 1979; Hatch et al. 1990; Walthall 1981; Walthall et al. 1979, 1980), and stylistic analyses (e.g., Seeman 1979a:379) have shown that this network was really many different networks

within which the same or different raw materials were distributed, different amounts of a raw materials were distributed, and different stylistic conventions and ideas were intercommunicated. The contrast between the Illinois–lower Mississippi valley connection and the Ohio–Tennessee–Georgia connection is a well-known example (e.g., Goad 1979:244–245; Jefferies 1979:170; Seeman 1979a:313, 385; B. A. Smith 1979:186; Toth 1979:196; Walthall et al. 1979:249–252; for summaries of these viewpoints, see Carr and Sears 1985:86). Struever and Houart (1972:74–77), themselves, came to define four geographically distinct northern Hopewellian interregional networks within which different raw materials or finished goods were thought to have been dispersed. The deconstruction of Hopewell as a geographic area is addressed in Chapters 11 and 20.

Another form of deconstruction of interregional Hopewell at the second level concerns its cultural content rather than its geographic expanse. An example is breaking apart the notion of interregional Hopewell as a complex kind of social organization that was interwoven with a symbol system that marked leadership and/or prestige and facilitated social interaction (Seeman 1995:123; Struever 1964:88). This kind of deconstruction is made at the pan-Woodlands scale in Chapter 18, by Turff and Carr, and at the smaller scale of Ohio in Chapter 9, by Field et al. In Chapter 18, one finds that widely dispersed over the East during the Middle Woodland were metal-jacketed panpipes, which might be supposed to represent some one form of important social role and its symbolic representation. However, Turff and Carr document that the role of the panpiper, which does appear to have been a key one, was instead combined fluidly with many other kinds of important social roles, including diverse shaman-like personae, one kind of community-wide leader, high achievers or members of two different prestigious sodalities, and important members of different clans. Also significant, the social roles with which that of panpiper was combined varied among regional traditions, and in a patterned way delimiting four, broader areas, each comprised of multiple traditions. (see Chapters That Follow, below, for details). These patterns imply the varying functions of panpipes, their use in varied social and ritual contexts by persons in different roles, and, in turn, varying forms of social and ceremonial organization and leadership symbolization across the East. The patterns do not evidence a single, panregional social–symbolic system, as Seeman (1995) envisioned. They also do not accord with Caldwell's (1964) and Prufer's (1964b) ideas that interregional Hopewell represents the spread of a specific set of religious beliefs, a ceremony, or a cult, such as the Ghost Dance or Midewiwin.

In a similar way, in Chapter 9, Field et al. document that shaman-like and other leadership roles, along with their richly symbolic artifact markers, were associated with different genders in different parts of Ohio. In northeastern Ohio, key social roles were filled only by males, suggesting a patrilineal kinship system like those found in historic Algonkian societies of the northern Woodlands. In southwestern Ohio, these roles and their markers were associated instead almost completely with females, suggesting a matrilineal system like those found in historic southeastern Woodland tribes. Geographically in between, in the central Scioto valley, the balance of males and females that filled such important roles is more equitable, with some male predominance (Field et al., Chapter 9:table 9.2). These different patterns among the three Hopewellian geographic areas do not accord with the idea of a unitary kind of social organization that was interwoven with a symbol system that marked leadership and/or prestige, as Struever and Seeman proposed.[2]

The final form of deconstruction of interregional Hopewell that is wanting at the second level involves recognizing and mapping the diverse mechanisms, as opposed to a singular mechanism, by which raw materials, classes of artifacts, artifact styles, mortuary and other cultural practices, and ideas came to be widely distributed over the East. Theoretically, one would expect, from the diversity of kinds of material items shared over the Eastern Woodlands, that several different mechanisms of dispersal might have been involved. Following the logic of Carr and Neitzel (1995c:389), "Different media can vary in their scale, visibility, rarity, durability,

malleability, portability, and other qualities. In turn, these characteristics determine the contexts of artifact production and use, and affect an artifact class's potential role and articulation with society and individuals"—as well as its capacity to interrelate different societies and their members, I would now add. Thus, for example, one would want to inquire whether Hopewellian male-produced metallic symbols used in mortuary–ceremonial contexts and female-produced clay figurines used in largely domestic–ceremonial contexts interrelated Hopewellian societies in different ways, and were distributed interregionally by differerent cultural mechanisms (see Keller and Carr, Chapter 11).

Empirically, this form of deconstruction of interregional Hopewell is historically exemplified in the works of Carr and Sears (1985), Griffin (1965, 1973), and Seeman (1995). Griffin (1973) championed the idea, in contrast to Struever and Houart (1972), that not all Interaction Sphere items were traded across the midcontinent, but instead some were procured through long-distance logistical trips. In the case of obsidian, he posed that this raw material might have been obtained from Yellowstone by one or a few small canoe parties from the Hopewell earthwork community. Thus, multiple mechanisms of distribution—both trade and direct procurement—might have been involved in interregional Hopewell. Carr and Sears (1985:84–86, 89), through geographic and chemical analyses, found that meteoric iron was probably procured and distributed over the East by several means. These include the possible local collecting of meteoric iron by Copena peoples, probably regional or interregional exchange or long-distance logistical trips by Santa Rosa–Swift Creek and St. Johns peoples, almost certainly long-distance logistical trips to multiple meteorite falls by Illinois and Ohio Hopewellian groups, and possibly interregional exchange of meteoric iron from the Southeast to Ohio. Carr and Sears concluded that interregional Hopewell was a composite of diverse distributional mechanisms that were not necessarily integrated.

This view is also found in Seeman's (1995) communication perspective on Hopewell. He proposed, following a theoretical distinction drawn by Helms (1988), that interacting Hopewellian peoples might have classified each other into three categories by their geographic, linguistic, and cultural distances: normal people, close strangers, and outsiders. Initiating and maintaining relationships and communication among peoples in these three categories can be expected, according to ethnographic analogs cited by Seeman, to involve different cultural mechanisms. Whereas normal people can speak to each other using the same language, close strangers may employ bilingualism facilitated by out-of-group foster care and education, as well as marriage exchanges, pidgins, trade jargons, and ritualized behavioral response sequences. Outsiders can use very simple "foreigner talk" to ensure safe passage or to initiate basic trade, but more in line with Hopewellian material culture is the use of nonlinguistic, artistic communication in the form of iconography, music, and/or dance. Seeman went on to notice that Ross Barbed points, copper celts, and panpipes have increasingly wider geographic distributions and explained their different expanses as the result of different means of communication among normal people, close strangers, and outsiders, respectively. Thus, interregional Hopewell was resolved into three kinds of distributive mechanisms.

Additional Mechanisms of Dispersal of Hopewell

The range of mechanisms by which Hopewellian material culture, practices, and ideas came to be spread over the East can be expanded and/or refined considerably beyond the ones just described. Additional possibilities—some of which are discussed here in Part IV of this book—include:

- *vision and power questing* by medicine persons, headmen, male initiates, or those trying to bolster their social position in a competitive milieu.
- *pilgrimage to a place of power in nature* (Gill 1982).
- the *travels of medicine persons* to heal the sick or the travels of the sick to medicine persons.

- *long-distance buying and selling* and/or *learning of ceremonial rites* by medicine persons or others (Penney 1989).
- *spirit adoption* (Hall 1987, 1997).
- *interregional intermarriage*.
- *pilgrimage to a ceremonial center* (Gill 1982).
- *valuables exchange among distant elite* (e.g., Flannery 1967).
- *travel to a center of learning* to gain esoteric knowledge (Helms 1976, 1988, 1993).
- *elite-orchestrated transference of religious cults* among tribal segments in order to facilitate supralocal exchange (Wiessner and Tumu 1999).

Significantly, these mechanisms are more specific and personalized than the generalized notions of "procurement" and "exchange", in that they reference actors within particular cultural roles and with specific motives. By considering social actors, they open the possibility of generating interregional Hopewell from local and intraregional concerns. In addition, many of these mechanisms are essentially religious in their nature and/or motives, and contrast with the economic and socioeconomic views of the Hopewell Interaction Sphere that predominated in the 1970s and 1980s (e.g., Ford 1974; Hall 1973, 1980; Seeman 1979a; Struever and Houart 1972) and that are still reiterated today (e.g., Braun 1986; Fagan 1995b:408–410, 414–417; Seeman 1995:125, 138).

In the following sections, each of the above ten mechanisms of interaction is described in actor-based terms with ethnographic analogs, and their relevance to explaining various facets of interregional Hopewell is assessed with available archaeological data. Mechanisms of interaction at the long-distance, interregional scale of the midcontinent (hundreds of miles) are the focus of discussion, except in the section on valuables exchange. In this case, local, regional, and interregional means of valuables exchange are considered and contrasted, for the purpose of suggesting those particular means that are more or less likely to have occurred at specifically the interregional scale.

In order to systematize the logic by which any one or few of the above mechanisms of interregional interaction might be identified as the cause of a specific interregional distribution of Hopewellian raw materials or artifacts, Table 16.1 is offered. It lists some expectable material consequences of all but the last of the above mechanisms. The consequences include the raw or finished nature of the items, their function, their local or foreign raw material source and style, and their abundance. The reasons why the mechanisms have the material correlates that they do will become evident as the mechanisms are described below. The last mechanism listed above is not addressed in Table 16.1 because it is a composite of several of the first nine (see below).

Not all of the mechanisms listed in Table 16.1 are easily distinguished archaeologically; some pairs of mechanisms share many or all of their listed material correlates. However, five groups of mechanisms appear to be readily discernible. These groups are (1) vision/power questing and pilgrimage to a place in nature; (2) the travels of medicine persons or patients for healing; (3) the buying of religious prerogatives, spirit adoption, and intermarriage; and (4) pilgrimage to a ceremonial center, valuables exchange among elites, and travel to a center of learning. Contextual evidence possibly would allow finer distinctions to be drawn within those groups having multiple mechanisms.

MECHANISMS BASED ON SHAMAN-LIKE IDEOLOGY AND PRACTICES

Overview

Vision and power questing by medicine persons or others seeking spirit helpers and/or power from nature; more regular, periodic pilgrimage to places of power in nature; the travel of medicine persons or patients in the context of healing and being healed; and the travel of medicine persons or others to ceremonial practitioners to learn or buy ceremonial rites each imply shaman-like cosmologies, practices, artifacts, and/or raw materials. These suggested

Table 16.1. Material Consequences of Various Mechanisms of Interregional Interactions

	Material consequence				
Mechanism[a]	**Raw material or finished good**	**Function of artifact**	**Material source**	**Visible and obscure style of finished goods**	**Quantity**
Vision/power questing (deposit back home)	Raw materials of many kinds	Shamanic quality	Nonlocal	n/a	Little to much
Pilgrimage to a place in nature (deposit back home)	Raw material of one or a few kinds	Symbolic token	Nonlocal	n/a	Much
Travels of medicine persons or patients for healing; tokens of healing	Raw material or finished good	Shamanic quality, symbolic token	Nonlocal	Nonlocal	Little
Elite valuables exchange	Raw material or finished good	Fancy, symbolic	Nonlocal	Nonlocal	Little to much
Pilgrimage to a ceremonial center (deposit at center)	Raw material or finished good	Fancy and/or utilitarian	Nonlocal or local	Nonlocal	Little to much
Travel to a center of learning (deposit back home)	Raw material or finished good	Symbolic token of esoteric knowledge	Nonlocal	Nonlocal	Little
Buying of religious prerogatives ± spread locally back home	Finished good	Ceremonial paraphernelia	Local	Nonlocal	Little ± much
Spirit adoption ± spread locally	Finished good	Fancy and/or utilitarian	Local	Nonlocal	Little ± much
Intermarriage ± spread locally	Finished good	Fancy and/or utilitarian	Local	Nonlocal	Little ± much

[a]Each of these mechanisms would produce a nodal geographic distribution of the raw material or finished good of relevance. Dotted lines group mechanisms that are least distinguishable from each other in the archaeological record.

mechanisms for how Hopewellian material culture, practices, and ideas were spread over the Eastern Woodlands are reasonable in light of the clear shamanic orientation of Hopewellian material culture and symbology (Carr and Case, Chaper 5). Specifically, shaman-like animal impersonators of several kinds are known to have practiced in Ohio Hopewellian societies from their depictions in sculptures and carvings and from elements of their costumery (see Chapter 5, Table 5.2). They were the culmination of a shaman-like tradition that had been elaborating since at least the terminal Late Archaic.[3] Shamanic paraphernelia of many kinds are found in Ohio Hopewellian burials, including turtle-shell rattles, turtle-effigy rattles, deer antler tine tinklers, mushroom effigies, and smoking pipes, all suggesting trance induction; quartz and other

crystals, a quartz disk, mica mirrors, and cones, all for divination; quartz and gem points used for war or hunt divination, spiritual warfare, and/or sending harmful power intrusions; turtle-shell and bird bone sucking tubes for healing; barracuda jaws historically used by ceremonial leaders for scratching and letting blood from participants in preparation for ceremonies; conch shells, which historically were closely associated with the distribution and use of the black drink in public ceremonies; and cosmological symbols for performing rituals that referenced the natural world (see also Carr and Case, Chapter 5, Table 5.4, for a much larger list).

Power/Vision Questing and Pilgrimage to a Sacred Place in Nature

Journeying to a place in nature that, by its geological, hydrologic, historic, or other qualities, was thought to have much power was a very common practice among historic Native Americans generally (Gill 1982:97).[4] Certain spots in nature were believed to be the home of powerful supernatural beings or, more generally, to be full with energy—for example, "where the Creator's heart beats more strongly" (Swan 1988:152). Waterfalls, springs, deep pools, caves, mountain passes, and outcrops of fascinating raw materials are common examples of the power places cited by Eastern Woodland Native Americans (e.g., Hudson 1976:130–131, 145; Bacon 1993). At such places, power was sought internally in the form of visions induced by exposure, fasting, chanting, prayer, and other means. Power was also obtained externally through the collecting of special minerals, pigments, medicinal plants, and such. The vision quests and rock-painting ventures of Ojibwa and other Algonquin persons at isolated spots on Lake Superior and other northern bodies of water (e.g., Dewdney 1970:22; Gill 1982:98–99) are classic examples and especially relevant to the Hopewell case, considering the Hopewellian acquisition of copper from this area. Journeys were taken by Eastern Woodland youths (usual males) as part of their initiation into adulthood, sometimes to obtain an animal guardian spirit; by ordinary persons seeking an animal guardian spirit to bring them power and bolster their social position in a competitive social milieu; and by prospective medicine persons seeking tutelary animal, plant, and humanlike spirits and specific procedures to help them in many shamanic tasks (e.g., Eliade 1964; Gill 1982:97–101; Halifax 1979:87–91; Harner 1980:54, 81–83; Mails 1979:49–54, 86, 154–155, 181–185; Parker 1923:27–28; Swan 1988; Walsh 1990:53–54). A long-distance journey thus was a means of social and internal transformation for an individual. It was a "rite of passage" from one personal and social state to another, and fits well the cross-cultural norm for rites of passage to involve a territorial passage (van Gennep 1960:192). Commonly, journeys for power and visions in the Woodlands and Plains involved an element of danger, which was instrumental in the process of transformation (see above references; also Turff and Carr, Chapter 18, and Spielmann 2002:199–200 for broader, world-wide examples).

A pilgrimage to a sacred place in nature is like a vision quest in most of the above respects. However, a pilgrimage takes a person to a traditionally visited spot, and one visited by many persons, whereas a power or vision quest often does not. In addition, a pilgrimage may be made as a group venture, whereas a vision or power quest is an individual affair. In the process of multiple persons sharing the pilgrimage ritual, group identity is strengthened (Turner 1969; see also Mack 2000), bolstering the personal and social transformation of the individual.

An excellent Native American example of a pilgrimage to a power place was the trip made annually by Papago youths and men from their desert Arizona homeland to the Gulf of California, about 200 miles away, beyond their territory of ordinary activities (Gill 1982:101–105). The ocean was seen as a place of power—the source of much needed monsoon rains in the desert and also salt, which was thought powerful, gathered from deposits, and brought back home, to be distributed as substance and power among the community. The trip was difficult and dangerous, and required adherence to a number of special rules and restrictions. Pilgrims had visions along the way and collected examples of objects seen in their visions. These they kept for themselves.

Upon coming back to the community, the journeyer had to remain isolated from the rest of the community for days, because the power acquired at the ocean was too great for others to be safely near. The trip was made 10 or more times by a person, beginning at age 16 or 17, and transformed a youth of religious naiveté into a vision-guided man, and one of a group of men of vision.

The idea that Hopewell Interaction Sphere raw materials were brought back home from afar in the course of long-distance power/vision quests or pilgrimages to sacred places in nature is directly implied by the combination of the materials' distant sources and their likely spiritual qualities in the native's eye. A canoe trip to Lake Superior sources of copper from the central Scioto area in Ohio and back, as one example, would have taken many months and required considerable endurance and demonstration of power (Little 1987). As for spiritual qualities, mica, copper, silver, meteoric iron, obsidian, galena, and other Hopewell Interaction Sphere materials each either have the capacity to be transformed from light to dark or shiny to dull, and vice versa, or simultaneously exhibit a light/shiny quality and a dark/dull quality (Carr and Case, Chapter 5; 1996; Carr 1998). In addition, quartz and translucent gemstones, as well as materials like mica that can reflect one's image, imply the ability to see within, through, or beyond. In shamanic worldviews, both transformation and seeing are qualities that are equated with power (Harner 1980:28–29). Thus, many Hopewell Interaction Sphere raw materials would likely have been perceived as powerful. The combination of a long journey and a spiritually extraordinary end point logically suggests the possibility that shaman-like practitioners, initiates to adulthood, or others seeking power went on long-distance power/vision quests or pilgrimages to the potent places in which these materials were found in bulk (e.g., Obsidian Cliff, Wyoming the Brenham Fall, Kansas; Isle Royale in Lake Superior; the Keweenaw Peninsula of Michigan; Cobalt, Ontario) and that they brought back these materials as evidence of the spirits and/or power they had witnessed and acquired there. Archaeological example tokens of such successful journeys include the books of mica, large raw copper nodules, and large galena cubes found in some Ohio sites; the large silver nuggets and relatively expansive sheets of silver found at the LeVesconte site, Ontario, and the Converse site, Michigan; and the multiple but small silver nuggets and masses from the Hopewell site, Mound 25, Burial 260–261, and from the Snake Den site, Ohio (Spence and Fryer, Chapter 20; Spence and Fryer 1990, 1996).

The image of Hopewellian vision quests resulting in the acquisition of power and powerful materials is perhaps most easily visualized for the case of obsidian from the Yellowstone region. There, dualities—which preoccupied the Hopewell—abound naturally. The obsidian veins of Obsidian Cliff are black but sparkle on and off with abundant white reflections of sunlight as one walks below the cliff. The Firehole river runs cold just feet away from warm pools, affording the possibility of sweat baths followed by cold emersion—a natural precipitate of trance states. Hot gysers also erupt just feet from the river. The colors that predominate in Hopewell art and earthen architecture, and that historically symbolized the Directions among Woodland peoples, are found closely juxtaposed in the hot pools—white carbonates, red algae, yellow algae, black basalt and algae, and blue–green waters. Good candidates for referents to beings of a Lower World abound in Yellowstone: gysers that erupt vocally and unpredictably, steam from vents, bubbling pools, and Roaring Mountain's steaming and vocal slope, just four miles from Obsidian Cliff, and occasionally heard from there. Redundant images of the axis mundi are found at Gyser Basin, where large mounds have built up around the gyser entrances, from the centers of which smoke rises and water plumes. Several animals whose power parts, effigies of them, or artistic images were a part of Hopewellian ritual paraphernalia occur at Yellowstone: bear, elk, goat, trumpeter swan, and raptors. We do not know how the Hopewell may have used the Yellowstone landscape ritually or what specific symbolism they might have attributed to its natural wonders. However, the power of the place and image of persons journeying there for spiritual power, powerful materials, visions, and initiation or transformation are

easily grasped by those who have walked in Yellowstone.

Likewise, the austerity, raw natural power, and eerie qualities of the Lake Superior basin, the magical properties of copper and silver that Hopewellian peoples obtained there, and its remote location all conform well to the picture of long journeys taken by Hopewellian people to extraordinary places for vision and power. The rugged relief, steep bluffs, dense maple–birch–hemlock forests with interwoven masses of foliage that prohibit the noonday sun, pendant mosses, and cedar swamps of the Trap range in the Keweenah peninsula and of Isle Royale are forbidding to overland travel. Lake Superior is equally dangerous for travelers, with its unpredictable dense fogs, violent windstorms, and shoreline seiches, waterspouts, and whirlpools, which historic Native Americans attributed to the Horned Serpent–Underwater Panther and other powerful underwater beings. The atmosphere of the region is unreal. The horizon is falsely luminous and colored on a clear day on the Keweenah peninsula, from the great mass of water that surrounds it. Disorienting and dynamically changing mirages and disproportionate, enlarged reflections of the terrain suspend in the air above Lake Superior or float on its waters as a result of strong differences in air and water temperatures. Massive and quickly changing cloud formations dominate the day sky. At night, streaks of orange and blue light of the aurora flash up from the horizon, sometimes to the zenith, in rapid pulses. (Foster and Whitney 1850:55–57, 81; Martin 1999:36–42, 202; Schoolcraft 1970:168–169, 178). The many unreal, transformational, powerful, and dangerous qualities of the place would have provided an ideal setting for journeys and rituals of personal and social transformation and empowerment for the Hopewellian people who traveled there.

