Chapter 3

Salient Issues in the Social and Political Organizations of Northern Hopewellian Peoples

Contextualizing, Personalizing, and Generating Hopewell

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In the previous chapter, it was observed that the interregionally focused definitions of Hopewell given by Caldwell (1964) and Struever (1964, 1965) have tended to guide archaeological research on Hopewell away from local cultural practices and ideas. In particular, the roles played by Hopewellian people in local societies and the locally founded motivations of those individuals for their interregional exploits have received little systematic study. The chapters in Part II of this book move our understanding of Hopewell forward by offering richly detailed and humanized accounts of the local community, social, and political organizations and the histories of northern Hopewellian groups. The chapters document Hopewellian communities, leaders, shaman, clans, sodalities, gender relations, and sociopolitical alliances, and changes in these over time, sometimes approaching ethnographic or historical resolution.

This chapter provides a conceptual and empirical foundation for the studies in Part II that follow. Focus is placed here on four main subjects that tie together the nine chapters: community and ceremonial site organization, leadership, social ranking, and gender. For each subject, anthropological concepts and theories that are necessary background to its study are reviewed, past works on Hopewell that pertain to the topic are summarized, and archaeological data that bear on it and evoke critical questions or possible interpretations are presented. In the course of these theoretical and empirical discussions, the analyses made in the chapters in Part II are summarized, placed in context, interrelated, and highlighted for their significance.

The chapter begins with the topic of community ceremonial–spatial organization in the Scioto, Mann, and Havana regions. Anthropological conceptions of the nature of communities, offered by Murdock (1949a), Mahoney (2000), and Charles (1995) are reviewed and ordered, leading to the development of a multiscalar and multidimensional concept that

embraces residential communities, broader demographically and economically sustainable communities, and conceived, symbolic communities of political, economic, religious, or other kind. In addition, the well-known viewpoint that social systems and mortuary programs may be regional and partitive in nature, rather than local and normative, is recalled. These basic anthropological concepts suggest the relevance of three most fundamental questions about the spatial organization of Hopewellian communities and ceremonial sites. First, were individual local, symbolic Hopewellian communities, which were comprised of multiple hamlets, each organized around a single ceremonial center, each of like kind in their range of ritual functions, or did local symbolic communities sometimes use multiple ceremonial centers that were differentiated in their ritual functions? Second, were all Hopewellian ceremonial centers built and used by a single, local symbolic community, or were some built and used by multiple, local symbolic communities to forge larger social networks? Third, were the members of a local, symbolic Hopewellian community usually buried together in a single ceremonial center, or were they sometimes segregated among multiple centers according to one or more social, philosophical–religious, circumstantial, or other criteria? The answers to these and other, related questions are explored for the Illinois and Ohio archaeological records, where researchers in the two areas have based their reconstructions on different assumptions about the nature of communities, social systems, and mortuary programs. Chapters 4 and 7, and parts of Chapter 8, are summarized here.

The second section of this chapter addresses the topic of leadership. It starts by identifying and defining for middle-range societies some key features of leadership roles that are important to reconstruct if the workings of a society are to be understood. These features are the range of roles played by leaders; the sacred, secular, or combined bases of power of leaders; the degree of centralization or segregation of leadership roles among persons; means for recruiting leaders; the degree to which leadership roles and positions were institutionalized; and the local or supralocal expanse of power of leaders. Next, certain anthropological theories of the development of supralocal leadership are introduced. These theories range from material–economic (Sahlins 1972) to sociodemographic (Chagnon 1979) to systems–managerial (Flannery 1972) to socioreligious (Netting 1972; Winkelman 1989, 1990, 1992) in character. Contributions to the topic of leadership made in Chapter 5, and parts of Chapters 7, 8, 13, and 18, are then summarized, with emphasis on the following subjects: identifying the kinds of roles and the power bases that constituted leadership in terminal Archaic through Middle Woodland societies in the greater Ohio area, role bundling and its changes over time in the Ohio Middle Woodland, variation in leadership role bundling across regional traditions, and leadership recruitment and the social factors affecting it.

The third section of this chapter considers the perennial question of whether various Hopewellian societies were organized by principles of rank or were more egalitarian in nature. Recent, robust ethnological theories that accommodate the diverse range of systems of ranking and sociopolitical power found cross-culturally in middle-range societies (e.g., Helms 1976, 1993; Kirsch 1980; Knight 1990a; Lankford 1992; Rosman and Rubel 1971), and that extend the classic models of ranking posed by Service (1962) and Fried (1960, 1967), are summarized. Refined, middle-range archaeological theory that conceptually disaggregates the mortuary material correlates of social ranking, achieved leadership, ascribed leadership, wealth, and achieved prestige, as distinct vertical social dimensions, is introduced. These theoretical developments are the cornerstones for evaluations made in Chapters 6 and 7 of whether social ranking existed in Havana and Scioto Hopewell societies.