The argument that the exotic and transformative raw materials found in Hopewellian sites evidence power/vision quests or pilgrimages is implicated in Chapter 18 by Turff and Carr. They review the detailed symbolic meanings of copper for various historic Great Lakes and Midwest–Riverine Native Americans, and distill some of copper's most probable, fundamental meanings for Hopewellian peoples. They conclude that copper would have evoked the notion of power as related to supernatural Upper and Lower World creatures, but also the power required by humans to make a long-distance journey to a copper source and the power attained by having successfully done so. The argument is further supported in the case of copper by Bernardini and Carr (Chapter 17), who show the likelihood that copper used to make the celts found over the Midwest and Midsouth was normally obtained directly by long-distance journeying to Upper Great Lakes sources rather than indirectly by down-the line exchange. The random geographic distribution of celts of varying sizes over the Midwest, rather than their clinal decrease in size away from the upper Great Lakes, is used by the authors to make their case. Bernardini and Carr also point out that copper celts, analogous to stone celts used to manufacture dugout canoes, would have been ideal representations of the long journeys made to acquire power in areas of copper deposits. Finally, the authors extend the long-distance journey interpretation to alligator teeth, barracuda jaws, obsidian, and meteoric iron, each of which have qualities implying power. Items of these kinds concentrate geographically in Ohio Hopewell sites and occur at very low densities or not at all between Ohio and their distant sources, suggesting that they arrived in Ohio by long-distance journeying rather than down-the-line exchange.

Geochemical sourcing, distributional data, and/or evidence of the working of exotic raw materials at a site indicate, with very high probability, the following instances of direct, long-distance acquisition rather than nodal exchange or down-the-line exchange: obsidian found in several Ohio Hopewell sites from Obsidian Cliff, Wyoming, a nearby Yellowstone source, and the Camas–Dry Creek formation in Idaho and, much less likely, obsidian found in Illinois Havana Hopewell sites from these sources (Griffin 1965; Hatch et al 1990; Hughes 2000; Hughes and Fortier 1997; Wiant 2000);[5] galena at several Ohio Hopewell sites and/or galena at a number of Tennessee Copena sites from the upper Mississippi valley source (Walthal 1981:41); galena at six Illinois Havana Hopewell sites from a central

Missouri source and at additional Havana sites from the Potosi deposit in southeastern Missouri (Walthal 1981:37); silver at the LeVesconte site in Ontario, the Converse site in Michigan, and the Tunnacunhee and Mandeville sites in Georgia, all from Cobalt, Ontario; silver at the Hopewell and Turner sites in southern Ohio from the Keweenaw peninsula of Michigan, where it occurs in the form of erratic inclusions within raw copper (Spence and Frye, Chapter 20; Spence and Fryer 1990, 1996);[6] meteoric iron at the Turner and Hopewell sites, Ohio, from the Brenham fall in Kansas (Wasson and Sedwick 1969); meteoric iron at the Havana site, Illinois from a Minnesota, a Kentucky, or an unknown source (Kimberlin and Wasson 1976); and one instance of river mussel shell at Naples–Russell Mound 8, Illinois, from southeastern Georgia (Farnsworth and Atwell 2001:74). Distant sources of other Hopewell Interaction Sphere raw materials have been documented to have been used (e.g., copper from the Keweenaw Peninsula, Isle Royale, Green Bay, and the Ducktown Appalachian ore band), but the mechanism(s) of interregional dispersal is(are) not so certain (compare Bernardini and Carr, Chapter 17; Turff and Carr, Chapter 18; Spence and Fryer, Chapter 20; Goad 1978, 1979; Griffin 1961b; Levine 1999; Seeman 1979a:292–293; Winters 1968).

Long-distance power questing and vision questing must have been given high value in Hopewellian societies. This is seen in part in the abundance of fancy, exotic raw materials found in Hopewellian cemeteries, sometimes in the form of very large ceremonial deposits of a single material (e.g., the 8,000+ disks of Dongola chert in Hopewell Mound 2, the 160 pounds of galena found in Hopewell Mound 29, and the 300 pounds of obsidian found in Hopewell Mound 11; see other examples in Carr et al., Chapter 13, Tables 13.2 and 13.3). The value placed on long-distance journeying is also seen in the flaunting of exotic materials crafted into the form of ceremonial items that probably were displayed in public events. Examples include large obsidian bifaces, large copper geometric symbols that apparently decorated costumes, a large mushroom-effigy staff sheathed with copper, deer antler headresses of copper, and large mica mirrors cut out and painted in the form of human heads wearing headgear (Carr, personal observation, Field Museum of Natural History). The high value that Hopewellian societies placed on long-distance acquisition of raw materials is also seen in the juxtaposition of materials from different, far-away places in the same deposits. For example, DeBoer (2000:36) pointed out that single bladelets of each of obsidian, Knife River flint, Upper Mercer flint, and Harrison County chert were placed in a pit in Russell Brown Mound 3, of the Libery Works, Ohio (Seeman and Soday 1980). Similarly, in Pete Klunk Mound 2 in Illinois, three marine shell cups were recovered, each a different species from different sections of the Atlantic and Gulf coasts (Perino 1968:51).

Long-Distance Travels of Medicine Persons or Patients for Healing

Native American medicine persons today and in the past, as well as shaman cross-culturally, are well known for the long distances they have traveled and, frequently so, in the course of following their spiritual calling to help individuals. Likewise, patients needing healing traditionally have traveled to distant medicine persons of reputation to be healed (e.g., Halifax 1979; Mails 1979:186–189; 1991:141, 169–176; Neihardt 1932). These travels have the potential for spreading material goods. Specifically, after healing ceremonies, many Native American medicine persons traditionally have given their patients a material remembrance of the vital and protective power(s) that had been brought back to them in place of what had ailed them—for example, a tie of tobacco, a crystal, an animal power part, imagery, and such (see references above). In the end, whether the medicine person or patient did the traveling, the given token is spread far from its original source in nature where the medicine person collected it. It is possible that certain, token-like Hopewell Interactions Sphere items, such as pieces of mica, copper, meteoric iron, and galena, were spread in small numbers from their sources in this way. Small caches of token-like materials in the graves of persons who have shamanic paraphernalia and probably were medicine persons,

or lone tokens in the graves of ordinary persons who may have been patients (Appendix 16.1), might indicate this mechanism of dispersal. The single river mussel that was carved with a shaman-like broad-beaked duck–raptor combination and was found in Naples–Russell Mound 8 in Illinois, but that originated from southeastern Georgia (Farnsworth and Atwell 2001:74), may be another example.

Long-Distance Buying and Selling, and/or Learning of Ceremonial Rites

The notion that interregional distributions of Interaction Sphere goods reflect the long-distance travels of medicine persons or others to buy rights to perform powerful ceremonies and to make the paraphernalia used in those ceremonies is an elaboration of a contribution made by Penney (1989:159–229). Penney examined Hopewellian smoking pipes, clay figurines, and bird-effigy pots spread across the Eastern Woodlands for their raw materials, stylistic details of the kind that reflect the producing artist, and more visible stylistic conventions and image content. From these data, he was able to show that objects that are remarkably similar in their stylistic conventions and image content and that were found in distant regional traditions are nevertheless clearly not examples of interregional trade[7] (see also Farnsworth 1997; Hughes et al. 1998; Wisseman et al. 2002). As an alternative explanation, Penny offered that it was the styles and images that were spread, and that this dispersion can be attributed to persons who traveled distances in order to buy or exchange prerogatives (i.e., rights) to the performance of particular ceremonies and the production of the ritual equipment required for those ceremonies. Purchase and exchange would have involved a period of tutelage in the ways of the ceremony and the manufacture of its equipment.

The parties involved might have been ritual trading partners, or less formally tied members of communities who met at interregional social and religious gatherings. The spread of medicine pipes among the historic Crow, Hidatsa, Blackfeet, Sarsi, and Gros Ventura, and the spread of the Dream Drum and Dream Drum cult among Eastern Siouan and Great Lakes Algonquin speakers are ethnographic examples involving these two kinds of parties, respectively. To the list of participants that Penney suggested can be added medicine persons who traveled distances to learn from each other—a common North American and global practice (e.g., Gill 1982:165; Harner 1980; Helms 1976:109–143; Mails 1979:156–161). The spread of the Ghost Dance from the prophet Wovoka (Jack Wilson)—a gifted healer among the Nevada Paviotso—across the Plains tribes through medicine persons and others who came to learn from him is an example (Gill 1982:164–167). Male bachelors who, as part of their initiation into manhood, journeyed to distant societies of power to purchase sacred objects and learn the rites connected with them, is another possibility, to follow the case of the *Sangai* bachelors' rites of the Enga in New Guinea (Wiessner and Tumu 1999:19; see below). There, male initiates from the most prosperous clans were identified by the tribe and sent in secret to purchase sacred objects and ceremonies from a distant society. The voyages were recorded in lengthy poems, which also described the physical transformation of the initiate into a man.

Penney's idea of long-distance buying and selling of religious prerogatives is very significant, because it provides an explicit mechanism for the spread of the "mortuary–ceremonial system," "ceremonial idea system," "cult," or "religion" that Caldwell (1964), Prufer (1964b), and Struever (1964) thought interregional Hopewell to have been. Prufer (1961a:725–726, Prufer et al. 1965:133) had suggested the less convincing idea, without ethnographic analog, that the Hopewell cult was spread by ceremonial and craft specialists who migrated interregionally (in particular, from Illinois to Ohio). The alternative mechanism of spread of religious cults documented ethnographically by Wiessner and Tumu (1999) and described below (see Big Man Orchestrated Transference of Religious Cults) would have worked well at the within-tradition scale of Hopewell, but probably would have been too cumbersome at the interregional scale of Hopewell.

SPIRIT ADOPTION AND INTERMARRIAGE

The practice of spirit adoption and its proposed application to explaining the interregional distribution of some Hopewellian practices and ideas have been presented by Hall (1987, 1997:42–47, 155–157). Spirit adoption was a historic, Great Lakes, Prairie, and Plains Native American ritual for releasing the soul of dead tribespersons and ending the period of mourning for them (e.g., Callender 1979:256). It involved the replacement of the deceased by a close relative, a fellow tribesman, a captive enemy, or a friend or prominent individual from a neighboring tribe, who took on the deceased's identity—commonly his or her name and/or clothes. If not previously a member of the tribe, the person was adopted into it. This replacement allowed the soul of the deceased (or one of his souls) to move on permanently to an afterlife and have a happy existence there. Because spirit adoption created fictive kinship relationships, it could be used to solidify alliances among individuals, villages or bands of a tribe, or neighboring tribes. In the latter case, a notable person from the foreign tribe was honored by being ceremonially made into a resurrection of a dead chief of the adopting tribe, and by becoming a chief of that nation.

Spirit adoption, with its tie to the mortuary realm, has an obvious potential for explaining the spread of Hopewellian mortuary and other practices and ideas in a down-the-line fashion, which Hall (1997:157) pointed out. His idea is strengthened by his proposal (Hall 1987) that the historically widespread Plains and Woodlands calumet pipe ceremony had its origin in spirit adoption ceremony. The calumet ceremony served to allow safe passage for travelers through potentially dangerous regions and to create alliances between potential or actual enemies. Hall's (1977:504–505; 1983:48, 52; 2000:115–116, 120) more specific ideas, that historic Plains and Woodlands Hako-type calumet ceremonialism had an analog during the Middle Woodland period in Hopewellian platform pipe ceremonialism, and that spirit adoption was a component of Hopewellian pipe ceremonialism, is not supported by archaeological evidence of several kinds (Turff and Carr, Chapter 18). However, his broader concept of spirit adoption as a fundamental ritual of social intercourse among neighboring or close parties in the Woodlands (Hall 1997:161; 1989:255–256; personal communication, 2004; see also 1987; 1997:57), and as extending back in time well before the Middle Woodland period (Hall 1987:39), remains reasonable.

Intermarriage among those neighboring villages, bands, and tribal nations in the Eastern Woodlands who might share or compete for hunting or fishing grounds, quarries, or sources of other goods was fairly common historically (e.g., Callender 1979:256). Intermarriage naturally had the potential for going hand-in-hand with spirit adoption among tribes: An adoptee might marry within the adopting tribe. Thus, intermarriage at the scale of neighboring groups could have been a significant factor in the down-the-line spread of Hopewellian practices and ideas. Distinguishing the relative contributions of intermarriage and spirit adoption to the spread of Hopewellian ways within a locale or region would be difficult.

In contrast to local and regional-scale intermarriage and spirit adoption, interregional intermarriage and spirit adoption were probably very rare historically. They are unlikely candidates for explaining much of the interregional distribution of common Hopewellian ways across the Eastern Woodlands. They may, however, very well explain certain specific cases of very striking resemblances among Hopewellian objects found in distant sites. For example, four clay figurines from Mounds A and B of the Mandeville site in Georgia resemble clay figurines from the Knight mound, Illinois, in the details of their body form, posture, clothing, and painting, but are not items of exchange because they have a micaceous temper like the local Mandeville pottery (Keller and Carr, Chapter 11; Kellar et al. 1962:344, 351). Another example is found in three pairs of copper earspools that are apparently unique over the Woodlands in having "white" metal—silver or meteoric iron—overlays in only their central depressions. These earspools are from the Esch site in northwestern Ohio (silver), Bedford Mound 4 in Illinois (silver), and Tunacunnhee in Georgia (iron) (Ruhl, Chapter 19). All of these

cases suggest the local manufacture of items by one or a few persons who came from a far-away stylistic tradition. Long-distance intermarriage and spirit adoption would be consistent with these cases; however, also possible would be the long-distance buying of ceremonial prerogatives.

Occasional long-distance intermarriage may have helped to solidify ritual ties between the Mann community in Indiana and communities in the Georgian Piedmont and/or Gulf Coastal Plain. Kellar (1979:186) noted the strong resemblance between complicated stamped vessels at the Mann site, Indiana, and early Swift Creek complicated stamped pottery in vessel shape, rim shape, and stamping. He concluded that more than trade was involved in this relationship, given the relatively high frequency of complicated stamped sherds at Mann compared to their rare occurrence in Scioto Hopewell sites. Complicated stamped sherds constitute about 2% of the ceramic assemblage from the Mann site and complicated stamping is the second most common form of ceramic decoration found at Mann (Ruby and Shriner, Chapter 15; Ruby 1997e:6). To explain this frequency of vessels of foreign style, Keller suggested a northward movement of people to Mann, perhaps by intermarriage. However, ethnographic parallels in the Woodlands for such long-distance, repeated intermarriage are wanting.

A different tack to the problem is taken by Ruby and Shriner (Chapter 15) in this book. Through petrographic, x-ray diffraction, and scanning electron microscopic analyses of pottery from the Mann site and local clays, they find that all of the Swift Creek-like complicated stamped sherds from Mann that they tested for location of production were made locally at the site, rather than imported from the Georgian Piedmont and/or Gulf Coastal Plain. On this basis, they ruled out the presence of complicated stamped pottery at Mann as due to power questing or elite valuables exchange. In addition, because complicated stamped pottery is relatively frequent at Mann, they conclude that its presence cannot be attributed to small numbers of pilgrims who might have regularly come to Mann and made their own pottery there. The pilgrimage interpretation is also not supported by the occurrence of complicated stamped pottery on a number of Mann phase habitation sites in the neighborhood of the Mann ceremonial center, rather than their restriction to the center (Ruby and Shriner, Chapter 15; Ruby 1997e:8). As an alternative explanation, Ruby and Shriner suggest that people of the Mann phase hosted regular ceremonies attended by good numbers of persons from the Georgian Piedmont and/or Gulf Coastal Plain. At the Mann site, and that this practice continued over a long time, leading to the frequency of complicated stamped pottery at Mann. The long-term stability of this tradition is attributed by Ruby and Shriner to the cementing of intercommunity relationships through some marriage and/or adoption. Note that interregional intermarriage, itself, is not thought to be responsible for the bulk of the complicated vessels at Mann. Ruby and Shriner also suggest that complicated stamped pottery at Mann might be attributable to residents at Mann having bought the rights from Southeastern groups to produce complicated stamped pottery and to enact ceremonies associated with it; pottery production and ceremonial performance might then have spread within the Mann community.

Intermarriage between the Havana and Scioto tradition peoples has been an ongoing topic in Hopewellian studies, beginning in physical anthropology and spreading to archaeology. Dixon (1923, in Buikstra 1979) saw resemblances between Illinois valley skeletons from Hopewell mounds and the skeletal series at Turner, Ohio. Neumann (1950, 1952, 1970, in Buikstra 1979) saw Illinois and Ohio Hopewellian populations as having been quite similar and derived from the same (Otamid) stock. His work was based first on a detailed, cranial–morphological typology that he developed in the style of descriptive anthropometry, in order to trace the racial history of North American Native Americans, and then on a discriminant function analysis of craniometric data. Following Neumann's conclusions and considering the similarities between the Havana and Scioto Hopewellian archaeological records and their chronological positions, Prufer (1961a:725–726, 1964a:55–59; 1964b:97; Prufer et al. 1965:133) posed that Ohio Hopewellian culture had its roots in Illinois Hopewellian culture. He specifically

thought that ceremonial and craft specialists of the Hopewell cult had migrated from Illinois to Ohio and intermarried there. Subsequent metric and nonmetric cranial analyses (Jamison 1971; Reichs 1974) of Illinois and Ohio Hopewellian skeletal populations have not firmly supported or denied the migration and intermarriage hypothesis (Buikstra 1979:228).

Frequent marriage exchange of women among Havana, Mann, and Scioto Hopewellian communities is pretty firmly refuted by stylistic studies done by Keller and Carr (Chapter 11) on clay figurines found in these areas. The authors argue that clay figurines were produced by women, based on very strong worldwide and Eastern Woodlands ethnographic associations between females and manufacture with soft, pliable materials, including clay (Driver 1969; Murdock and Provost 1973). The authors also find support for this position in the natural style of the figurines, unelaborated with the ceremonial face marking and costumery found on human images carved from hard materials, and in the production and frequent deposition of figurines in domestic rather than ceremonial sites in the Havana and Mann regions. Lack of interregional exchange of female producers of figurines, as well as a lack of exchange of figurines themselves, is indicated by marked variation among the three regional traditions in the less visible, facial stylistic attributes of their figurines, which theoretically should be sensitive to learning among close kin/artisans (Carr 1995a). Lack of interregional exchange of females and figurines is also evidenced in the idiosyncratic sharing of different stylistic attributes among different pairs of the three regions, rather than the interregional spread of the covarying bundles of stylistic traits that would be produced by artisans of frequently intermarrying societies.[8]

PILGRIMAGE TO CEREMONIAL CENTERS

Long-distance pilgrimage to a sacred ceremonial center has a cultural logic behind it closely similar to long-distance pilgrimage to a sacred place in nature. In both cases, personal and/or social transformation of the individual are the goals, traveling a distance is equated with approaching the sacred or supernatural (Helms 1976:133, 136, 176), and the pilgrimage point is a place of power. Moreover, ceremonial centers have commonly been built in places in nature that were thought to be powerful. For example, the site of Delphi, Greece, was selected to erect the famous shrine in honor of the earth goddess, Gaia, because the location was experienced as having a stronger earth-force or "plenum", thus favoring prophecy (Swan 1988:153).

Hopewellian ceremonial centers may have been places of pilgrimage not only because religious specialists and community members gathered there periodically to perform sacred rites, but also because they were located in places in nature thought powerful. For example, in Ohio, the Seip earthwork is located immediately northwest of white florescences of alum—an astringent—in the 300-foot-high black shale cliff of Copperas Mountain, along Paint Creek (Seeman and Branch n.d.), and very close to outcrops of red ocher (Romain 2000:29) that would have been useful for making paint.[9] The Glenford hilltop enclosure, within a few miles of the Newark Earthworks, is situated on a hill bearing outcrops of a rare white sandstone that today is sought out commercially for its abnormally high silica content (Romain 2001). Tremper mound was located strategically across the Scioto River from pipestone quarries in Feurt Hill (Mills 1916:265), which was use to manufacture some of the smoking pipes deposited in the mound (Weets et al., Chapter 14; Emerson et al. 2002). The Hopewell earthwork is located immediately adjacent to a series of springs, and the McKittrick earthwork is less than a half-mile from brine springs used historically to make salt (the Old Scioto Salt Lick [Romain 2000:30]). More broadly, the great concentration of earthworks at the interface of the Appalachian Plateau and the Till Plain provinces in Ross County, Ohio, may well reflect the perceptions that Ohio Hopewellian peoples had of the abrupt rising of the Appalachian Plateau above the relatively flat Till Plain in this area, and/or the closed-in versus open nature of these two provinces, respectively.[10] The Old Stone Fort hilltop enclosure in Tennessee was located between the two deep gorges of the Duck

and Little Duck rivers, and had seven major waterfalls with plunge pools and a multiple-entrance cave nearby it. The closest Middle Woodland enclosure to Old Stone Fort—Desota Falls, near Ft. Payne, Alabama—also has water falls, a plunge pool, and a multiple-entrance cave by it (Bacon 1993:246, 249, 260). Thus, the distinction between Hopewellian pilgrimages to places in nature and pilgrimages to ceremonial centers could have been largely insignificant in Hopewellian cultural logic.

Regarding archaeological correlates, pilgrims may manufacture utilitarian and ceremonial artifacts at sacred sites in their nonlocal styles out of local materials. The foreign-style specimens may be rare to frequent at the sites, depending on pilgrimage rates. Unfortunately, these same material consequences can result from long-distance intermarriage and spirit adoption, and from the long-distance buying of religious prerogatives. In these cases, foreign practices may be accepted by the local community and spread within it to varying degrees (Table 16.1). Alternatively, pilgrims may bring along their own utilitarian and ceremonial artifacts to a sacred site, for use there or for exchange with local residents, with the possibility of breakage and deposition at the sacred site. In these cases, the deposited artifacts will have been made of nonlocal materials. Pilgrimage can then be distinguished from long-distance intermarriage, spirit adoption, and the buying of religious prerogatives, but may be indistinguishable from elite valuables exchange or travel to a distant center of learning (Table 16.1).

Pilgrimage where foreign style artifacts are made of local materials is probably exemplified at the Pinson ceremonial center, Tennessee (Mainfort et al. 1997; see also Mainfort 1996:387). At Pinson are found vessels produced of local clays but in multiple nonlocal styles from distant Hopewellian traditions in the Marksville, Santa Rosa–Swift Creek, Tennessee valley, and Mobile Bay areas (Mainfort 1980, 1988b:168; Mainfort et al. 1997; but see Stoltman and Mainfort 1999 and 2002:16 for qualifications). Foreign-style vessels have been found in "virtually every tested locality" at Pinson (Mainfort 1996: 386), but are not found in surrounding Middle Woodland habitation or other sites (Mainfort et al. 1997:44). These data suggest a long-term pattern of pilgrimage of peoples from afar to Pinson for ceremonies, without intermarriage or spirit adoption with local residents—practices that would have spread foreign styles to local residents and their habitations. Buying of religious prerogatives by local residents in order to manufacture the foreign-style vessels is unlikely for the same logic. The multiplicity of foreign styles and their restriction to the Pinson center distinguish this example from the case of, complicated stamped pottery at the Mann site (see Spirit Adoption and Intermarriage, above). The few known examples at Pinson Mounds of foreign-style vessels that were actually produced at distance from the site (Stoltman and Mainfort 1999, 2002:16) could indicate pilgrimage, or the long-distance travel of aspiring leaders to Pinson Mounds for training under important teachers there, or symmetrical valuables exchange among elite (see below, Interregional, Asymmetric Exchange of Valuables, on Helm's model).

Pilgrimage where foreign-style artifacts made of nonlocal materials are brought to a ceremonial center by pilgrims may be represented at the Mann site, Indiana (Ruby and Shriner, Chapter 15). This mechanism can account for the rare occurrences of foreign-made, Southeastern-style, fine-spaced, simple stamped pottery vessels at Mann. The authors reason that peoples from the Appalachian Summit may have been attracted to visit the great Hopewellian ceremonial earthworks of the north, upon hearing tales of them, and may have made pilgrimages to them as rites of passage, somewhat akin to the pilgrimages or power quests that Southeasterners seem to have made to the copper-bearing power places of the upper Great Lakes (Turff and Carr, Chapter 18; see also Goad 1978, 1979). With them, the Southeasterners would have brought their simple stamped pottery. In turn, residents at Mann could have placed value on the pottery, by virtue of its foreign origin and unusual designs, and exchanged gifts for the vessels and possibly their contents. The allure of northern ceremonial earthworks generally, as envisioned in Ruby and Shriner's scenario, finds support in the continued use of some of these earthworks locally for

burial of persons in simplified mounds long after the major events of Big House use and earthwork and large mound construction were complete.[11] Alternatively, the fine, simple stamped pottery at Mann could be explained by long-distance travel to a center of learning or long-distance elite exchange, which have archaeological correlates similar to pilgrimage to a ceremonial center (Table 16.1). It is not likely that residents of Mann phase sites made pilgrimages or power quests to the Appalachian Summit and brought back simple stamped pottery from communities there, because such pottery does not occur in habitations around the Mann site, based on surface surveys (Ruby 1997e).

A case similar to that at Mann, but with its own twist, seems to be evidenced in the rare occurrences of simple stamped pottery with sand temper (Turner Simple Stamped B [Prufer 1968]) in southern Ohio. Specimens of this kind of pottery from several Ohio ceremonial centers have been identified petrographically to have come from the Appalachian highlands, especially in North Carolina and Tennessee, and from the Gulf Coastal Plain (Stoltman 2000; see also J. A. Brown 1994:186–188; Chapman 1973; Chapman and Keel 1979; Griffin 1983; Keel 1976). However, the pottery type is also known occasionally from residential sites away from ceremonial centers (Dancey 1991:63; Prufer 1968; Prufer et al. 1965:25). This situation leaves open the possibility that southern Ohioans made pilgrimages to the Southeast, not simply vice versa. Again, long-distance travel to a center of learning or long-distance elite exchange are viable, alternative interpretations.

LONG-DISTANCE EXCHANGE OF VALUABLES AMONG ELITES

The nodally concentrated distributions of certain Hopewellian fancy artifact classes and raw materials across the East suggested to Struever (1964:88, 105; Struever and Houart 1972:49) some form of exchange of goods that was tied to "selected persons who occupied status positions" (Struever 1964;105) within societies that were widely separated. The goods, themselves, were thought to "communicate" social prestige or to be "paraphernalia used in the ritual reinforcement" of prestige (Struever and Houart 1972:49). Goad (1978:201–204, 1979:245–246) went on to characterize the presumed exchange of copper, in particular, as "reciprocal" and "hierarchical," with reciprocal exchange among unspecified persons at major "regional transaction centers" and, again, between these "pooling areas" and smaller, surrounding sites of a region. Modern anthropology, simplified, would rewrite these interpretations as the symmetric exchange of valuables and sumptuary items among the elite (chiefs, chief-priests, big men, and/or ritual leaders of a kind) of approximate "peer polities" (Renfrew 1986). One purpose of the exchange would be seen as the opportunity for elite to have materially demonstrated their power and knowledge, and their efficacy in accessing these, especially supernatural forms of power and knowledge (Earl 1997; Helms 1976; Renfrew 1986; Service 1962:147, 150). A complementary view offered by the neo-Marxist based "prestige goods economy" model (Brown et al. 1990; Clark and Blake 1994; Earl 1982; Frankenstein and Rowlands 1978; Friedman and Rowlands 1977; Hayden 1995; Meillassoux 1978) would suggest that "individual aggrandizing" or "competitive accumulating" emerging elite co-opted the production and circulation of material valuables necessary for social payments of debt, damages, bride-price, ceremonial functions, and other forms of social reproduction; used the valuables to create debts and obligate others in their society to them; and augmented their power by building alliances with other elite of the region through the exchange of the valuables with them, or what has been called a "network strategy" for political action (Blanton et al. 1996; Feinman 1995, 2000).

This section begins by summarizing current archaeological evidence of the kinds of Hopewellian items, and specific examples of them, that actually were and were not physically moved long distances among Hopewellian traditions. Thus, candidates for elite valuables exchange are identified, although other cultural means of movement of the items must also be entertained. The section proceeds to describe several different ethnologically known forms of valuables exchange—among elite, aspiring elite,

or commoners—at three distinct geographic scales, thereby widening the simplified idea of "elite valuables exchange" to a spectrum of behaviors, which should be distinguished anthropologically and archaeologically. Finally, for each of the several defined kinds of valuables exchange, instances of Hopewellian movements of goods that probably or possibly represent the form of exchange are identified.

Archaeological Evidence for the Long-Distance Movement of Valuables among Hopewellian Regional Traditions

Two empirical questions have historically been fundamental to the topic of the movement of Hopewellian Interaction Sphere goods among regions. First is whether finished artifact classes, or only ideas related to their styles, were transfered among regions. Second is whether raw materials were moved among regions through some kind of network or, instead, procured directly from their sources by each region separately.

Struever (1964:88) initially held the position that "primarily raw materials ... not finished goods" had moved through an interregional network. This he concluded from the "considerable local reinterpretation of diagnostic Hopewell artifact forms." Eight years later, Struever modified his position, holding that a wide variety of both raw material and artifact forms had moved through the network (Struever and Houart 1972:48, 74), including such artifacts as copper earspools, celts, and breastplates, pipes, figurines, and Hopewell ware. Within this paradigm, the results of sourcing studies of copper (Goad 1978, 1979) and galena (Walthall 1981; Walthall et al. 1979) were interpreted to reflect interregional "exchange" and "trade" rather than direct procurement by several regions. For example, Goad (1978:201–204, 1979:245) interpreted the nodal distribution of copper in large sites across the East as evidence for reciprocal exchange among regional centers, as described above. She adopted Struever and Houart's (1972) terms of "regional transaction center" and "local transaction center." Goad left the specific mechanism of center-to-center exchange undefined, although she ruled out long-distance traders and other options that she thought unlikely. She did not entertain the possibility of direct acquisition of copper from its sources independently by persons from different sites. In contrast to the above authors, Griffin (1965, 1971:242, 1973, 1979:278) consistently saw little evidence of interregional-scale exchange of either raw materials or finished artifacts, but did envision local-scale exchange of Hopewell diagnostics. The distant sources of many Hopewellian raw materials, along with their massive deposition in restricted numbers of sites, were taken by Griffin (1971:242) to indicate their direct "acquisition" and "local ceremonial consumption" and exchange. This view was reiterated by Griffin's student, Braun (1986:121).[12]

A cautious approach to the issues of artifact or stylistic exchange, and of exchange or direct procurement of raw materials, requires that each kind of item be assessed for itself, and that the potential for different modes of distribution in different parts of the Eastern Woodlands for the same kind of item be recognized. The unique geographic distributions of different raw material and artifact classes across the East (Seeman 1979a, 1995; Struever and Houart 1972), as well as the geographically differentiated distributional patterns documented for each of meteoric iron (Carr and Sears 1985) and copper (Goad 1979) across the East, affirm this methodology.

A number of kinds of Hopewellian valuables that have been thought possibly to have been moved interregionally can be taken off the list of candidates, based on recent studies. In this book, clay figurines in northern Hopewellian societies, earspools from Ohio and the Southeast, and metal-jacketed panpipes across the entire East are analyzed in detail stylistically for indications of whether they were moved across regions (Keller and Carr, Chapter 11; Turff and Carr, Chapter 18; and Ruhl, Chapter 19, respectively). Local production, use, and burial, without interregional movement, is concluded for all three classes of artifacts. Likewise, stylistic analyses of bird-effigy Hopewell ware vessels, platform pipes, and again, clay figurines over the East, by Penney (1989), do not indicate their interregional transport. Griffin (1971:238) did not

see any stylistic evidence of Illinois Hopewell ceramics having been moved to Ohio at any time during the Middle Woodland. Source analyses of Hopewell ware pottery from Illinois, Indiana, and Ohio (Ruby and Shriner, Chapter 15; Fie 2000; Stoltman 2000) indicate little or no long-distance movement of these items. None of 21 Hopewell ware vessels and 20 Baehr vessels from six habitation and mortuary sites in the lower Illinois valley analyzed by Fie (2000:462–466) were found to have been made outside of the area, and only 6 had circulated within that region. Only 2 (8%) of 24 Hopewell wares from the Mann site analyzed by Ruby and Shriner (Chapter 15) were made of nonlocal clays and rock temper (Ruby and Shriner, Chapter 15). None of 42 Hopewell Series wares from seven southern Ohio sites studied petrographically by Stoltman (2000) had paste compositions or temper types that would indicate foreign manufacture. Illinois Havana Hopewellian platform pipes, commonly thought to have been made from Ohio flint clays and moved long distance into Illinois, are now known from mineralogical analyses to have been made of northwestern Illinois berthiorine-rich flint clays within the Illinois Havana stylistic region (Farnsworth 1997; Hughes et al. 1998; Wisseman et al. 2002). Copper celts from Northern and Midsouthern Hopewellian traditions do not have the size differences over space that one would expect for the interregional exchange of either raw copper or celts through a network of ceremonial centers (Bernardini and Carr, Chapter 17). The absence of alligator teeth and barracuda jaws, and the sparsity of obsidian, between their sources and their deposits in Ohio mortuary sites make their exchange through an interregional network of centers also unlikely (Bernardini and Carr, Chapter 17; Griffin 1965).

The most convincing cases for the movement of valuable artifacts and/or raw materials among regional traditions—which may or may not have constituted elite exchange—are those for which some information on interregional variation in item density is available, and that entail associations among several kinds of foreign items. Galena is one such case. Galena cubes in Ohio Hopewellian mounds and more southerly sites source almost completely to the upper Mississippi valley (Walthall1981:37, 41). Galena is found at the highest density in the Ohio Hopewellian sites and at lower density nodes as one moves south, to Copena sites in the Tennessee valley, and then to Mandeville (Santa Rosa–Swift Creek tradition) and McQuorquodale (Miller tradition) closer to the Gulf (Walthall et al. 1979). In contrast, galena from Havana sites, which fall geographically between the Ohio sites and the upper Mississippi valley source, were obtained from other, closer sources (southeastern and central Missouri). These patterns suggested to Walthall et al. (1979:249, fig. 31.2) that Ohio Hopewellian peoples probably obtained galena by direct procurement from the upper Mississippi valley, rather than through exchange with Havana communities, and that from Ohio, galena was exchanged southward among centers, in decreasing amounts. The possibility that Copena peoples exchanged galena to persons at Mandeville and McQuorquodale, rather than the latter two having directly procured galena from the upper Mississippi valley, is bolstered by the association of galena with Copena-like stone celts and a greenstone spade in one cremation at Mandeville and with a Copena-like greenstone celt on the surface of the primary mound comprising McQuorquodale. A similar but somewhat weaker case can be made for movement of meteoric iron northward from/through the Copena region to the Seip earthwork community in Ohio.[13] Although these instances of the interregional movement of valuables among regional centers are good candidates for elite valuables exchange, the alternatives of pilgrimage to a ceremonial center and travel to a center of learning cannot be ruled out (Table 16.1).

Perhaps the strongest case for interregional valuables exchange among Hopewellian elite is the burial of a complete articulated skeleton of a roseate spoonbill duck with the skeleton of an adult male and a child in a subfloor crypt of Gibson Mound 3 (Burials 17, 18) of the lower Illinois valley (Buikstra 1976:31). The duck had to have been brought alive to Illinois from a Gulf Coast location. The spoonbill currently lives year-round along only the Florida, Louisiana, Texas, and Mexico Gulf coasts and has a somewhat broader spring-through-summer breeding

range along the entire Gulf Coast and inland only about 50 miles (National Geographic Society 1983:56). Cross-culturally, exotic, live animals are not uncommon gifts among leaders of polities (Renfrew and Bahn 1991b:311), and the spoonbill would have had the requisite symbolic value for Middle Woodland leaders in the Southeast and Midwest, if historic thought on the animal is relevant. Specifically, the spoonbill is an aquatic, filter-feeding bird that, because of these characteristics, is considered in contemporary Creek thought (Dan Penton, personal communication, 1996) to be an anomalous (powerful) animal—a transformer that connects the Upper and Lower Worlds. Thus, it is a pointed symbol of cosmological beliefs. The spoonbill also has brilliant pink feathers unlike any bird native to the Midwest. As in the cases of galena and meteoric iron, the alternative explanations of pilgrimage to a ceremonial center and travel to a center of learning cannot be eliminated.

Interregional movements of fancy decorated ceramic vessels other than bird effigy Hopewell ware were apparently rare over the Woodlands. Such vessels might or might not have been considered "valuables" by Hopewellian peoples, although their contents, if any, might have been. Two rocker-stamped vessels from the Connestee phase Icehouse Bottom site in eastern Tennessee (Chapman 1973; Chapman and Keel 1979) have been sourced petrographically to southern Ohio (Stoltman 1999), and thirty-five simple-stamped, Connestee-like vessels from several mound sites in southern Ohio (Shetrone and Greenman 1931), have vice versa been sourced petrographically to the vicinity of Icehouse Bottom (Stoltman 1999, 2000). Likewise, rare, finely spaced, simple-stamped, Connestee-like vessels from the Mann site, Indiana, appear to have been manufactured in the Appalachian Summit (Ruby and Shriner, Chapter 15; see also above, Pilgrimage to Ceremonial Centers). Only 134 Connestee-like simple stamped sherds are known from eight Ohio mound sites, and only about 200 such sherds have been found at the Mann site (Ruby and Shriner, Chapter 15). At the Pinson mound site in western Tennessee, at least some foreign-style vessels buried there were manufactured in the regions of origin of their styles rather than locally (Stoltman and Mainfort 1999, 2002:16; compare with above, Pilgrimage to Ceremonial Centers). All of these cases of interregional movement of vessels could indicate the exchange of valuables among elites, but also pilgrimage to a ceremonial center or travel to a center of learning.

For the great majority of foreign Hopewellian raw materials, it is unknown whether they were moved across regions by direct procurement, exchange, or other means. Likewise, for most foreign Hopewellian finished materials, it is unclear whether they were moved interregionally by exchange or one of the alternative mechanisms listed in Table 16.1.

Multiple Scales of Valuables Exchange

If long-distance exchange of valuables among the elite of Hopewellian societies did occur, its nature is best understood in the larger framework of valuables exchange among elite or others at three distinct geographic scales: local, regional, and interregional or, in Helm's (1988) terms, areas of "normal people," "close strangers," and "foreigners" (see also Seeman 1995). Valuables exchange at these different scales can vary in the social roles of the persons involved (e.g., elite, ordinary persons), in the nature of the relationships among them (e.g., equal or unequal in prestige), and in purpose (e.g., to secure subsistence needs, to increase one's prestige). Exchange activities at the three scales are not necessarily mutually exclusive, and it is likely that the material–distributional correlates of the Hopewell Interaction Sphere are the composite result of several of such kinds of activities.

In the multiscalar framework of exchange to be described, the terms local, regional, and interregional exchange are used here to describe cultural processes that approximately sort out by geographic scale, but not sharply.[14] The sizes of the geographic areas over which distinct processes manifest overlap, cross-culturally. As approximate points of reference in the Hopewellian world, *local* is used here to describe communities that were situated within a single river valley or very close river valleys and that would have been very similar culturally—"normal people." Examples include communities in the lower and

central Scioto valley, the lower and central Little and Great Miami valleys, the lower and central Illinois valley, and the middle Tennessee valley. River distances are about 50 miles or less. The term *regional* is applied here to communities of the order of 50 to a couple hundred miles apart, who would be "close strangers." Some adjacent Hopewellian traditions, such as the Scioto and Mann phase Hopewell, the Mann phase and lower Illinois valley Havana Hopewell, and the Copena and Porter Hopewell, could have been connected by regional exchange processes. The term *interregional* is used for communities that were separated by larger distances and would have considered themselves "foreigners," such as those in the Havana and Scioto areas, the Scioto and Copena areas, or more distant traditions.

Local, Symmetric Exchange of Valuables

Exchange of valuables at the local level is addressed in Hall's (1973, 1980) model of Hopewellian interaction. He proposed that local exchange of valuables among neighboring groups had the benefit of regularly renewing and keeping open ties of mutual friendship and obligation that, in occasional years of subsistence scarcity and need, could then be more easily called upon for obtaining staples. A similar interpretation was offered by Ford (1974). However, Ford envisioned valuables and subsistence items as directly exchangeable for each other, whereas Hall more realistically assumed a multicentric economic organization, in which staples and valuables have different prestige and moral value and belong to distinct spheres of exchange (Bohannan 1955). To Hall's and Ford's models can be added the possibility that regularized, local exchange of valuables may have kept alive alliances that had as their goals security from conflict and/or the exchange of mates. Both Hall and Ford envisioned interregional Hopewellian exchange and procurement as mechanisms for feeding local exchange and alliance systems.

Cross-culturally, valuables exchange at the local level, either within a polity or among adjacent polities, can occur among ordinary persons seeking to raise their prestige with the items they receive and give, among leaders who are Big Men or chiefs and likewise seek to improve their status, or both. Melanesian kula trading partners within and among island societies (Malinowski 1922b) were both commoners and leaders. Cross-culturally, the parties involved in local valuables exchange are usually roughly equivalent in prestige and give roughly equivalent gifts, that is, exchange is symmetric. This need not be the case at the interregional level (see below). Local valuables exchange among trading partners may be more or less ritualized and institutionalized, in part depending on the social distance of the parties. Sometimes, trading partnerships may be inherited across generations, as in the cases of the kula (Malinowski 1922b) and historic Plain-Rio Grande Pueblo exchange of ceramics and staples (Leonard 2000).