The final section of this chapter summarizes some contemporary developments in the anthropological and archaeological theory of gender (e.g., Claassen and Joyce 1997; Conkey and Spector 1984; Crown 2000; Hays-Gilpin and Whitley 1998; Lewis 1971; Nanda 2000; Sered 1994) and relates to them the studies of gender presented in Chapters 9, 10, 11, and 18, on Hopewellian societies. Three areas of

gender study, as modified from Claasen and Joyce (1997), are discussed in general and in reference to these chapters. The first, *womanism*, focuses on finding evidence of women in the archaeological record and challenges stereotypical views of the roles assumed by women and men. The second, which might be called *gender proper*, embraces the traditional topics of social organization applied to gender, including the social roles, rights, and duties of genders; relations of symmetry or asymmetry in prestige, power, and authority among genders; the cultural construction of gender categories through daily life and special events; the meanings (ideology) given to genders; their symbolic representation; and the ultimate causes of gender distinctions. The third area of gender studies, *femininism*, aims at empowering women today by revealing the implicit andropocentrism of traditional anthropological research and by counterbalancing the view of women as typically subordinate to men socially. In this regard, clear examples of key social roles ordinarily reserved for women in Hopewellian societies are brought to light. Chapter 9, 10, 11, and 18 all counterbalance the generally accepted view of Hopewellian women as subordinate to men, which has arisen from mortuary analyses.

In total, these discussions offer a diversity of strategies for contextualizing Hopewellian cultural characteristics locally and for personalizing Hopewellian material remains with specific social roles.

COMMUNITY CEREMONIAL–SPATIAL ORGANIZATION

The Anthropology of Communities and Societies

Current models of the ceremonial–spatial organization of Hopewellian communities in Ohio, in Illinois, and more broadly over the Eastern Woodlands (e.g., Buikstra 1976; Buikstra and Charles 1999; Dancey and Pacheco 1997a; Prufer 1964a, 1964b; B. D. Smith 1992) are founded on varying, basic assumptions about the nature of communities, and social organization more generally. As a backdrop for examining and evaluating these assumptions and for broadening our understanding of Hopewellian communities, some current anthropological perspectives on communities and societies are first introduced.

Communities

Murdock's (1949a:79–80) classic definition of the community as a residential unit of frequently interacting persons has, in recent years, been refined and expanded in ways that are quite useful for understanding Hopewellian domestic and ritual landscapes. Three kinds of communities can be distinguished and defined by taking a multiscalar and multidimensional perspective on social interaction. First are *residential communities*. These are sets of households and people who live in close proximity and interact regularly on a face-to-face basis, whether they be clustered or dispersed over the landscape. They are a territorially based social formation, in that they combine both people and place (Mahoney 2000; Tringham 1972; Varien 1999:21), and typically have a sense of common identity by virtue of their ties to a place (Basso 1996). Kinship, race, dialect, other potential shared identities, and peculiarities of culture and lifeways may also be important in a community's self-definition or definition by outsiders, but are not universally essential. In northern Hopewellian societies, residential communities were very small hamlets of one to a few extended households or small clusters of several single or multiple-household hamlets (Ruby et al., Chapter 4).

Commonly at a broader geographic scale and larger than residential communities are demographically and economically *sustainable communities* (Mahoney 2000). These are usually regional social networks within which mates, labor, food, and other material resources are regularly exchanged, offsetting and buffering against local demographic variations (e.g., in birth and death rates, sex ratios) and the ups and downs of local subsistence productivity (e.g., Braun and Plog 1982; Moore and Moseley 2001; Wobst 1974), and thereby ensuring long-term viability. The boundaries and membership of a sustainable community can shift dynamically with changes in the spatial structure of demographic and subsistence variability. Sustainable communities

may or may not be self-recognizing units with a self-given name, a sense of identity, or even an outside-given name and identity (e.g., Fried 1968). In these regards, sustainablecommunities may or may not be capable of united decision making.[1] Hopewellian examples of sustainable communities include those who gathered from afar at large and/or elaborate ceremonial centers of limited numbers: the flood plain ceremonial sites in the lower Illinois valley, the Mann earthwork and the GE mound in southwestern Indiana, and certain key earthworks in the Scioto–Paint Creek area, including Tremper, Mound City, Seip, Baum, Hopewell, Frankfort, Liberty, and East Works, at least (Ruby et al., Chapter 4; Carr, Chapter 7). Most of these sites in all three geographic regions are characterized by having had one or more large, loaf-shaped mounds.