The only two examples of Hopewellian local exchange that have been documented firmly through artifact chemical or physical signatures, and that might have involved valuables, of which I am aware, are the coordinated study by Carr and Komorowski (1995) and Yeatts (1990) on the exchange of fancy and ordinary ceramics within Ohio (see also Carr, Chapter 2) and a parallel study by Fie (2000, n.d.) for the lower Illinois valley. Carr, Komorowski, and Yeatts found that, at the McGraw site, Ohio, finely decorated vessels of the kind that were used in mortuary and probably domestic ceremonial contexts and that might represent valuables, as well as coarse, utilitarian, cordmarked vessels, were manufactured up to 25 kilometers away from McGraw and most probably were brought into the site by exchange. McGraw was a small, undistinguished habitation. If the finely decorated vessels were specially valued by Hopewellian peoples, then the case would constitute local valuables exchange, most probably among ordinary persons of roughly equivalent prestige. The persons would have been from the same and/or close local symbolic communities and sustainable communities (Carr and Komorowski 1995:741), given what is known about Hopewellian community and mating network sizes,[15] and would have considered each other "normal people" in Helms' terms. In addition, because both utilitarian and fancy foreign-made vessels at McGraw were sometimes produced from very similar clays and tempering

materials, and likely were made in the same foreign location, the case suggests that lines of valuables exchange were paralleled by lines of utilitarian exchange. This would support Hall's position (see above) that local valuables exchange helped to maintain local alliances and utilitarian exchange, specifically the exchange of staples, especially if food had been contained in the vessels brought to McGraw. The case does not address the issue of whether utilitarian and valuables exchange occurred at the same or different times and places and constituted distinct spheres of exchange.

Fie (2000:498–502) chemically analyzed 304 Middle Woodland coarse and fine ware sherds from four bluff-base habitations and two flood plain mound centers well distributed along the lower 40 miles of the Illinois valley. Twenty-eight (9.2%) of the sherds—six of which were fine ceremonial wares (Hopewell, Grigsby rockered, and Baehr styles)—were found to have been manufactured in all probability at locations in the lower Illinois valley other than the sites where they were discarded. Because three of the six fine ware vessels occurred in habitation sites, not simply in flood plain mound centers where local and extralocal peoples gathered for ceremony and may have used and discarded only their own ceramics (Buikstra and Charles 1999; Charles 1995), it can be inferred that the three vessels actually exchanged hands between persons of neighboring groups within the lower Illinois valley. The three vessels can be interpreted as cases of local valuables exchange, if their fineness set them apart as valuables for lower Illinois valley Hopewell peoples. This is probably true, because Hopewell, Baehr, and Grigsby rockered styles are found much more commonly in mortuary contexts than domestic ones. In addition, Fie's (2000:447) data show that coarse and fine wares were traded in parallel, from the same originating habitation site to the same destination habitation site, for two pairs of sites in the lower Illinois valley.[16] Again, this supports Hall's position that local valuables exchange helped to maintain local alliances and utilitarian exchange, possibly including the exchange of staples in vessels.[17]

Indirect evidence of local valuables exchange can be found in chemical sourcing data on galena (Walthall 1981). Of the 121 archaeological samples of galena from across the East that have been chemically sourced, only 8 came from central Missouri deposits, and all of these were found in sites in the lower Illinois valley. The rarity and spatially limited distribution of the Missouri galena suggested to Walthall (p. 37) that it was procured in one shot and then dispersed through trade partners among nearby communities. Additionally, Walthall (1981:41) argued that upper Mississippi valley galena cubes found in Copena sites are so geochemically homogeneous that they probably were gotten from one specific place within the source district, possibly in one or a very few procurement trips. Subsequently, the galena would have been spread through trade partners among Copena communities. Additional indirect evidence of local valuables exchange in Ohio, Indiana, and Illinois can be envisioned in the foreign, fancy raw materials besides galena that are found in small quantities in small habitation sites. These are listed and referenced by Carr (Chapter 2, Interregional and Local Hopewell).

All of the above-cited literature and examples of local valuables exchange focus on ceremonial exchanges that had as their purpose the establishing and reinforcing of alliances. A second form of local valuables exchange—competitive exchange—aims instead at settling prestige rivalries among elite or among ordinary persons and their kin (Dalton 1968, 1977). This is accomplished through the giving-away of valuables in such quantity and quality that they cannot be reciprocated and the receiving party is embarrassed. Food surpluses and other staples commonly exchange hands along with valuables, which may help to overcome temporary local shortages and extralocal differentials in the staples of life, similar to the case of cooperative alliance formation defined by Hall (see above). The potlatch of Northwest Coast Native Americans is a well-known example of competitive valuables and staples exchange among elites who held their position by inheritance or achievement, supported by their kin and/or communities (Piddocke 1969; Rosman and Rubel 1971; Suttles 1960). These events were tied to the acquisition of titles of prestige.

Competitive exchange among common persons and their kin are found in societies of many levels of complexity around the world in the form of bridewealth give-aways; less common dowry give-aways; and give-aways associated with puberty rites, marriages, funerals, and other rites of passage. The bridewealth exchanges of historic Great Plains Native Americans (e.g., Collier and Rosaldo 1991:278–279; Driver 1969:224–225, 342; Hoebel 1966:349) are examples. Among other purposes, these aimed at prestige building. Another fine example of competitive exchange among common persons is the contemporary Apache female puberty ceremony, which openly involves competitive giving of massive amounts of gifts, raw food, and cooked food between the young woman's matrilineal clan and the matrilineal clan of her Godmother. Hundreds of persons are fed for a period of four days. The ceremony is followed immediately afterward and one year later by give-aways by each clan to those who helped amass the valuables and food (Elizabeth Brandt, personal communication, 2001). On the Great Plains, the Give-Away Ceremony among the Arapaho was competitive, but less openly so in the short run. It was and is held by families who wished to honor a family member who had achieved or experienced something good, such as being selected for a position or title of importance, participating in the Sun Dance, or returning home from military duty. The ceremony was also held at funerals. Cloth bolts, clothing, pots, horses, saddles, and such were given to a variety of persons, from close friends to visitors from other bands or tribes—in general to those with whom one had some kind of relationship of reciprocity—rather than to a specific social unit of competition. However, the items given were noticed and talked about (Weist 1973; Peter Welsh, personal communication, 2001).

In the Hopewell world, competitive exchange and the gathering of large numbers of people for this purpose have been inferred explicitly for Havana flood plain mound complexes from the quantity and diversity of prestigious items found in the mounds and surrounding midden deposits (Buikstra and Charles 1999; Charles 1995; Charles and Buikstra 2002; see Carr, Chapter 2, Buikstra and Charles). Competitive exchange has also been used to interpret the flamboyance of Hopewellian mortuary remains across the East generally (Braun 1986:121). However, other ritual practices are probably responsible for the large ceremonial deposits of valuable artifacts within the "altars" (cremation basins) and some burials in Ohio Hopewell mounds, especially those deposits comprised of many artifacts or raw materials of one or two kinds (e.g., breastplates, celts, pipes, copper geometric symbols, ovate stone disks, quartz, galena, obsidian) (Carr et al., Chapter 13; Greber 1996).

A final variant on local valuables exchange is that involved in the making of a Big Man, as described ethnographically for Melanesian societies and modeled by Sahlins (1972). Here, the upcoming leader gains prestige and power by giving away valuables and/or staples to the persons he is attempting to draw into debt to him and in support of him. The valuables or staples commonly are needed by those persons to fulfill social obligations of a kind (e.g., bridewealth, blood money, feasts, and give-aways at rites of passage). It is not difficult to imagine a Hopewell person who aspires to be socially important acquiring specimens of a potent mineral, herb, "medicine", or other natural product through travel to its source or through trade partners and then ceremonially "giving" them away[18] to others, thereby increasing his or her prestige, but also spreading the valuables through the society. The distribution of central Missouri galena in lower Illinois valley sites and upper Mississippi valley galena in Copena sites (Walthall 1981), as described above, could easily be explained in this way or by the other forms of local exchange.

Regional, Symmetric Exchange of Valuables

Valuables exchange at a regional level, involving "close strangers", has been modeled by Flannery (1967). He was concerned with explaining material similarities between Formative-period communities in the valley of Oaxaca, Mexico, and the central highlands generally, and the Olmec communities in coastal Veracruz and Tabasco. The similarities include both concepts expressed in

nonportable material culture (ceremonial architecture, iconography) and portable prestige raw materials and finished items, as in the Hopewell case. Early and Middle Formative ceremonial architecture and iconography in Oaxaca incorporated elements found among Olmec sites, but not vice versa. Oaxacan sites have yielded Gulf Coast mussel shell, turtle shell, and a crocodile mandible, while Olmec centers have borne magnetite and ilmenite that was concentrated and worked in quantity in one Oaxacan site, and obsidian and greenstone from the highlands (Flannery 1967:68; Grove 1997:84–85).

To explain these distributions, Flannery built a model of regional valuables exchange among elite through ethnographic analogy to the fur "trade" of the coastal Tlingit and inland Athabascan groups in the Pacific Northwest, and to the jade and food "trade" of the valley Shan and highland Kachin in Burma. The regional scales of all three exchange systems are roughly similar to each other and to certain interaction spheres in the Hopewell world. From the valley of Oaxaca to Gulf Olmec centers it is about 175 miles. The Tlingit–Athabascan and Shan–Kachin exchange systems spanned about 50 to 100 miles. These distances equate, at most, to those between adjacent northern Hopewellian phases, such as Scioto Hopewell and Mann phase Hopewell, the latter and lower Illinois valley. Hopewell, or Scioto Hopewell and the Goodall focus, but not to the distances between these northern traditions and ones of the mid Southeast and deep Southeast (e.g., Copena, Marksville, Santa Rosa–Swift Creek, Porter, Miller). Also relevant to the analogy is that the interacting Pacific Northwest and Burmese groups spoke different languages, i.e., were "close strangers," which was true of the Native American tribes that historically were spread over the territories of the above-named northern Hopewellian traditions.

The Northwest Coast and Burmese exchange systems worked as follows. The Athabascans were egalitarian groups, and the Kachin egalitarian and simple rank societies. Both groups lived in highland territories having valuable raw materials (furs in the first case; jade, amber, tortoise shell, gold, and silver in the latter). These goods were coveted by the elite of the stratified lowland Tlingit and Shan societies for use as symbols of prestige, for competitive display, and, in the Tlingit case, also for give-away and destruction through potlatching. In both exchange systems, headmen or chiefs from highland groups and nobles or princes from lowland groups entered into gift-giving partnerships, which were cemented by the exchange of daughters for marriage. The Burmese system also involved the Shan elite, who had agricultural surpluses, gifting rice and sometimes valley-bottom rice land to the Kachin elite, who had more marginal subsistence yields.

Flannery's model of regional exchange, based on these two ethnographic analogs, has characteristics beyond scale that are both different from and similar to the models of local exchange described above. First, regional exchange and display of exchanged prestige goods are exclusively or largely restricted to the upper eschelons of the exchanging societies rather than potentially open to persons of all levels of prestige in any frequency (Dalton 1977, in Renfrew and Bahn 1991b:311; Flannery 1967:81). Local exchange is typically more open. Second, although the exchanges of gifts and daughters in regional exchanges are symmetric and the parties involved are structurally equivalent as social elite, their prestige differs. This encourages emulation of the cultural ways and status symbols of the more prestigious elite (e.g., Tlingit, Shan) by the less prestigious elite (e.g., Athabascans, Kachin), some practices of which may then filter down to the remainder of the society. Third, regional exchange may involve simply the exchange of items or persons of value, without parallel exchanges of food or utilitarian items, as in the Tlingit–Athabascan case. Regional valuables exchange among elite can be motivated simply by their desire to raise their prestige and bolster their leadership positions within their own communities with the foreign status items they receive. In contrast, local valuables exchange is typically paralleled by utilitarian exchange, formally or informally.[19] Fourth, because the parties involved in regional valuables exchange are "strangers" and may speak different languages, the practices of exchange are typically heavily ritualized (see Seeman 1995).

To these characteristics of regional valuables exchange can be added a qualification of Helms (1976:133, 136, 176), which is based on ethnohistoric and ethnographic analogy to interaction among Panamanian chiefdoms. Helms posed that leaders in rank societies, to be effective, must evidence knowledge of the supernatural, upon which their claims to leadership in part are typically built. She also notes that to travel beyond a circle of neighboring tribes to unknown territories inhabited by unknown peoples/beings is tantamount in some non-Western societies to traveling to little-known supernatural worlds of the cosmos. The near–far axis and the ordinary–supernatural axis may be confounded philosophically (but see Huntington and Metcalf 1979; also Eliade 1964).[20] Thus, elite who travel in the course of obtaining and exchanging valuables bolster their status not only with rare material symbols of rank, but also with esoteric knowledge and experience of supernatural worlds obtained in their journeys, as evidenced by those symbols. This same logic applies to traveling elite in egalitarian and emerging rank societies (Netting 1972). Helm's qualification may not apply to regional-level valuables exchange among groups who are culturally and linguistically different yet know a fair amount about each other, such as the Shan and Kachin, who knew enough to dislike each other. The interpretation is more likely to apply as the distance of regional valuables exchange increases, such as between highland and lowland Mesoamerica, or between adjacent northern Hopewellian traditions, where the average community member might know little about the distant lands.

Archaeological evidence for regional valuables exchange among Hopewellian societies that is in line with the above-described characteristics is reasonable to explore, at least considering a broad perspective on the nature of Hopewell. First, differences in sociopolitical complexity of the kind found between the Tlingit and the Athabascans may have occurred among Havana, Mann phase, and Scioto Hopewell societies (Braun 1979; J. A. Brown 1979:219; Struever 1965; but see Buikstra 1976), and between southern Havana or Scioto Hopewell and Goodall focus Hopewell. The organizational differences among these Hopewellian communities, if real, would have afforded a motivation for valuables exchange and leadership emulation and would suggest the applicability of Flannery's model. It is true that firm statements about differentials in sociopolitical complexity among these traditions cannot yet be made, because mortuary analyses of their social organization have not been made or have generally been site-specific rather than regional in scope (e.g., Braun 1979; Brown 1981; Greber 1979; Tainter 1975a, 1977; see also Carr, Chapter 2, Buikstra and Charles; Carr, Chapter 3, Community Ceremonial–Spatial Organization; and Carr, Chapters 6 and 7, for exceptions). However, differences in the amounts and ranges of material symbols accumulated in the above-compared Hopewellian traditions, and in their earthmoving endeavors, are clearly evident and substantial,[21] and these visible conditions may be more directly relevant to the question of applicability of Flannery's *emulation* argument than social complexity per se—which was the variable he emphasized.

A second aspect of Hopewell that invites us to explore the applicability of Flannery's model is found in a conclusion of Struever's (1964:88). He held that fancy Hopewellian artifacts and raw materials deposited in mortuary contexts were not specifically mortuary ceremonial goods but, instead, were status markers used by elite persons in rituals and social contexts within community life generally. This he surmised from the occurrence of such items, to some extent, in domestic contexts as well as in burials. Flannery's model deals specifically with the exchange of fancy items as status markers.

Finally, note that Flannery's model of regional valuables exchange stands distinct from both Renfrew's (1986) concept of "peer polity interaction" and the "prestige goods economy" model summarized above, and appears more applicable to regional-scale Hopewellian interaction than the latter two. Flannery's model poses significant differences among the exchanging polities in their socio-political organizational complexity and the positional security and institutionalizing of their elite, whereas Renfrew's construct does not. Such organizational differences appear to distinguish Hopewellian

societies in certain different, neighboring regional traditions, as just mentioned, and give priority to Flannery's model. Also, Flannery's ideas pertain to the exchange and emulation of specifically elite status items, not valuable items that were used locally as currency by non-elites in making critical social payments and that were monopolized by rising elite, as posited in the prestige goods economic model. The restricted distributions of Hopewellian interaction items to a minority of burials within Hopewellian cemeteries over the Woodlands again suggests the greater relevance of Flannery's model to the Hopewellian case.

Unambiguous cases of specific artifacts or artifact classes that were exchanged at a regional scale are few. Seeman (1979a:330) and Struever and Houart (1972:74) agreed that platform pipes were exchanged from Scioto Hopewell communities west into those of the Crab Orchard and Havana traditions. However, Penney's (1989:174–191) stylistic analysis of 117 effigy platform pipes from the Scioto, Havana, Crab Orchard, and other traditions disclosed only 2 as having likely been made by the same hand yet buried in different cultural areas—those from the Rutherford mound in the Crab Orchard area and the Bedford mound in the Havana area (Penney, p. 185). Mineralogical analyses of Havana platform pipes by Farnsworth (1997), Hughes et al. (1998), and Wisseman et al. (2002) support Penney's finding (see above). Hopewell ware pottery, including bird-effigy vessels, from the Havana, Crab Orchard, and Scioto traditions, bears strong resemblances that Struever and Houart (1972:74) interpreted to represent regional exchange. Griffin et al. (1969:1) thought that limestone-tempered Hopewell ware made in the lower Illinois valley was traded or carried into central and northern Illinois and western Michigan. Of these Hopewell ware pots, only the one from the Newcastle site, Indiana, which resembles pots from the Steuben, Knight, and Norton sites in Illinois (Swartz 1971:4, in Seeman 1979a:379), and the vessel from the Esch mound group, Ohio, which resembles Havana Hopewell vessels (Prufer 1961a:476), were assessed by Seeman (1979a:378–379) to have possibly been exchanged. Only a rare few Hopewell ware vessels from the Mann site have been shown, through compositional analysis, to have been foreign to this site (Ruby and Shriner, Chapter 15). Compositional analyses of Hopewell ware from southern Illinois and Ohio (Fie 2000; Stoltman 2000; both summarized above) and a stylistic analysis of specifically bird-effigy vessels from the two regions (Penney 1989:207–225) have not revealed any foreign Hopwell ware vessels there. Copper celts and clay figurines were once thought to have been exchanged among Ohio, Indiana, and/or Illinois Hopewellian peoples (Struever and Houart 1972:74), but these conclusions are not consistent with stylistic and distribution studies (Keller and Carr, Chapter 11; Bernardini and Carr, Chapter 17).

The possibility that obsidian was obtained from the Rocky Mountains by Ohio and/or Indiana Hopewell peoples and exchanged from one or both of these communities to Havana peoples in Illinois (Struever and Houart 1972:74) remains a reasonable but still tentative interpretation, considering the smaller amounts and sizes and the lesser formality of obsidian specimens in Havana sites than those at the Hopewell site, Ohio, and the Mt. Vernon site, Indiana (Note 5; Wiant 2000). The similarity of Illinois and Ohio specimens in their percentages from various obsidian sources supports this interpretation over the idea of independent acquisition of obsidian by Havana and Scioto Hopewell peoples. Alternatively, this case may represent an example of the travel of aspiring social leaders from Illinois to centers of learning in Indiana or Ohio, and/or from Indiana to centers of learning in Ohio (see the following section).

The possibility of regional-scale exchange remains open for most classes of Hopewell Interaction Sphere items, which have not been studied.

Interregional, Asymmetric Exchange of Valuables

Exchange of valuables interregionally among "foreigners" has been modeled and explained by Helms (1976; see also 1988, 1993). Her ideas applied to this geographic-scale complement those of Flannery's for regional-scale valuables

exchange, although she did not make this scalar distinction herself.

The interregional expanse of the exchanges that Helms addresses is on the order of hundreds of linear miles, typically making impractical the parallel exchange of utilitarian and subsistence goods found in local valuables exchange systems and some regional valuables exchange systems (see above). Thus, the impetus for interregional exchange in Helm's view is not directly material but, rather, sociopolitical: to augment and validate the authority of leaders with esoteric knowledge, ceremonial practices, and material symbols of knowledge and power sought out from foreign (i.e., supernatural) realms. As in regional valuables exchange, long-distance exchange is undertaken only by leaders of societies or those aspiring to become leaders. However, the form of exchange among leaders differs from that in regional exchange: It is *asymmetric*. Leaders travel afar to study under and to learn esoteric matters from more prestigious leaders, providing their teachers with gifts and perhaps receiving ceremonial paraphernelia or other valuables that symbolize and prove their acquisition of knowledge. Leaders who serve as teachers are perceived as powerful because of their geographic distance from the homelands of their student-leaders, the greater sociopolitical complexity and perceived power of their polities, and the greater elaboration of the religious practices, concepts, and oral literature over which they have command, according to Helms (1976:129–143, 177).

Helms (1976) based her ideas on the learning networks of high chiefs (*quevis, nelas*) and shaman-like practitioners (*tequinas*) of the Cuna in Panama. In Cuna culture, a high value is placed generally on knowing about things, particularly their origins, as a means for controlling things (Helms, p. 120). In chiefdomship and shamanic leadership, "an understanding of the powers of nature and of the origins and history of human society and its relationship with the natural–supernatural realms legitimized chiefly rule" [and shamanic practice] (Helms, p. 127). Chiefs and shaman were admired for their displays of traditional esoteric knowledge and held status challenges with other chiefs and shaman of similar position to show their control over "secrets" and the hidden essences of things (*purba*) (Helms, pp. 73, 126). The specialized ceremonial languages and metaphors used by chiefs (Helms, pp. 124–125), their abilities to creatively use traditional cultural metaphors (Helms, p. 125), and apparently in prehistoric times the zoomorphic, gold symbols of their education in distant capitals of learning in Columbia (Helms, p. 119) each demonstrated their knowledge and power. Cuna chiefs and shaman in the late 19th and 20th Centuries traveled to eastern Panama and into Columbia to traditionally known places of learning to study with teachers (Helms, pp. 129–131), sometimes for years and with regular trips back to their teachers afterward.

Making one or several educational journeys or "knowledge quests" (Helms 1976:140) to one or several different teachers was essential to the making of a chief in the Cuna world. Helms argued that those Cuna who were born of a high-status chiefly line and were thought to inherently have great potential for power (*niga, kurgin* [Helms 1976: 74]) nonetheless had to activate it—through their educational stays in foreign places associated with the unfamiliar and supernatural, through their journeys in trance to mystic levels of the Upper and Lower Worlds of the cosmos, and through ritual practice. Her conclusion is based on a 20th-Century example of a Cuna leader and by way of analogy to Polynesian chiefs (Helms, pp. 71–72, 119, 137–139).

In Helm's theoretical perspective, and in light of the Cuna analogy, to say that interregional valuables exchange had as its goal the acquisition of fancy items for a leader to evidence his or her power would be to miss the point. The commodity sought in Helms's view is esoteric knowledge, which could be used in public ceremonial displays to extend the reputation and sphere of influence of a chief, to outcompete rivals, and to impress and maintain the support of followers within the chiefdom (Helms 1976: 109). Esoteric knowledge was a more fundamental "scarce resource" (Helms, pp. 175–176) than material symbols of it. Moreover, Helms challenges us to replace the picture of symmetric exchange between foreign leaders in some ritualized gift-giving context, as discussed in the previous section, with an asymmetric one: the image of

a student-leader learning from a renowned leader in a foreign land and paying in valuables and labor, with the return of perhaps a few elite, material symbols of schooling. In my thinking, in light of ethnographic analogs, these two views of elite valuables exchange are not competing, as Helms (pp. 172–175) seems to argue, but differ in their probability of occurrence according to geographic scale and modes of travel. With greater distances and travel times among polities, asymmetrical valuables exchange among elite becomes more probable, and symmetrical exchange less so.

Helms's idea of leaders traveling long distances to learn esoteric knowledge, including how to perform religious ceremonies, recall's Penney's (1989) notion of medicine persons or others journeying afar to learn powerful ceremonies and buy the rights to perform them, as documented ethnographically among Plains and Woodlands Native Americans. However, in Penney's framework, those who bought religious prerogatives were not specifically community leaders, but any individuals, with varying degrees of community recognition, who were seeking power in general or power to control specific things. Moreover, buying of religious prerogatives in historic North America did not involve the long periods of learning documented for Cuna leaders.

Helms's interpretive framework has potential for helping us to understand the interregional distribution of at least some Hopewellian valuables and concepts, when taking a broad view of them. It is true that we do not know the value system of Hopewellian peoples, and whether it emphasized the learning of esoteric knowledge to control life or would have encouraged long-distance travel to leader-teachers of esoteric knowledge. However, the heavily shaman-like nature of Hopewellian ceremonial paraphernalia and leadership symbols, and the visual complexity of their art system, both suggest a rich ideology that could have been supported by such a value system.

Examining specific Hopewellian artifact classes, it is clear that Helms's interpretive framework is not useful for explaining the distributions of several distantly moved Hopewellian material exotica because their sources were in sparsely populated territories without ceremonial centers of learning. Obsidian brought from the Rocky Mountains, copper from the upper Great Lakes and the Ducktown, Tennessee area, and mica from the southern Appalachians, for example, do not fit the model. However, conch shells, barracuda jaws, shark teeth, and alligator teeth, which were buried in Scioto Hopewell sites but are not found in other sites between Ohio and their Gulf/Atlantic coast sources, may well be explained by Helms's ideas. Conch shells, barracuda jaws, and shark teeth were specifically used in religious ceremonies in the Southeast, the first for serving the black drink (Hudson 1976:229, 373, 398), and the last two for scratching persons (to let blood as a sacred offering) in preparation for participation in ceremonies. Moreover, the items are fairly rare to very rare in Scioto Hopewellian sites, much as the gold zoomorphic artifacts that Helms concludes were gifts from Columbian teacher-leaders to Panamanian student-leaders. Conchs, barracuda jaws, and shark and alligator teeth could logically have been either gifts made to Ohio teacher-leaders by Southeastern student-leaders or symbols of acquired knowledge given by Southeastern teacher-leaders to Ohio student-leaders; the geographic distribution of the items does not discriminate the two possibilities. Other reasonable interpretations for the northward movement of these four Southeastern items include Scioto Hopewell peoples having bought religious prerogatives and these items from Southeastern persons and the direct procurement of these items at their Southeastern sources by Scioto Hopewell persons who journeyed afar in the course of vision and power quests. Long-distance symmetrical valuables exchange among elite seems less likely, given the relatively modest value that these four artifact types would have had to peoples and leaders of the Southeast, where the items are common.

The southward movement of galena from its concentrating area in Scioto Hopewell centers to Copena sites (about 325 miles) and then to Mandeville and McQuorquodale (about 250 miles), as described above (see Archaeological Evidence for Long Distance Exchange), could indicate the

travel of leaders seeking training and teacher-student gift/token-giving over a string of learning centers. Again, the travel of students to foreign centers could logically have been in either direction. An equally plausible interpretation of this movement of galena would be the long-distance symmetric exchange of valuables among elite. Galena is rare in both the Midwest and the Southeast, and would likely have been seen as valuable/powerful to peoples in both regions. Another alternative interpretation—pilgrimage to a ceremonial center—must also be considered.

It is possible that Havana Hopewell aspiring leaders from Illinois ventured to Ohio and/or Indiana to be trained in esoteric issues by mentors there and were given small, token gifts of obsidian to bring back with them. This interpretation is supported by an apparent westward movement of obsidian from centers in Ohio and/or Indiana—at least the former of which directly procured it in the Rocky Mountains—to Illinois communities. That movement is indicated by the much smaller amounts and sizes and the lesser formality of obsidian in Illinois sites than at the Hopewell site, Ohio, and the Mt. Vernon site, Indiana (Note 5; Wiant 2000). Also supporting the interpretation of Havana rising leaders traveling to Ohio or Indiana for training, and weakening the case for independent acquisition of obsidian by Havana and Scioto Hopewellian peoples from the Rocky Mountains directly, is the similarity of Illinois and Ohio obsidian specimens in their proportions from various obsidian sources (Note 5). Alternatively, the data could reflect elite exchange between Havana Hopewell communities and Ohio and/or Indiana communities, with obsidian having moved westward and other items eastward. Neither the Helms model of student-leader traveling to a distant mentor nor the elite exchange scenario, however, accord with the wide, largely sparse, distribution of obsidian among dozens of village sites in Illinois along the Illinois and Mississippi river valleys (Wiant 2000). This distribution suggests relatively open access to obsidian in Illinois, rather than its restriction to elites and to elite training or exchange. If either the traveling student-leader or elite exchange situation apply to the Illinois case, this activity was followed by local exchange of obsidian within Illinois.

The case of the roseate spoonbill brought alive from the Southeast to Illinois (see Archaeological Evidence of Long-Distance Exchange, above) could represent long-distance asymmetric valuables exchange of the kind envisioned by Helms, instead of the long-distance symmetric exchange of valuables among elites. The spoonbill could have been either a token symbol of acquired knowledge given by a Southeastern teacher-leader to a Midwestern student-leader, or a gift-payment to a Midwestern teacher-leader by a Southeastern student-leader. Again, the alternative explanation of pilgrimage to a ceremonial center, either in the Southeast or in Illinois, also remains a possibility.

Finally, the several kinds of fancy, decorated, foreign-made vessels found at the Pinson Mounds site, Tennessee (Stolman and Mainfort 2002:16) could indicate the travel of rising leaders from various portions of the Southeastern United States to Pinson—the premier Hopewellian center in the Southeast—for training. Santa Rosa-Swift Creek vessels from the greater northern Florida area, a Larto Red vessel from the southern Lower Mississippi valley, and check marked vessels and a fabric impressed vessel, all identified petrographically to have been produced elsewhere than Pinson Mounds, are telling. These vessels, and/or their contents, could represent gifts to important teachers at Pinson. Other possible interpretations of these foreign-made vessels include pilgrimage and symmetrical valuables exchange among elite. The great bulk of foreign-style vessels found at Pinson, which were made locally (Mainfort et al. 1997), are more in line with the practice of pilgrimage, given their substantial quantity there (see Pilgrimage to Ceremonial Centers, above). Other foreign style or foreign-made vessels found in the Duck's Nest Sector of the site (Mainfort 1986:31, 35, 46; 1988:167–168) are much more readily interpreted as the remains of a ceremonial gathering analogous to the historic Huron and Algonkian Feasts of the Dead (Carr, Chapter 12; Mainfort 1986:46).

Helms's (1976) model informs us of not only the possibility of aspiring Hopewellian leaders having traveled far in their quest for esoteric knowledge, with accompanying gift giving

and the interregional spread of ritual items. The model also suggests, in this context, the possible nature and roles of Hopewellian ceremonial centers. A great Panamanian Cuna chief-teacher might have as many as 20 to 50 student chiefs who studied with him (Helms, p. 132). These persons constituted for the chief a "fund of power" and a source of prestige (Sahlins 1972) in their ritual and mundane labor for the chief, and in the ritual gifts they gave to him, during the course of their studies. It is possible that some or all of the clusters of domestic debris (apparent residences) and the wooden buildings used for manufacturing ritual items within the confines of the Seip earthworks, Ohio (Baby and Langlois 1979; Greber 1997:216), indicate, among other interpretations, the areas of tutelage, ritual practice, payment in the form of ritual manufacture, and temporary residence of local and foreign students of one or more renowned Ohio Hopewellian leader-teachers. A similar interpretation might apply to some of the clusters of domestic debris within the Mann site (Ruby 1997e). Only further excavation and artifact analysis can bear out or refute these and alternative propositions.

ELITE-ORCHESTRATED TRANSFERENCE OF RELIGIOUS CULTS

A final means by which Hopewellian material culture, ideas, and practices may have been disseminated over the Eastern Woodlands is through the transference of religious cults among clans or other tribal segments, which in turn was orchestrated by competing Big Men to facilitate supralocal exchange and local wealth and prestige. This mechanism is suggested by way of analogy to the Enga regional system of ceremonial exchange and the spreading of cults in highland Papau, New Guinea, as described by Wiessner and Tumu (1999). The introduction of the sweet potato to the highlands, perhaps not unlike the dramatically increased productivity of cultivation of Eastern Agricultural Complex plants in the Midwestern United States during the Woodland Period (Wymer and Johannessen 2002), afforded the possibility of local Big Men to generate larger local food surpluses. In New Guinea, such surpluses were used locally and supralocally to compete for brides and allies in warfare through the payment of bridewealth and war reparations, while Big Men who helped to finance their followers in these matters gained in prestige. The surpluses were accumulated not simply within networks of kin locally, but also through two potent networks of ceremonial regional exchange—the Tee cycle and the Great Ceremonial Wars exchange festivities—which greatly expanded geographically and in the generation of wealth after the sweet potato was introduced. These two networks eventually came to connect more than 355 clans over a distance of about 85 kilometers (55 miles). In the Tee cycle, which came to replace the Ceremonial Wars, initiatory gifts moved down the chain of clans, main gifts of pigs, utilitarian goods, and valuables were reciprocated in the opposite direction, and then large kills of pigs and festive distributions of pork moved in the first direction, repaying those who had given the main gifts.

Organizing a clan to generate wealth for ceremonial exchange and articulating neighboring tribal segments and tribes in a milieu of increasing wealth, competition, and new and wider social relations were difficult for clans and their Big Men. So too, were setting agreed-upon times for the different stages and ceremonies of the Tee and Ceremonial Wars, and maintaining a spirit of cooperation among all exchange participants over the course of a ritual exchange cycle. These difficulties were overcome by the conscious crafting, innovation, and circulation of ritual cults, which integrated the necessary parties. The cults involved sacred objects, rites, and spells, which were intended to improve individual and clan prosperity. One cult—the bachelor's cult—involved young men making voyages to purchase sacred objects from another clan, as a part of their social transformation into adult men integrated with a broader community. Cults were exchanged for wealth and, once bought, could be altered by the purchaser and sold to others. Thus, cults were traded and reworked like material objects, without restriction by any centralized religious authority, and in accord with local needs of the moment and management by local leaders.

The buying and selling of cults that occurred in New Guinea are similar to the buying and selling of ritual prerogatives that occurred in North America, as posed by Penney (1989; see above) to explain interregional Hopewell, but involved an entire clan, which was led in its decisions by a Big Man, rather than the efforts of one individual.

The Enga system of ceremonial exchange and cults is instructive when considering how Hopewellian ideas, ways, and materials might have spread because it shows how several of the mechanisms enumerated above may *combine* to form a regional system of interaction. The Enga case encompassed the spread of cults, buying and selling of ceremonial prerogatives, local valuables exchange, intermarriage across community lines, Big Man-orchestrated competitive displays (e.g., Tee feasts, the Ceremonial Wars), and personally transformative journeys to obtain sacred objects.

The Enga system is not a reasonable analog for Hopewellian interaction among regional traditions across the East, given differences in scale, language diversity, and community distribution between the Enga and Hopewellian cases. The Enga system spanned a linear distance much smaller than the Eastern Woodlands and, instead, approximated the expanse of a single Hopewellian tradition, such as the lower Illinois valley Havana Hopewell, the Scioto Hopewell, or the Tennessee valley Copena Hopewell. While the Enga spoke dialects of one language, and would fall within Helms's category of "normal people," interregional Hopewell spanned Helms's "normal people," "close strangers," and "foreigners" (see above). Finally, while the Tee Cycle, the Great Ceremonial Wars, and specific cults connected a near-spatial continuum (i.e., cline) of communities, the communities that participated in Hopewellian ideas and practices had a patchy (i.e., nodal) distribution over the East, possibly restricted to areas of high resource potential (Struever 1964:89, 95–96, 99–105). These distinctions imply significant differences in the nature of intercommunity social interaction in the two cases, with regard to social distance, formality, bridging symbolism, and perhaps the frequency of interaction.

The Enga case may, however, give insight into Hopewellian interaction within regional traditions. It is not hard to envision ceremonial events functionally like the Enga Great Ceremonial Wars having occurred at various prescribed earthworks and times in Ross County, Ohio, bringing together communities from several tens of miles away in competitive displays, exchange, and alliance creation. One can also easily imagine a string of communities along the lower Illinois valley, each focused on a flood plain mound center, having been tied together in a cycle of exchange like the Enga Tee. Finally, the dynamic innovation and spread of cults to keep such exchange systems going among the Enga may have characterized Hopewellian intraregional exchange, as well. The diverse nature of the large ceremonial deposits of copper symbols, copper earspools, copper breastplates and celts, smoking pipes, mica sheets, obsidian, galena, and quartz crystals found in different Scioto Hopewell mounds (Carr et al. Chapter 13) may evidence the active innovation, spread, and short life of various cults that helped to organize and schedule Scioto Hopewellian exchange systems and keep up a spirit of cooperation among widespread participating communities.

Speaking against this analogy of Hopewell corporate ceremonialism to Enga ceremonial cycles, at least in the Ohio case, are Clay's (1992:79–80) criticisms of the interpretation of pre-Hopewellian Adena societies as Big Man societies, which also hold for Ohio Hopewell societies (see Carr and Case, Chapter 5). Clay rightly pointed out that the power of Melanesian Big Men, and we would add their ability specifically to fuel corporate ceremonialism of the Enga type, is based on their capability to amass large surpluses. In contrast, the rarity of storage pits in Ohio Hopewell habitation sites suggests subsistence productivity at the level of family consumption alone, although recent paleoethnobotanical syntheses for the Havana and Ohio Hopewell traditions (Wymer and Johannessen 2002) may place this in debate. Second, Clay notes that the ceremonies administered by Melanesian Big Men are staged near their own houses, creating an essential identification among the Big Man, place, and power. The dispersed settlement pattern

of Ohio Hopewell communities and the use of Ohio earthwork ceremonial centers by leaders from multiple communities do not indicate this key symbolism. The Enga case is perhaps more instructive in showing how competitive displays, the spreading of cults, buying and selling of ceremonial prerogatives, local valuables exchange, and intermarriage among communities may have been combined in Hopewell life and in the spread of practices, ideas, and material forms within a regional tradition than it is in epitomizing the nature of Hopewellian leadership. Archaeological evidence for the primarily shaman-like rather than Big Man-like nature of Ohio Hopewellian leaders (Carr and Case Chapter 5) supports this conclusion.

SOCIAL RECEPTIVITY TO FOREIGN WAYS

Of the many mechanisms enumerated above by which Hopewellian raw materials, artifacts, practices, and ideas came to be spread across the Eastern Woodlands, some require, in addition, that local communities were receptive to and accepting of such foreign elements, so that they gained in popularity in their new cultural setting. Intermarriage, spirit adoption, buying of religious prerogatives, and emulation involved in regional-scale, elite valuables exchange each offer the opportunity for the spread of a foreign idea or practice within a local community, but contingent upon local receptivity.

A society at large can be more or less receptive to outside contact, ideas, and practices for very many philosophical–religious, political–ideological, social organizational, technological, demographic–labor, and ecological reasons (Roe 1995:38–55). The very patchy distribution of Hopewellian material traits across the Eastern Woodlands during the Middle Woodland period (Struver 1964) reflects the lack of acceptance of Hopewellian ideas and practices by many Woodland societies at large. A well-documented example is the persistence of Adena ritual practices among communities in the Hocking and the central and lower Muskingum valleys (Black 1979; Carskadden and Morton 1996:320–321, 326–327), several centuries after their geographically close, Scioto valley neighbors had been heavily creating and investing in Hopewellian ways.

At a smaller scale, different segments and personae of a society—males and females, groups of different rank or wealth, leaders and followers—may vary from each other in their receptivity to foreign cultural elements for reasons as diverse as those pertaining to whole societies (e.g., Roe 1979; 1995; see also Cannon 1989). Thus, a well-grounded understanding of the spread of Hopewellian ideas and practices and the mechanisms of their dispersal requires the study of many different functional categories of material culture that were produced and used by different segments of society, which potentially varied in their openness to foreign culture. It is likely that the differing geographic distributions of various finished Hopewellian artifact classes over eastern North America (e.g., Seeman 1979a, 1995) reflects in part the differing receptivity of different social segments and personae in different regions to the ideas and practices enmeshed with those various artifact classes.[22]

The topic of the receptivity of a particular kind of social segment/persona to foreign Hopewellian ways, and its variation across regional traditions, is taken up in this book by Keller and Carr (Chapter 11). They document similarities and differences among three Hopewellian regional traditions in the style of terra cotta figurines, which in all probability were made by females,[23] and then infer the varying receptivity of female artisans in those different societies to foreign designs. Illinois Havana Hopewell, Indiana Mann phase Hopewell, and Ohio Scioto Hopewell are the regional traditions examined. The authors find that, in all three traditions, figurines were probably produced and used in open social–ceremonial contexts rather than closed, secretive ones. This would have allowed the free spread of visible stylistic traits—such as the natural style and clay medium of the figurines—across traditions, which is observed. At the same time, female producers of figurines in the three traditions differed in their acceptance of styles for rendering somewhat less visible, facial features such as the nose,

eyes, mouth, and ears. Figurines from the Mann phase vary widely in the style of these features, sharing in some styles found in the other two regions. This suggests a wide network of "active interaction" of female artisans of this tradition with those of others, and the receptivity of Mann phase figurine makers to foreign styles. In contrast, Havana and Scioto Hopewell figurines are more uniform and limited in the style of their facial features. This implies a strong network of artisan interaction within each region, strong grammatical rules in form and production rather than family or individual-generated stylistic innovations, and little acceptance of extraregional styles. The greater receptivity of Mann phase females to foreign figurine styles is paralleled by their[24] acceptance and reproduction of Southeastern, Swift Creek, complicated stamped pottery decoration styles, vessels of which are common at Mann phase sites and were made locally, but very rare in Scioto Hopewell sites and apparently nonexistent in Havana Hopewell sites (Ruby and Shriner, Chapter 15).[25] In turn, the openness of Mann phase females to foreign styles and their greater interaction with neighboring groups may relate in part to the location of the Mann phase in a major riverine crossroads—near the conjunctions of the Wabash, Tennessee, and Cumberland rivers with the lower Ohio River.

A fruitful extension of Keller and Carr's study would be stylistic analyses of artifacts likely made by men, in order to infer their receptivity to foreign styles compared to that of women in each of the three regional traditions. Documenting the interregional spread of Hopewellian ideas and practices along multiple lines, possibly distinguished by gender or other dimensions of social segmentation, could prove useful in understanding the distinct geographic distributions of different Hopewellian material traits, and the social–ceremonial nature of Hopewell.

SUMMARY AND CONCLUSIONS ON INTERREGIONAL HOPEWELL

When an actor-based view of the spread of Hopewellian ideas and practices across the Eastern Woodlands is taken, and when ethnographic descriptions of long-distance human travel and interaction are considered, a wide diversity of mechanisms of dispersal and motives for dispersal of Hopewellian material culture are suggested as logical possibilities (Table 16.1). Cautious and systematic review of archaeological evidence relative to ethnographically derived expectations indicates that most of these mechanisms probably operated in Hopewellian times. The strongest examples are summarized in Table 16.2, following from the above discussion.

From this table, it can be seen that no single mechanism is a satisfactory explanation of much or all of the spreading of Hopewellian ideas, practices, and material culture. This finding is fully in accord with the great diversity of kinds of Hopewellian artifacts and raw materials, their wide range of religious, social, and other functions, their varying contexts of production and use (e.g., local, nonlocal, mortuary, domestic), and the diverse roles of the individuals who would have used them. *When one considers who was doing what and for what possible social or individual motives, instead of simply tracking the movement of objects over a landscape, the reasons for the distinct geographic distributions of different material classes become clearer.* One would not, for example, expect galena obtained by individual or small groups of medicine persons or aspiring leaders from multiple societies over the East during vision/power quests to be distributed geographically like ceremonial ceramics made by pilgrims at a single ceremonial center. By deconstructing the interregional Hopewellian archaeological record specifically through personalizing and contextualizing it with social roles and motives, interregional Hopewell is made more dynamic and understandable, and also is opened to being generated from local situations. This last task remains a challenge that has been addressed to date only in the most general of terms.

CHAPTERS THAT FOLLOW

The four chapters that follow each address interregional Hopewellian travel, procurement, and forms of interaction that led to the wide distribution of Hopewellian ideas, practices, material

Table 16.2. Mechanisms of Interregional and Regional Dispersal of Hopewellian Raw Materials and Finished Goods, with Strong Evidence

Raw material or finished good	Mechanism
Obsidian in Ohio and possibly Indiana	Vision/power questing or pilgrimage to a place in nature from Ohio and possibly Indiana
Obsidian in Illinois	Travel to Ohio or Indiana centers of learning, or elite valuables exchange between Ohio or Indiana and Illinois
Meteoric iron in Ohio and Illinois	Vision/power questing or pilgrimage to a place in nature from Ohio and Illinois sites
Copper for peoples within the distribution of copper celts in Northern and Midsouthern traditions	Vision/power questing or pilgrimage to a place in nature
Cobalt silver at LeVesconte, Ontario, the Converse site, Michigan, and the Tunnacunhee and Mandeville sites, GA	Vision/power questing or pilgrimage to a place in nature from these sites
Keweenaw peninsula silver at the Hopewell and Turner sites, OH, and possibly the Liverpool site, IL	Vision/power questing or pilgrimage to a place in nature from these sites
Galena in Ohio and Illinois	Vision/power questing or pilgrimage to a place in nature from Ohio and Illinois sites
Galena from Copena sites to Mandeville, GA, and McQuorquodale, AL	Long-distance elite exchange or travel to a center of learning
Conch shells, alligator teeth, barracuda jaws, shark teeth in Ohio sites from the Gulf Coast/Florida Atlantic area	Vision/power questing, pilgrimage to a place in nature, travel to a center of learning, buying of religious prerogatives
A carved river mussel shell in Naples-Russell Mound No. 8, IL, from southeastern GA	Vision/power questing or the travels of a medicine person
Effigy platform pipes in the Scioto, Havana, Crab Orchard, and Marksville areas	Buying of religious prerogatives or travel to a center of learning
A platform pipe at the Rutherford Mound (Crab Orchard area) and one at the Bedford Mound (Havana area)	Elite valuables exchange (chemical testing required)
Bird-effigy pots in the Marksville, Miller, Havana, Crab Orchard, and Scioto areas	Buying of religious prerogatives or travel to a center of learning
A Hopewell ware pottery vessel at the Newcastle site, IN, from the area of the Steuben/Knight/Norton Mounds, IL	Elite valuables exchange (chemical testing required)
A Hopewell ware pottery vessel at the Esch Mound (northeast OH) from the Havana area	Elite valuables exchange (chemical testing required)
Rocker-stamped vessels at the Connestee phase Ice House Bottom site, TN, from southern Ohio	Elite valuables exchange
Connestee-like, simple stamped vessels at several mounds in southern Ohio from the vicinity of the Ice House Bottom site, TN	Elite valuables exchange
Clay, painted figurines at the Mandeville site, GA, and the Knight mound, IL	Intermarriage, spirit adoption, or buying of religious prerogatives
"White metal" (silver, iron) overlaid in the central depressions, only, of copper earspools at the Esch Mound (northeast OH), Bedford Mound 4 (IL), and Tunacunnhee (GA)	Intermarriage, spirit adoption, or buying of religious prerogatives
Swift Creek-like complicated stamped pottery made locally at the Mann site, IN	Intermarriage, spirit adoption, or buying of religious prerogatives and their spread locally
Decorated ceramics made locally at the Pinson site, TN, similar in style to pottery from the Marksville, Santa Rosa–Swift Creek, Tennessee valley, and Mobile Bay areas	Pilgrimage to a ceremonial center
Decorated ceramics found at the Pinson site, TN, but produced nonlocally and similar to Santa Rosa-Swift Creek, Larto Red, check-marked, and fabric-impressed styles	Pilgrimage to a ceremonial center, travel to a center of learning, or elite exchange
Fine-spaced, simple stamped pottery found at the Mann site, IN, but produced nonlocally and similar in style to pottery from the Appalachian Summit	Pilgrimage to a ceremonial center, travel to a center of learning, or elite exchange
Roseate spoonbill in Gibson Mound 3, IL, from the Florida/Alabama Gulf Coast	Pilgrimage to a ceremonial center, travel to a center of learning, or elite exchange

styles, raw materials, and, occasionally, finished goods over the Eastern Woodlands. The chapters consider four different kinds of Hopewellian items: metallic celts, metallic panpipes, metallic earspools, and raw and worked silver. These vary interregionally in a number of their characteristics and allow interregional Hopewell to be resolved into some of its variant contents, geographic expanses, and distributional mechanisms, as discussed at the beginning of this chapter. The themes that the chapters address, in various combinations, include: (1) the geographic place(s) of origin of the styles of finished artifact classes, (2) the different geographic distributions of the four kinds of items and what this variation implies about differing forms of interregional communication, (3) the different or similar ideological meaning(s) of each kind of item across its own geographic distribution, (4) the fundamental issue of whether the finished items were exchanged across traditions, or whether Hopewellian peoples from each tradition procured their own raw materials and manufactured the items themselves, (5) the similar or different mechanisms by which each kind of item came to be distributed over the Woodlands, (6) the similar or different social roles of those who employed a given kind of item across its geographic distribution, and (7) the similar or different rituals in which a given kind of item was used across the Woodlands. The conclusions drawn about each of these seven topics in the four chapters that follow are now summarized and integrated.

Origins

Ohio has commonly been interpreted as the place of origin of Hopewellian ideas and practices, which spread from there over the East. The enormous concentration of certain Hopewellian artifact classes and the diversity of Hopewellian artifact classes in Ohio would suggest this interpretation if one indiscriminately accepted the simple logic that the area of origin of a cultural feature is that region with the greatest concentration and/or diversity of the feature—an extension of the old age–area hypothesis (Wissler 1926; see also Harris 1968:374–377). Although undemonstrated for most material aspects of Hopewell, one finds this assumption embedded in archaeological terminology used today, where Ohio is said to be the "core" of Hopewell (Pacheco 1996).

Two chapters in this book and other evidence refute this position. In Chapter 18, metallic panpipes are found through stylistic study to have had their origins most likely in the Upper Great Lakes Trempealeau region, not in Ohio. Chapter 19 indicates that earspools of early morphology occur as early in the Copena, Havana, and Goodall regions as in the Scioto area. Similarly, the style of Hopewell ware made its appearance earlier in the Havana region than in Ohio (Griffin 1967:184). These probable or possible extra-Ohio origins of some primary markers of Hopewell reinforce the view of Hopewell as an interaction sphere of co-evolving regional traditions (Griffin 1967:184) without one center of origin, and in this regard, not unlike the later Southeastern Ceremonial Complex of Mississippian societies (J. A. Brown 1976). Thus, interregional Hopewell is to be understood as having been generated in several different, local cultural contexts, and its study requires a locally contexualized and generativet approach.

Artifact Classes with Different Geographic Distributions

Metallic earspools, metallic panpipes, and raw and worked silver are each distributed across essentially all the major Hopewellian traditions in the Eastern Woodlands (Seeman 1979a:304, 381). In contrast, metallic celts are limited to Hopewellian traditions in the northern and mid-southern Woodlands. These different distributions suggest the possibility of different cultural mechanisms of interregional communication and imply the need to deconstruct interregional Hopewell geographically. Following Seeman's (1995) and Helms's (1988) lead (see Deconstructing Interregional Hopewell, above), the smaller distribution of metallic celts may indicate interactions among peoples who considered each other "close strangers" and who used bilingualism; out-of-group foster care, education, and marriage exchanges; pidgins; trade jargons; and ritualized behavioral response sequences to

relate to each other. Seeman (1995:134–135) would equate this relatively small area of close strangers, who communicated through linguistic means, with a *Sprachbund*: an area of shared general understandings where people know what to talk about—in this case, Hopewellian society and philosophical–religious beliefs. In contrast, the much more widely distributed earpools, panpipes, and silver imply interactions among groups who considered each other "outsiders", spoke mutually unintelligible languages, and were limited to nonlinguistic, artistic forms of communication such as iconography, music, and dance. These persons probably would have considered each other to have been potentially dangerous yet, by their very unfamiliarity, also powerful and attractive to interact with (Helms 1988). All of these thoughts about the different forms of communication in which different classes of artifacts participated provide a solid groundwork for thinking about the ideological meanings of those artifacts, to which we now turn.

Uniformity and Variability of the Ideological Meanings of Artifact Classes across the Woodlands

Seeman's (1995) interpretation of the different geographic distributions of celts and panpipes posits only that the two artifact classes were involved in different kinds of interregional communication. He did not attempt to define what specific meanings celts and panpipes might have had to Hopewell peoples. This issue and the related one of whether the meaning of a given artifact class varied across regional traditions are taken up in each of the following chapters in Part IV.

The most theoretical of the four chapters in their discussions of artifact meanings is Chapter 17, by Bernardini and Carr. It provides a framework for understanding the social, symbolic, and semantic place of Hopewellian artifacts in local communities and their interregional relations, not simply for copper celts—its subject matter—but also for many other ritual artifact classes. The authors draw from social science distinctions made by Marx (1954), Rappaport (1979), and Helms (1988), and thoughts on Hopewell by Seeman (1995).

Bernardini and Carr argue that copper celts and other Hopewellian ceremonial artifact classes each had unique values and meanings, and thus articulated socially in local contexts in their own unique ways. The value and meanings of a particular specimen, they propose, were a composite of two independent dimensions: its "canonical" meaning(s) and its "indexical" meanings. Canonical meanings are basic worldview assumptions about the enduring aspects of nature, society, and the cosmos. In pertaining to things outside of a specific ritual or cultural context, they are immutable and unfalsifiable. Indexical meanings are more particular concepts that concern the immediate conditions and relations among people in a given ritual or cultural context. Being concerned with relationships and the immediate, they may vary from situation to situation. In the case of copper celts, their canonical meanings were indicated by their similar shape and material over the northeastern and midsouthern Woodlands. Across the Hopewellian traditions in these areas, celts may have uniformly referred to canoe building and long-distance journeying and power questing via canoe, the felling of trees to make earthworks and ritual architecture, the journey of souls to an afterlife, and/or the institutionalized leadership roles involved in these activities. Ethnographic and archaeological data suggest these interpretations. To own a copper celt thus communicated an attained level of prestige through achievement in one or more of these arenas. The more practical and variable indexical meanings of celts were indicated by their different sizes. Larger and smaller celts indicated the differing abilities of persons to acquire copper—a substance that was economically, socially, and politically costly, and ideologically charged and potentially dangerous—and, by extension, the prestige of a celt owner relative to others. This second meaning also would have been understood uniformly across the geographic areas where metallic celts have been found. That both meanings were shared across regions is argued by the authors finding little relationship between a celt's length and its distance from the upper Great Lakes

copper source. The lack of correlation implies that each Hopewellian tradition with celts acquired copper from the upper Great Lakes independently of others, through long-distance journeying, rather than through interregional exchange of copper and/or celts. Thus, the various regional traditions would have shared experientially in the same mode of acquisition of copper for celts, with all its philosophical–religious, canonical implications listed above. In addition, people in each of the multiple regional traditions would have understood the expense of obtaining copper and the prestige differentials of copper celts of different sizes, that is, their indexical meanings. The interregional sharing of these two dimensions of the value and meaning of copper celts can be considered an example of a coherent *Sprachbund*.

In Chapter 18, Turff and Carr explore the possible meanings that panpipes may have communicated within regional Hopewellian traditions and among peoples from distant traditions who met. Like Bernardini and Carr (Chapter 17), Turff and Carr distinguish between the canonical and the indexical meanings of ceremonial artifacts. The authors point out that historic Native Americans in the northeastern and southeastern Woodlands attributed different sets of indexical meanings to copper, of which panpipes were made. In the Northeast, copper referenced creatures of both the Upper and the Lower Worlds, including the Horned Serpent, Underwater Panther, bear, and Thunderers. In the Southeast, copper apparently was associated with the sun deity, the sacred fire, blood, life and success, the colors red and/or brown, and the East and/or Upper World. All of these meanings, in not spanning the entire Woodlands, are too specific to explain the spread of panpipes across this area. More plausible candidates are some very general, canonical meanings that possibly were attributed to panpipes. One is power, attributed through the association of the copper of panpipes with powerful supernatural beings of one kind or another, through the linking of the copper, silver, and music of panpipes with magical transformation, and possibly through the tying of cedar or sumac, which may have been used in stuffing some panpipes, with purification. Other possible canonical meanings of panpipes include power obtained by long-distance journeying to copper and silver sources; the power of the panpiper in his/her ability to successfully make such a dangerous journey and to manage power; and/or humanness, personhood, and sentience, expressed in the multinote sounds of panpipes, which resembled the human voice in song and speech. Any of these canonical meanings would have fostered mutual respect among foreigners from different Hopewellian traditions who met, helped to smooth social interactions among them, and given the parties a motive for interacting. In being effective in aiding social interaction across the Woodlands, panpipes would have spread over this range. Turff and Carr go on to note that it would have been the musical qualities of panpipes associated with humanness, personhood, and sentience, rather than the symbolic referents of their copper, that were most fundamental to their wide distribution over the Woodlands. The association of panpipes with the meanings linked to copper, such as power, obtained power, and managed power, would have been true of other copper artifacts (e.g., breastplates, celts, headplates) as well, yet these have smaller geographic distributions. In addition, the message of humanness would have been particularly important to communicate among very distant foreigners because, not uncommonly, tribal societies consider others at a far distance to be nonhuman and thus dangerous or unworthy of interaction. Finally, Turff and Carr reject the notion that panpipes imitated specific bird calls or other animal sounds, even though animals figure importantly throughout Hopewell art, because panpipes in different regional traditions were different lengths and probably produced different notes.

A critical conclusion that Turff and Carr reach from their study of panpipes is that interregional Hopewell, or at least the aspect of it represented by panpipes, was not a single religion (contra Caldwell 1964), nor was it an ideological system interwoven with a social structure (contra Seeman 1995:123), nor was it a consistent set of material forms and practices in which uniform ideas might have been expressed. Instead, Turff and Carr pose that interregional Hopewell

was fluid, material–ideological–mental projective process. Panpipes across the Woodlands were similar enough in their forms, materials, and tonal qualities to have allowed Hopewell peoples in different regional traditions to have projected *some* meaning(s)—canonical or indexical, more or less local—onto them, creating familiarity and some common basis for meeting. Upon meeting, persons from different regional traditions may have read somewhat different meanings into panpipes. They almost certainly were not able to appreciate all the specific, indexical connotations that panpipes of copper and their music had in each other's cultures, and they may not have been able to grasp even some core worldview assumptions that panpipes may have differentially expressed in the northeastern versus southeastern Woodlands. However, the roughly similar worldviews and beliefs across the Eastern Woodlands area, which were rooted in shamanic thought and practices, would have ensured that the projected meanings were similar enough to have formed an effective framework for interaction.

Like celts and panpipes, earspools appear to have communicated very general, shared Hopewellian concepts of a canonical kind when Hopewell peoples from distant regions met. The case for earspools is presented in Chapter 19 by Ruhl. There, Ruhl makes a stylistic–technological analysis of earspools across the Woodlands and finds an interesting contrast. On the one hand, poorly visible stylistic–technological traits provide strong evidence for the very localized production of earspools, localized design norms, and minimal exchange of earspools geographically. At the same time, visible aspects of earspool morphology form the same symbol across the East at large—a gleaming metallic ring of light offset from a dark center. Very significantly, Ruhl's chronological seriation of earspools enables her to show that the style of the ring symbol changed in parallel across the East over the Middle Woodland period. These time–space–form patterns in combination suggest a metaphorical, nonverbal form of interregional communication using a key material symbol—in line with Seeman's (1995) and Helms's (1988) model of communication among widely separated "foreigners". Symbolic communications of this kind, and across great distances, must have been fairly regular for the ring symbol to have followed the same stylistic trend across all regions over the centuries.

The specific canonical meaning(s) of the ring symbol are not discussed by Ruhl. However, it can be mentioned that the contrast between light and darkness seen in earspool design is just one example of a fundamental concern with light and darkness that fully permeates Hopewellian material culture—artifacts, and mound and earthwork soils, alike (see Carr and Case, Chapter 5, for many examples). The contrast most likely represents a basic worldview assumption of Hopewellian peoples in Ohio, where it has been studied in detail (Carr 1998; Carr and Case 1996; Greber and Ruhl 1989:275–284), and probably has its foundations in shaman-like ideologies (Carr and Case, Chapter 5) that would have been known across the Eastern Woodlands and more widely.

Contrasting with the uniform, general, ideological meanings had by celts and earspools, and probably panpipes, across the Woodlands is the apparently dichotomous meaning of silver. In Chapter 20, Spence and Fryer document chemically that Hopewellian traditions across the Woodlands used only two sources of silver, in Cobalt, Ontario, where it occurs in pure veins, and in the Keweenaw peninsula of Michigan, where it is intermingled in small quantities with much more plentiful copper. Different traditions used one source or the other, exclusively, and the source used by a particular tradition was typically that closest or made available through neighboring traditions that used the source. However, this was not the case for Hopewellian peoples in the Scioto and Little Miami valleys, who used only the Keweenaw source, which was more distant than Cobalt silver available to them through neighboring Point Peninsula communities and which was less rich in silver. Spence and Fryer explain this anomaly, and the generally exclusive use of one kind of silver by each Hopewellian tradition, as resulting from the circulation of two concepts of silver among Hopewellian peoples in the Woodlands. In one view, silver was a ritually acceptable material in its own right and could be

gotten from the pure silver Cobalt source. In the other view, silver was associated in some essential ideological way with copper and had to be obtained from the Keweenaw source to be ritually acceptable. Hopewellian peoples in the Scioto and Little Miami valleys would naturally have had the second concept of silver because they procured copper from the Keweenaw peninsula. Spence and Fryer also suggest that the plentifulness of silver at the Cobalt source may have encouraged its association with that place, and with personal stories about taking arduous journeys to that place to obtain it. The personalizing of Cobalt silver procurements could have limited their transfer among persons, including transfer to Hopewell peoples in the Scioto and Little Miami valleys from peoples in the Point Peninsula, Goodall, and northeastern Ohio regions. This limitation would not have pertained to Keweenaw silver, which was acquired as a byproduct of copper mining, and would explain the spread and common distribution of Keweenaw silver among sites within the Scioto valley. Thus, through several kinds of evidence and lines of thought, Spence and Fryer were able to resolve the Hopewellian geographic distribution of silver into two, apparently ideologically distinguished components.

Each of the following chapters in this part of the book, by giving ideological meanings to the whole of the geographic distribution of a raw material or artifact, or by discriminating ideologically different subareas within it, humanize interregional Hopewell. The chapters, along with what has been presented in this one, fill in the Hopewellian landscape with socially, politically, and religiously motivated people who met and interacted in social contexts of varying kinds and with beliefs both shared and distinct.

Whether Finished Artifacts Were Exchanged

The chapters on celts, panpipes, and earspools in Part IV, as well as an earlier one on terra cotta figurines in Part III, each conclude through stylistic studies that there was little or no interregional exchange of these finished goods (contra Struever and Houart 1972). Although celts, panpipes, and earspools were found at the highest frequency by far in the Scioto region, peoples of the Scioto were not normally exporters of these goods to peoples of other regional traditions, and Scioto burial sites were not typically the resting place of these goods imported or brought from afar. The Scioto concentration of celts, panpipes, and earspools is, instead, to be understood as a product of intense, local conspicuous consumption—cooperative and/or competitive—peculiar to this region. Part of the cultural context for this consumption was a three-community alliance and its periodic recreation in the Scioto–Paint Creek area, described in Chapter 7 by Carr.

Distribution Mechanisms

Chapter 20, by Spence and Fryer, resolves the distribution of raw and worked silver over the Woodlands into three possible mechanisms of its acquisition and dispersal, which occurred in different regions. Vision and power quests and/or pilgrimage directly from LeVesconte to Cobalt, Ontario, over 400 kilometers away, to obtain silver are implied by the silver items found at LeVesconte. The silver represents every stage in the technological sequence, from acquisition to processing: raw ore, derived nuggets, partially formed sheets, artifacts, and clippings left from their production. The authors conclude that the remains probably represent a single expedition to Cobalt. The evidence from the Converse site, Michigan, is similar, with raw nuggets and a partially formed sheet. These specimens also suggest direct procurement, or perhaps exchange through a few hands from Cobalt. In contrast, silver specimens from the Scioto Hopewell region suggest multiple expeditions and/or exchange. The specimens all come from the Keweenaw peninsula, where silver occurs infrequently as inclusions within copper, and would have been obtained fortuitously as a by-product of copper mining. One sheet of silver from the Hopewell site and silver overlays on buttons, earspools, and panpipes from the Hopewell, Mound City, and Seip sites in Ohio each are formed from multiple small pieces of silver blended together, and each may represent the accumulated results of several procurement trips or exchange episodes.

The clear conclusion from Spence and Fryer's chapter is that interregional Hopewell was constituted by multiple means of distribution, which varied situationally and, as reviewed above, probably with belief.

Uniformity and Variability in the Social Roles in Which Interaction Sphere Items Were Used

A further topic that helps to personalize interregional Hopewell and reveal its complexity through deconstruction is the social roles in which interaction sphere artifacts were used. In Chapter 18, Turff and Carr document that panpipes varied in their specific social and ritual functions and in the contexts in which they were used, both within and among Hopewellian societies across the Eastern Woodlands. These variations occur despite the fact that panpipes as a roughly similar artifact form were spread widely across the East. In order to reconstruct the uses of panpipes, the authors begin with the observation that panpipes were taken out of life only through burial in cemeteries, primarily in the graves of individuals rather than communal ritual deposits, and usually one panpipe per person, indicating that those buried with panpipes were typically their owners. Panpipes are found to have been buried alone with a person a quarter of the time, suggesting that the panpiper was a social role in its own right. The associations of panpipes with other kinds of grave goods and the social roles indicated by the goods give insight into the structural place of the panpiper in a system of social statuses, the roles with which that of the panpiper was bundled, and by extension, the activities in which panpipes were probably integral. The roles associated with the panpiper turn out to be very diverse, as well as fluid in their combinations. The roles encompassed community-wide leaders marked by celts; sodality members or high achievers marked by breastplates and/or earspools; clan leaders or members of import; and many kinds of shaman-like practitioners, including public ceremonial leaders, producers of ceremonial items from exotic raw materials, diviners in general, war or hunt diviners, healers, and keepers of cosmology and philosophy. Significantly, regional Hopewellian traditions differ distinctly from each other in the ranges of social roles with which that of panpiper was combined. For example, panpipers buried with shaman-like equipment occur most commonly in the Southeast, while panpipers in the central and northern Midwest rarely had such burial furniture. Considering all role associations, the authors find four broad regions of the Eastern Woodlands that were distinguished in their organization of social roles with that of the panpiper: the northern Midwest, the Northeast, the central Midwest, and the Southeast. These empirical findings clearly make questionable the notion that interregional Hopewell was a single, complex kind of social organization interwoven with a symbol system that marked leadership and/or prestige and that facilitated social interaction (contra Seeman 1995:123).

In Chapter 19, Ruhl infers that earspools in the Scioto and Little Miami valleys of Ohio had both personal and group aspects to their symbolism. They were typically found one pair per burial, suggesting individual use. At the same time, they also were deposited in large offerings, sometimes bundled together, suggesting a reference to some larger corporate group. Corporate group symbolism, and the precedence of the group over the individual, is also implied by the better workmanship of earspools found in large deposits than that of earspools placed in burials. Ruhl goes on to notice that earspools in Ohio were buried much more commonly with adult males than females, suggesting their representation of a corporate group of restricted membership. In Chapter 7, Carr uses this and other contextual evidence to conclude more specifically that earspools marked membership or achievement in a sodality. Interestingly, outside of the Scioto and Little Miami valleys, large ceremonial deposits of earspools do not exist, or at least are very rare (Ruhl, personal communication, 2003), suggesting differences in the nature of the social roles marked by earspools in Ohio than elsewhere, and the unlikelihood that interregional Hopewell was a unified social–symbolic system.

Chapter 17, by Bernardini and Carr, explores the social roles in which metallic celts may have been used. The authors suggest several

possibilities, based on the known utilitarian functions of the stone counterparts of metallic celts. A metallic celt may have symbolized dugout canoe making, canoes, and the long water journeys that the celt's owner made or led to the sources of valued raw materials, such as the copper from which the celts were made, or to unknown and learned peoples. A metallic celt also may have referenced the spirit canoe that a shaman used to make a trance journey to another world, which is a common practice cross-culturally. Further, a metallic celt could have symbolized a person who was involved in or led the clearing of trees to make earthworks or the cutting-down of trees to make charnel houses, log tombs, and coffins, all of which served as containers for the deceased. Proven accomplishment and leadership in any of these domains may have been represented by a celt, especially given that, at least in Ohio, metallic celts were regularly decorated with images of important persons in regalia (Carr 2000c, 2000d; Carr et al. 2000).

It is generally unknown whether metallic celts marked different ones of these social roles in different Hopewellian traditions. However, Bernardini and Carr do note that canoe-shaped coffins, which also would have been constructed with celts and probably connotated the journey of the deceased to an afterlife, were unique to the Copena tradition. Further, earthworks and the social roles involved in managing their construction occurred in only some Hopewellian traditions. It seems likely that celts represented somewhat different social roles in different Hopewellian traditions and, again, that the idea of interregional Hopewell as a single, complex kind of social organization wedded with a unified symbol system that marked leadership is an oversimplification (contra Seeman 1995:123).

Uniformity and Variability in the Rituals in Which Interaction Sphere Items Were Used

Metallic panpipes, celts, and earspools each were used in rituals of varying kinds within and among Hopewellian regional traditions. In Chapter 18, Turff and Carr elucidate four fundamental ways in which rituals involving panpipes differed from each other. Rituals varied in whether they were directly or only indirectly related to mortuary tasks, as reflected in the contrast between panpipes buried in graves and panpipes buried in a ceremonial deposit lacking human remains. Rituals also differed in whether multiple panpipers gathered and gave gifts to the deceased, perhaps indicating whether a sodality of panpipers and a sodality-run ritual were involved. Rituals also varied in whether panpipes were buried with a mature adult or, much more rarely, a child, young adult, or very old person, the latter three suggesting age-related rites of passage such as naming, attainment of puberty, menopause, the passing into elderhood, and the death of persons at or nearing these ages. Finally, in the case of rituals that generated ceremonial deposits lacking human remains, the ceremonies differed dramatically in the number and role diversity of persons who attended. Most such gatherings over the Woodlands were very small and resulted in the decommissioning of only one panpipe, with no other or few other items. Focus was on the panpipe. On the other hand, two gatherings in Ohio were enormous, having involved hundreds of gift givers and gifts representing many kinds of roles and persons from multiple local communities. Attention was not on panpipes or the panpiper. Instances of rituals that were unique in one or more of these ways and very localized in their geographic distributions include rituals at LeVesconte and Cameron's Point, Ontario; Tunacunnhee, Georgia; and the Hopewell and Turner sites in Ohio. The varied and geographically delimited nature of rituals of these different kinds clearly shows that interregional Hopewell, or the aspect of it marked by panpipes, was not a single cult (contra Prufer 1964b).

Chapter 17, on celts, and Chapter 18, on earspools, likewise note that these artifacts were usually placed in burials, normally one celt or a pair of earspools per person, and were aspects of mortuary rites. However, the chapters also describe occasional large deposits of these items. In the case of earspools, Ruhl attributes one huge deposit of them to the gathering of a corporate group, which is identified earlier (Carr, Chapter 7) as a sodality. Ruhl notes that both the bundling of the earspools together with heavy cord and

their higher quality than earspools placed in individual graves suggest emphasis on the group over the individual in this instance.

In sum, each of the four chapters in Part IV develop finer-grained understandings of interregional Hopewell by resolving it into its variant contents, geographic distributions, and distributional mechanisms. These kinds of discriminations are fostered heuristically by inhabiting Hopewellian landscapes with motivated people who filled a great variety of social roles and operated at both the local and the interregional scales. In this way, interregional Hopewell in its rich diversity of ideas, practices, material forms, and their distributions is generated from its human creators.

CODA: SO, WHAT WAS INTERREGIONAL HOPEWELL?

Hopewell in its interregional expression has commonly been defined in the past as some one kind of cultural and material content that was shared broadly across regions of the Woodlands and/or as some single kind of mechanism by which shared content came to be spread across regions (Hall, 1977:156). Attempts to find a simple understanding of Hopewell by assigning it one identity—be it ecological (Struever 1964), economic (Struever and Houart 1972), religious (Caldwell 1955), a form of symbolic communication (Seeman 1997:138), or other—have been a consistent aspect of Hopewell archaeology.

The chapters in this and other parts of this book, along with some previous publications, show empirically that interregional Hopewell cannot be so simply characterized as one form of content or distribution mechanism. By taking a humanizing perspective that personalizes the archaeological record with motivated actors in social roles, that explores the intricacies of local cultural context, and that is founded in deep and broad empirical data—by thickly describing the past—it has been possible to resolve interregional Hopewell into contents and distribution mechanisms of many different kinds and scales.

Let us step through the phenomena that empirical evidence firmly shows interregional Hopewell not to have been, and then assemble empirically what it was.

Interregional Hopewell was not a single, coherent, or high volume economic exchange system. Many of the artifact classes once thought by some to have been exchanged outward and interregionally from certain centers of production (Struever and Houart 1972; see also Seeman 1979) turn out to have been produced locally at multiple centers. Stylistic studies and/or material compositional analyses of copper celts, metallic panpipes, metallic earspools, ceramic figurines, bird effigy ceramic vessels, and platform pipes indicate little or no interregional transport of these items (Chapters 11, 15, 17, 18, and 19, and citations above). Likewise, raw materials once believed to have been procured by a particular society and then exchanged to others interregionally (Struever and Houart 1972) are now known from material compositional analyses to have frequently been procured directly from their natural sources by multiple Hopewellian societies across the Woodlands independent of one another. This is the case for copper, silver, obsidian, and probably meteoric iron, but only in part for galena (Chapters 17 and 20, and citations above). In addition, Seeman (1979a) showed that if some Hopewellian artifact classes and raw materials were traded, trade did not occur through a single, hierarchically structured network of sites, or regularly, as Struever and Houart (1972) had modeled. These conditions are indicated by weak correlations among the regional spatial distributions of artifact and raw material classes, as well as a lack of fit of these distributions to central-place, geographic models of exchange that focus on site size and the diversity of goods traded through a site.

Interregional Hopewell was not a single kind of social organization. Hopewellian societies across the Eastern Woodlands varied in the social roles they encompassed, as indicated by the different kinds of material social role markers found in them (Seeman 1979a:381, Table 13). Social roles were bundled into social positions in different combinations in different regional traditions. For example, the northern Midwest, the central Midwest, the Northeast, and the Southeast were distinguished from one another by the roles that were associated with that of the panpiper (Turff and Carr, Chapter 18). Role bundling also varied over time, over the Middle Woodland

period. In Ohio, the multiple roles of the classic shaman became increasingly segregated among discrete specialists over time, and an incipient priest-like role marked by plain copper headplates seems to have emerged by the end of the period (Carr and Case, Chapter 5). Further, Hopewellian societies likely varied in their kinship structure (Field et al., Chapter 9). Even within the limited area of Ohio, strongly patrilineal, less strongly patrilineal, and matrilineal kinship systems are evident from multiple lines of evidence. Also, gender relations and the relative prestige given to men and women varied among Ohio Hopewellian societies (Field et al., Chapter 9; Rodrigues, Chapter 10).

Interregional Hopewell does not appear to have been a coherent cult, ritual, or ritual system, from what evidence has been analyzed in detail to date. Metallic panpipes perhaps give the best understanding of this (Turff and Carr, Chapter 18). They are one of only five Hopewellian social-ceremonial artifact classes (Seeman 1979a:381, Table 13)—panpipes, earspools, conch shell vessels, mica mirrors, and metallic beads—that are distributed across all eight of the major Hopewellian traditions of the Woodlands, and the only class that is restricted temporally to the Middle Woodland period. Nevertheless, peoples in different regions differed considerably in how they used panpipes ritually. Regions varied in the social and ceremonial roles associated with panpipes, in whether panpipes were used only for mortuary rites or also more broadly ritually, in the size and role diversity of gatherings that led to the burying of panpipes, perhaps in whether panpipers were organized into a local ceremonial society, in whether panpipes were used in age-related rites of passage, and in the age-sex distribution of those who were buried with and presumably owned panpipes. The Woodlands can be divided into four broad regions (listed above) that differed from one another in their ceremonial organization and content in these regards. Further, the different arrays of ceremonial artifacts and raw materials that characterize different regional Hopewellian traditions (Seeman 1979a:306–308; 382–384) do not indicate a single, pan-Woodlands cult or ritual system. The idea that interregional Hopewell was specifically a burial cult is negated by the great differences found in the sizes, layouts, and contents of mortuary facilities in Ohio compared to those in Illinois (J.A. Brown 1979; Struever 1965).

Interregional Hopewell was not a consistent symbolic-meaning system of shared, specific, indexical meanings. Ceremonial raw materials and religious concepts that have deep roots in time in the Eastern Woodlands, such as copper, raptorial birds, serpents, and bears, nevertheless had significantly different symbolic associations and indexical meanings in the historic northeastern and southeastern Woodlands (Turff and Carr, Chapter 18). This was probably the case during the Middle Woodland as well, to judge from extensive regional variations of the kinds just mentioned in ceremonial content and ceremonial role organization (Field et al., Chapter 9; Keller and Carr, Chapter 11; Turff and Carr, Chapter 18; Ruhl, Chapter 19). The two distinct meanings that seem to have been given to silver by Hopewellian peoples in different regional traditions (Spence and Fryer, Chapter 20) illustrate the conceptual diversity of interregional Hopewell.

Interregional Hopewell was not a single mechanism of dispersal of raw materials, artifacts, artifact styles, and cultural practices and ideas. Nine forms of interregional interaction and procurement, which have ethnohistoric analogs in the Eastern Woodlands or more broadly in North America, have some to substantial evidence that they operated among Hopewellian societies interregionally during the Middle Woodland. (Table 16.2). A minimum of four groups of these mechanisms are most readily distinguishable in their archaeological signatures (Table 16.1), and one or more mechanisms from three of the groups very likely occurred: (1) vision/power questing and pilgrimage to a place in nature; (2) perhaps the travels of medicine persons or patients for healing; (3) the buying of religious prerogatives to manufacture and use ceremonial items, spirit adoption, and intermarriage; and (4) pilgrimage to a ceremonial center, valuables exchange among elite, and travel to a center of learning for mentoring in esoteric knowledge and ceremony (Table 16.2). Interregional Hopewellian connections were a composite palimpsest of multiple kinds of discrete activities by socially different kinds

of actors with different kinds of needs and motives.

Interregional Hopewell was not a phenomenon, of whatever kind, that originated in one place in the Eastern Woodlands—Ohio or elsewhere. Of the five Hopewellian social-ceremonial artifact classes that are essential archaeological markers of interregional Hopewell, in that they are distributed across all eight major Hopewellian traditions in the Woodlands (listed above and in Seeman 1979a:381, Table 13), at least three are now known to have had their origins of manufacture and social-ceremonial use in separate portions of the Woodlands, and not in Ohio. Copper earspools, as technologically complex forms, appeared earliest in the Havana and Copena traditions. They appeared later in Ohio, as fully realized forms, without obvious technological antecedents there (Ruhl, Chapter 19). Panpipes that are simplest in form and in the materials from which they are made, and that presumably were earliest, were concentrated in the Trempealeau tradition in the Upper Great Lakes area. Outward from there, the simple panpipe class decreased in its frequencies in central Midwestern traditions, and was almost entirely missing from southeastern Hopewellian traditions. Formally and materially more complex kinds of panpipes increased in frequency and complexity from north to south, with the most complex and presumably latest kinds having been most frequent in the Southeast and missing from the Trempealeau tradition and neighboring Goodall Focus (Turff and Carr, Chapter 18). Conch shell ceremonial vessels had their origins, obviously, in a third area of the Woodlands—along the Gulf Coast. A geographically more restricted yet still interregionally distributed artifact form, ceramic ware with bird designs, appeared earliest in the Marksville tradition (Penney 1989:111, 119; see also Griffin 1967:184; Prufer 1964a:58), not Ohio. In sum, important markers of interregional Hopewell had both northern and southern points of origin. The diverse geographic origins of "Hopewellian traits" was recognized early on by Griffin and some other archaeologists: "It is erroneous to speak of *an* origin for Ohio Hopewell, or for any Hopewellian focus. There were many origins for many different traits, and these were combined in the different areas into regional associations. These are isolable blocks of culture traits." (Griffin 1946:74; see also Maxwell 1947:26; R. Morgan 1952:92).

Although the Ohio Hopewell tradition is known for the most numerous examples, most stylistically elaborate examples, and/or the most diverse versions of many classes of interregionally distributed Hopewellian items, it does not necessarily follow that Ohio was the place of innovation of them, as some earlier researchers thought (e.g., Deuel 1935:430; 1952:264; Ritchie 1937:185). Some aspects of Ohio Hopewellian material culture, practices, and beliefs did have direct antecedents in earlier Adena ways in Ohio and adjacent locales. Yet, peoples of the Ohio Hopewellian tradition were also avid collectors of cultural practices and fancy artifact classes from distant places and peoples, just as they were avid collectors of exotic, fancy raw materials, for a variety of social, political, and religious reasons.

So, if interregional Hopewell was not a single kind of economic exchange system, social organization, cult or ritual system, indexical symbolic meaning system, or mechanism of dispersal of raw materials, artifacts, artifact styles, and cultural practices and ideas, what was it? The easiest answer to give is that the question, itself, is misleading, because it assumes that interregional Hopewell had some singular identity. The search for an interregional Hopewell of one nature derives historically from the attempt of Eastern Woodland archaeologists to fill the void created when it became evident that Hopewellian similarities across the Woodlands could no longer, with anthropological appropriateness, be interpreted and termed monolithically a "Hopewell Culture". The Midwestern Taxonomic System (McKern 1934, 1939), accompanied by McKern's critique of the improper use of the term "culture" in Woodlands archaeology, was a key intellectual development that helped to produce that void. Yet the taxonomic system also perpetuated the monolithic view of Hopewell, by recognizing both a Woodland-wide "Hopewellian Phase" and various more localized "Hopewellian Aspects" or "Foci". (A well referenced discussion of this history of concepts and terms is given in Chapter 2, Note 2). In this vein of thought, the right

question to ask might be "What *is* interregional Hopewell", placing emphasis on the intellectual construct and its history of development, rather than on some empirically based, monolithic, cultural phenomenon of the past. Monolithic interregional Hopewell in this view, then, is a historical product of archaeological intellectual thought.

Although this first answer is reasonable and historically correct, it by itself is not satisfying to me, and would not be satisfying to the scores of archaeologists who, familiar with the Hopewellian archaeological record, see similar cultural features that cluster in time during the Middle Woodland period and that are spread broadly in space across the Eastern Woodlands. So, again, what was interregional Hopewell?

Interregional Hopewell was an interaction sphere (Caldwell 1955), but not of one nature or scale. Varying combinations of localized peoples in different cultural traditions created connections with each other in different ways through a good diversity of means, and varyingly shared raw material classes, artifact classes, artifact styles, and cultural practices and ideas. Interregional Hopewell was a composite palimpsest in its contents, their geographic expanses, and in mechanisms of interaction, following Hall's (1977) trichotomous distinction.[26] The boundaries of expanse of interregional Hopewell are fuzzy rather than clear cut, from an archaeological viewpoint, because interactions were of multiple kinds that linked differing sets of peoples and places to varying degrees and with variation through time as localized conditions and needs changed (see also Seeman 1996:306, 312). The interactions were clothed almost completely in philosophical- religious concepts, symbols, and ceremonies (Tables 16.1, 16.2), but had local social, economic, political, religious, and demographic ramifications, more or less so, depending on the particular kind of interaction. In this regard, the interactions should probably not be labeled "religious" or "mortuary-religious", as Caldwell (1955:137, 139) did.

The differing geographic distributions of different Hopewellian raw materials, artifact classes, styles, cultural practices, and ideas that the Woodlands archaeological record exhibits reflects the different *roles* that these media played in the lives of different local peoples. It also reflects the differing localized conditions, needs, and preferences of peoples in different regional traditions and, thus, the kinds of interregional connections that peoples in one or another regional tradition did or did not search out, and the kinds of exotic practices and ideas that they did or did not accept. The different media (material, behavioral, and conceptual) had different qualities, such as size, visibility, rarity, durability, malleability, and portability, which determined their differential suitability to particular roles and their varying utility or desirability in different local contexts and in different forms and scales of interaction.

Despite all of the above-mentioned variations in interregional Hopewell, there is a fabric—a seeming gestalt—to its forms and ways that no well-familiarized archaeologist can deny. This quality of interregional Hopewell derives from some very basic, shared philosophical-religious concepts—canonical meanings—and their most essential symbolic expressions in material (and presumably ceremonial) forms that served as vehicles for and facilitators of interregional and local interactions and local lifeways. The concepts were shamanic world view assumptions and cosmological constructs that had deep and widespread roots in the Eastern Woodlands and that served as foundational elements for the more particular Woodlands Native American belief systems and religions built on them through prehistory and historically. Some of the most essential of these concepts include: transformation in a variety of guises, "seeing through", darkness versus light, the tripartite cosmos, the creatures and qualities of these realms, the four directions and solstices, and the axis mundi (Carr and Case, Chapter 5 and 1995; Carr 1997, 1998, 1999a, 199b, 2000a, 2000b). These widely shared, historically deep, foundational elements are seen in the raw materials, artifact classes, artifact styles, and cultural practices of Hopewellian peoples, and create the fabric of their cultural world that archaeologists intuitively sense as Hopewellian: the figure-ground reversal structure that runs through much of Hopewellian art; the directional symmetry that is common in Hopewellian art and earthen

architecture; the zoned and tripartite structure of Middle Woodland ceramics, especially Hopewell ware; the creatures that commonly were rendered in Hopewellian art; the attention given to contrasts between darkness and light in Hopewellian art, artifacts, and earthen architecture; the shiny, reflective, translucent, and transparent raw materials that Hopewell peoples favored; raw materials that naturally, or with human manipulation, transform between shiny or light and dull or dark, and sometimes back again, or that are simultaneously shiny/light and dull/dark; the distant journeys that, as a metaphor for and facilitator of transformation, were required to obtain many Hopewellian raw materials; mortuary practices that emphasize staged processing of corpses, dismemberment, and cremation; burial mounds as axis mundi and earthworks that were aligned to solstices; and so on. The light and dark, ring-shaped image created by the form of copper earspools (Ruhl, Chapter 19), which occur in all the major Hopewellian regional traditions across the Eastern Woodlands, is one specific, shared expression of some of the foundational concepts and general kinds of materials that give interregional Hopewell its distinctive nature. So, too, is the panpipe, which is found in all Hopewellian regions and which, through its copper material, appears to have connoted power by reference to the creatures of the Upper and/or Lower Worlds (Turff and Carr, Chapter 18).

Cross-regional Hopewellian interactions were made possible by the essential, widely shared, shamanic concepts that some kinds of local material productions (e.g., earspools, panpipes), and perhaps some kinds of locally created ceremonies, embraced in vivid manners. The basic Woodland-shared, shamanic qualities that such material items and ceremonies effectively expressed allowed Hopewellian peoples in different regional traditions to project *some* meaning(s)—canonical or indexical, more or less local—onto them, creating familiarity and some common basis for meetings of interregional scope, and making such items and ceremonies attractive, leading potentially to their interregional spread. Foreign Hopewellian persons who met and gathered would not have known or understood all of the specific indexical meanings that such items or ceremonies had in each other's cultures. However, what meanings the parties projected onto the items or ceremonies, in sharing essential, Woodlands shamanic concepts, ofttimes appear to have been "close enough" to have served as an effective context for interaction and the cross-regional spread of those items or ceremonies.

The widely shared, historically deep, basic shamanic concepts and their generalized material and ceremonial expressions enumerated above became elaborated during the Middle Woodland as an aspect of and in support of increasing social complexity in select areas and cultural traditions of the Eastern Woodlands that we have come to call Hopewellian. At least some of the particular areas in which societies became more complex were characterized by one or more critical, natural environmental and ecological conditions that spurred on social change (Struever 1964; see also Ruby et al., Chapter 4). In some areas, social change was tied to increases in population sizes and densities, as in the expansion of central Illinois valley Havana peoples into the lower Illinois valley (Ruby et al., Chapter 4; Charles 1985, 1992, 1995; Farnsworth and Asch 1986; see also Styles 1981). In other areas, such as the Scioto valley, this may not have been the case (Wymer 1987a; see also Seeman and Branch, n.d.), and other environmental or sociocultural factors seem to have been important (Ruby et al., Chapter 4). Interregional Hopewell was generated from *local* sociocultural and natural environmental conditions and dynamics.

The cultural character of a given Hopewellian regional tradition was a product of several things: the previous history of its peoples in expressing and working out, in their own local ways, materially and ceremonially, the basic foundational shamanic concepts of the Woodlands (e.g., Adena material culture and practices in Ohio); the peoples' further, unique innovations and elaborations in expressing materially and ceremonially those shamanic concepts during the Middle Woodland as societies became more complex; and the peoples' emulation, resisting, and/or reworking of particular material and ceremonial expressions created by others in other Hopewellian regional traditions. In some

instances, particular local material or ceremonial expressions of basic shamanic concepts came to have very wide distributions across the Woodlands, such as earspools and panpipes mentioned above; in other instances, the expressions spread only so far—all depending on the social roles that those material forms or ceremonies fulfilled, the utility or not of those roles in the context of the particular conditions and needs within other regional traditions, and how well the forms or ceremonies meshed with cultural ways and preferences within other traditions. The geographically diversified nature of interregional Hopewell in its content and distribution mechanisms, but also certain aspects of its definable, shared fabric, derived from local matters. It is in this light that this book has emphasized the linkages between interregional and local Hopewell, their common nature in addition to their distinctive qualities, and the generation of interregional Hopewell from local scenes (Carr, Chapter 2).

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NOTES

1. Our use of the term *deconstruct* has no linkage to the postmodern deconstructivist school of thought in the humanities and social sciences.
2. An analogous study in Chapter 11, by Keller and Carr, shows differences in the amount of prestige and the markers of prestige given to Hopewellian women in the Havana tradition in Illinois versus the Mann phase in Indiana versus the Scioto tradition in Ohio. However in this work, the specific nature of the differences in social organization among the three geographic areas is less clear than in the case presented by Field et al. in Chapter 9.
3. The roots of Ohio Hopewellian animal impersonation in earlier Glacial Kame and Adena practices is clearly evidenced in actual animals masks and medicine bags (Converse 1981; Webb and Baby 1957:61–76) and in the Adena engraved tablets (Carr 1999b; Webb and Baby 1957:83–101).
4. See Basso (1996) for a Native North American view of places that is broader and encompasses that presented here.
5. Obsidian from Ohio Hopewell sites has a high total weight—300 pounds was found in Mound 11 of the Hopewell site, alone. The obsidian occurs as large finished bifaces in a few sites, as well as smaller tools, core fragments, blades, and debitage (Hatch et al 1990:463). The large total amount of obsidian and the large size of some specimens suggest its direct acquisition from its source in the Wyoming–Idaho area. In contrast, obsidian from Illinois Hopewell sites has a very low total weight (about two kilograms), occurs as small specimens scattered over many sites with a few pieces each, and is largely debitage (Wiant 2000). The small total amount of obsidian and the small maximal size of specimens suggest indirect acquisition by some means. Only three unaltered obsidian nodules are known from Illinois—from the Albany mounds in northwest Illinois (Herald 1971; Wiant 2000). One large, 25-pound obsidian boulder supposedly from the Meridosha site, lower Illinois valley, cannot currently be confirmed for its provenience, antiquity, or source (Wiant 2000).

   Ohio Hopewell sites do not differ significantly from Illinois ones in the percentages of obsidian from Obsidian Cliff versus other sources like the Camas–Dry Creek formation. Tabulating specimens analyzed by Hatch et al. (1990), Griffin et al. (1969), and Hughes and Fortier (1997) reveals that 30 of 37 (81.1%) assayed specimens from Illinois came from Obsidian Cliff, Wyoming, while 48 of 54 (88.9%) assayed specimens from Ohio came from or possibly came from this source. The similarity of these two areas in their percentages of obsidian from different sources does not support the hypothesis that persons from both areas *independently* and directly acquired obsidian by long-distance travel to the Wyoming–Idaho area. Instead, it suggests acquisition by one of these areas and disperal to the second, leading to the similarity in percentages. The much larger specimens and much greater amounts of obsidian found in Ohio imply that it was Ohio Hopewellian persons who obtained obsidian directly from the Wyoming–Idaho area, while Illinois Hopewellian persons got it indirectly, through the hands of Ohio Hopewellian persons.

   Less is understood about obsidian found at the Mt. Vernon site, Indiana. Formal, large bifaces of the kinds found in Ohio, and ovate preforms, are known from the Mt. Vernon mound (Seeman 1995:129) and suggest access to large pieces of obsidian, through either direct long-distance travel to the Rocky Mountains or exchange with Ohio Hopewell peoples. The quantities of these specimens compared to those found in Ohio sites is unknown, given the incomplete and unsystematic excavation of Mt. Vernon. The ovate preforms suggest that obsidian was worked at Mt. Vernon and that formed points were not necessarily brought into the site from Ohio. The percentage (60%) of obsidian that sources to Obsidian Cliff, Wyoming, is lower than that found in

Ohio and Illinois sites, but the sample of assayed artifacts is small (total $n = 10$) and of unspecified formal types (Shackley 1997), prohibiting sound comparison.

6. Keweenah silver at the Liverpool site, Illinois, may have been acquired directly from the Keweenaw peninsula rather than through down-the-line or nodal exchange. The few silver specimens from Illinois that have been analyzed by Mauer et al. (1976) and Spence and Fryer (Chapter 20; 1990, 1996) all source to Cobalt, Ontario, save those from Liverpool. The silver at Liverpool thus may not have been obtained from communities within the region and may have been obtained from afar. However, in contrast to the strong cases for direct acquisition of silver that can be made for LeVesconte, Hopewell, and Turner, where silver manufacturing debris occurs, no such debris is reported from Liverpool. This leaves open the possibility that the silver at Liverpool was obtained in finished form from communities outside of the Havana region by other processes, rather than procured directly from the Keweenaw peninsula by the occupants of Liverpool. Logical alternatives to direct acquisition would be long-distance elite valuables exchange and travel to a center of learning. Stylistic analysis of panpipes across the Eastern Woodlands (Turff and Carr, Chapter 18) does not, in general, indicate the long-distance dispersal of finished panpipes, but the panpipe from Liverpool was not included in their study.
7. Especially convincing examples of similarity in artifact style and content are the raven pipes from Mound City, Ohio, and the Rutherford and Bedford mounds in Illinois, plus the fact that, of the 14 animal species represented on Illinois pipes, 13 are found on Ohio pipes (Penney 1989:183–185, 285–288).
8. The homogeneity of figurine styles in the Havana, and perhaps Scioto, regions is less definitive evidence of a lack of interregional exchange of female artisans and figurines. The homogeneity suggests the infrequency of exchange of female or figurines and/or the low receptivity of figurine producers in these traditions to styles from other traditions.
9. Copperas Mountain also is a source of pyrite nodules. Pyrite shaped into hemispheres that were probably used for divination were deposited at the Hopewell site (Shetrone 1926:190–191), which is not far from Copperas Mountain, but in a different branch of Paint Creek valley. However, no pyrite is reported from Seip (Shetrone and Greenman 1931:455–458, 509), which is directly adjacent to Copperas Mountain.
10. The closed-in nature of the Appalachian Plateau compared to the openness of the Till Plain province in Ross County may have been perceived by Hopewellian peoples as a dark/light dichotomy, or Lower World/Middle World dichotomy, given the commonality of these themes in their material culture generally (Carr and Case, Chapter 5; Carr 1998; Carr and Case, 1996).
11. A good example of this situation is the use and construction of Russell Brown Mound 3 at the Liberty earthworks, two or three centuries after the heyday of Liberty when the Big House of the Edwin Harness Mound was in operation. The Big House has a weighted-average, calibrated radiocarbon date of A.D. 309 ± 32 (Greber 1983:89), whereas three calibrated dates from Russell Brown Mound 3 have means that span the period of A.D. 490 to A.D. 665 (Seeman and Soday 1980:93).
12. Griffin (1958:7, Griffin et al. 1970:8; Braun et al. 1982:62–62) and Stoltman (1979:135) did think that some finely made Hopewell ware vessels in northern Illinois, southwestern Wisconsin, and Ohio had been traded there from their core area of occurrence in the lower Illinois valley.
13. Carr and Sears (1985:85) note that while meteorite falls—sources of iron—are much more common in the Southeast than the Northeast, meteoric iron in Hopewellian sites is more common in the Northeast than the Southeast. This complementarity suggests the possibility of systematic interregional exchange of meteoric iron from south to north. Concordant with this possibility is the co-occurrence of a variety of meteoric iron artifacts (Carr and Sears, p. 80) and Copena-style Big Pipes (Shetrone and Greenman 1931) at the Seip–Pricer mound.
14. The terms local, regional, and interregional, in referencing space rather than social relationships, are poor substitutes to Helms's descriptors, normal people, close strangers, and foreigners, which bridge more easily to kinds of valuables exchange. Nonetheless, the spatial terms are more easily used as adjectives and do reference archaeological landscapes well.
15. Ohio Hopewellian community and mating network sizes are known from the work of Pacheco (1996; Pacheco and Dancey n.d.), and Ruby et al. in Chapter 4. Pacheco's survey data on the central Muskingum valley, as analyzed by Ruby et al., indicate that local symbolic communities in the Dresden subregion and the upper Jonathan Creek subregion had catchment diameters of about 6 to 11 kilometers. A study of the distances among earthwork-mound centers in the Scioto valley–Paint Creek region by Ruby et al. (Chapter 4, Table 4. 6) indicates that local symbolic communities there had modal nearest-neighbor separations and diameters of about 8 to 10 kilometers. Sustainable communities (mating networks), also defined from earthwork-mound center distances, were separated from neighbors by and had diameters of 16 to 18 kilometers, or 21 kilometers, depending on the measure. These inter-community distances are all smaller than the approximately 25 kilometer maximum distance of origin of fine vessels brought into McGraw–a radius from McGraw that equates to a 50 kilometer diameter area. Together, these estimates imply that vessels at McGraw came from within its local symbolic and sustainable communities, and well as sometimes from outside of them, from up to two to three local symbolic communities away and from immediately adjacent sustainable communities.
16. Fie's (2000a) table 52 shows that one fine ware vessel and one coarse ware vessel both were probably manufactured

at the Macoupin habitation site and came to be deposited at the Sandy Creek Church habitation site. Similarly, two fine ware vessels and four coarse ware vessels were probably made at the Sandy Creek Church habitation site and ultimately were deposited in the Smiling Dan habitation site.

17. Unexpected relative to Hall's model is Fie's finding that some coarse wares ($n = 26$ of 304) in lower Illinois valley sites were derived from outside of the area, while no fine wares were. This pattern may indicate visitation by small family groups from adjacent regions (Fie n.d.) similar to that clearly evidenced at the Massey and Archie sites (Farnsworth and Koski 1985), rather than extralocal exchange of utilitarian vessels and staples, per se.
18. Given the common historic Native American view that power can be acquired only by exchange, it is unlikely that the items would simply be given away and received. They would probably be acquired by the recipient with a small exchange gift. Penney's (1989) concept of buying of religious prerogatives is one manifestation of this thought process, as is the leaving of tobacco or other offerings in the place of any object removed from nature for use.
19. The emphasis placed here on the status-building motivation for regional exchange was not that preferred by Flannery (1967:81). He held on to the idea that regional exchange could have an underlying ecological purpose of distributing food from zones of agricultural surplus to less fortunate areas, in line with Sander's (1956; Sanders and Price 1968:188–191) idea of regional Mesoamerican symbiosis.
20. The equation of greater geographic distance with a transition from the natural to the supernatural is complemented or contradicted in at least stratified societies by the notion of the kingdom as the cosmos, with the center—the capital and the king—being the most sacred part (Huntington and Metcalf 1979:123; see also Eliade 1964:264). In simpler societies with shamanic cosmologies, the idea of the omnipresent, sacred "Center of the World" or *axis mundi*, found in each person's own self, own house, and own village (Eliade 1964:260–265; see also 259–274, 477–482, 487–494) also complements or contradicts the equation of distance with sacredness. More in line with Helms's idea is the paradoxical equation of the vertical *axis mundi*, which connects this world and those above and below it, with a horizontal bridge or difficult horizontal passage (Eliade 1964:482–486).
21. Seeman (1979:391–397, Figure 36) reported the richness and sizes of Hopewellian sites across the Eastern Woodlands in terms of the total number of kinds of Interaction Sphere goods (finished items and raw materials) recovered from each site and the amount of moved earth encompassed in the mounds and embankments (if any) of each site. On these measures, the Ohio Hopewell tradition far outranks the Havana tradition, which in turn outranks the Mann phase and Goodall tradition. Two sites alone, both in Ohio, have 30+ kinds of Interaction Sphere goods and sizes of 672,000–1,8999,000 ft^3: Hopewell and Seip. Sites with 22–26 kinds of Interaction Sphere goods and sizes of 131,000–204,000 ft^3 include Turner, Liberty, and Mound City, all in Ohio. Sites with only 7 to 17 kinds of Interaction Sphere goods and sizes of 6,000 to 4,37,000 ft^3 include Knight, Bedford, Baehr, Montezuma, Naples, Havana, Ogden-Fettie, Rutherford, Davenport, Klunk, Gibson, Albany, and Norton in Illinois; Newcastle in Indiana; and Cincinnati, Esch, Ater, Tremper, and North Benton in Ohio. The Mann site in Indiana and Goodall site in Michigan fall in a group of 42 sites with only 5–10 kinds of Interaction Sphere goods and sizes of 1,000 to 157,000 ft^3. Only a few third-order sites occur in traditions outside of the Scioto, Havana, and Mann areas: Crystal River in Florida, Wilson in the Crab Orchard area of Illinois, and Tunacunnhee in Georgia. All other regional Hopewellian traditions have only fourth or fifth order sites in Seeman's typology.

   Ruby (1997a:400) calculated the volume of the five largest Hopewellian mounds in the Eastern Woodlands and found them to be restricted to the Scioto and Mann areas: Hopewell Mound 25, Ohio (49,000 m^3), Mann mound IU9, Indiana (17,000 m^3), Seip-Pricer, Ohio (14,700 m^3), Mann mound IU1, Indiana (13,200 m^3) and the GE mound, Indiana (11,000 m^3).

   Walthal et al. (1979:202) calculated that the typical Ohio Hopewell burial mound required 50 times more labor than the typical Copena mound. In addition, Ohio Hopewell communities built massive earthworks, whereas Copena communities did not.
22. Geographic distributional differences in artifact classes could also reflect whether or not various social segments/personae existed in particular regions over the East.
23. There is a strong worldwide and North American cross-cultural trend for women to make pottery and work soft, pliable materials, while men work hard, tough-to-process materials (Driver 1969; Murdock and Provost 1973).
24. Here it is assumed that females also made the Southeastern complicated ceramic vessels, as in Note 23.
25. Swift Creek complicated stamped sherds were found at the Twenhofel site (Caldwell n.d.)—a Crab Orchard tradition site in Jackson County, Illinois, but apparently not in Havana sites in Illinois.
26. Here, as throughout this book, interregional Hopewell is defined in terms of *regional cultural traditions and societies* that shared practices, ideas, and material forms to various degrees, and the cultural interconnections and means of interconnection among these societies. Distant places in *nature* from which Hopewellian peoples procured raw materials (e.g., Obsidian Cliff, Wyoming, the Keweenaw peninsula, Michigan) are not included in the geographic expanse of interregional Hopewell, although the travels to such places for various purposes, as cultural practices and as practices more or less shared among traditions, are included in the concept of interregional Hopewell. From this perspective, then, interregional Hopewell can be spoken of as an "interaction sphere" rather than more broadly as a "sphere of interaction and procurement".

Gathering Hopewell

Society, Ritual, and Ritual Interaction

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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 Hopewellian 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.