Another kind of social unit that is broader than the residential community is the *symbolic community* (Charles 1995). It is an encompassing concept that most basically can be defined as a set of residential communities, or segments of them, that have joined together to form a larger, self-identifying social unit through the active construction and negotiation of affiliation to that unit and the creation of a sense of common purpose. A symbolic community's goals may be political, economic, religious, or some combination of these, such as warfare, regulation of irrigation (Abbott 2000; Rice 1998), and maintenance of the order of the cosmos (Rappaport 1968, 1971). A symbolic community is capable of united decision making and action relative to its goals and, in this sense, is corporate (Befu and Plotnicov 1962). Like sustainable communities, symbolic ones can be fluid in their boundaries and membership in response to a changing landscape of social, political, economic, or other risks and opportunities. Typically, although not necessarily, the members of a symbolic community derive from a limited geographic area, which helps in maintaining the community's coherency. Examples include a group of households that share an interest in a common irrigation canal or in participating in a local festival or religious cult, or that temporarily organize around a charismatic leader. In the northern Hopewellian societies examined in this book, symbolic communities are localized, and we use the special term, *local symbolic community*, to render this characteristic. Examples of such local symbolic communities are the hamlets and kinship groups from a locale who gathered at bluff-top cemeteries in the lower Illinois valley, at the Martin cemetery in southwestern Indiana, and at the earthwork–cemetery ceremonial centers in the Scioto–Paint Creek area to bury their dead. All of these sites in these three regions include multiple conical to low circular mounds in which persons from different hamlets and kinship groups were buried (Ruby et al., Chapter 4).

A symbolic community, or a local symbolic community, may or may not have as its goal the ownership and protection of a territory. For this reason, symbolic communities can sometimes be difficult to track on the ground archaeologically. Finally, a symbolic community may be coterminous with a sustainable one. The sense of identity and common purpose forged by symbolic community can be the means by which a sustainable community is practically bound together.

The Partitive Perspective on Culture and Society

A well-known distinction in Americanist archaeology is that between the *normative* and the *partitive* views of culture and society. The distinction was first drawn by the ethnologist, Fredrick Gearing (1958), who proposed that a society has not one "social organization," as British structural–functionalists (e.g., Evans-Pritchard 1940; Fortes 1945; Radcliffe-Brown 1952b; Radcliffe-Brown and Forde 1950; see also Eggan 1955; Murdock 1949a:226–259) had conceived, but multiple such organizations. In Gearing's view, the members of a society may divide and organize for action in different ways according to varying criteria (e.g., age, sex, village, clan) and along the lines of different social roles and identities (e.g., subsistence tasks groups, war grades, villages, feuding clans), which appear and disappear with the society's calendar, the seasons, situational events, and the needs of the time. In this regard, culture is partitive rather than holistic, and individuals "participate in" only certain aspects of a culture through the roles they take on, rather

than expressing all of a culture and sharing it with all others in the society in a normative manner.

The partitive view of culture, society, and the place of the individual in them was later applied by Binford (1964a:426, 1972:264) to interpret archaeological landscapes, leading to his concept of the subsistence-settlement system. In this "behavioralist" viewpoint, the result of a society partitioning along different lines for varying purposes is that the sites of activity produced by one society over a landscape will vary in the roles played out at them, in the number, age, and gender of persons who use them, and, consequently, in their size, form, material content, and structure. In contrast, a normative, traditionalist view of culture and society leads to the expectation that all of the archaeological sites produced by a society will be similar in their content and structure because culture is shared and norms are followed.

Binford's application of the partitive view of culture and society to define and interpret past subsistence-settlement systems has at least two important analogs in the study of landscapes of ritual sites, such as those of Hopewellian societies. First, the partitive view suggests that a single society can produce many and diverse kinds of ritual sites that vary in their function, in the segments of society that use them, in the roles played out at them, and thus, in their size, form, content, and structure. Single societies need not have singular ceremonial centers, or multiple centers of one kind, which would follow from the normative perspective on society and culture. Second, focusing more particularly on mortuary ritual, the partitive view of society and culture implies that a single society may use multiple cemeteries of diverse kinds for burying different subsets of its members who held different social roles, died in different ways, were bound for different afterlives, or were distinguished by any of a variety of other social, philosophical–religious, circumstantial, or physical criteria. The resulting cemeteries will accordingly vary in their size, form, content, and/or structure. Single societies need not be associated with singular burial grounds, or multiple burial grounds of one nature, as the normative view of culture would hold. Ethnography supports this point. The use of locationally and functionally distinct mortuary sites by a single society is common across cultures—not only in complex societies with rich role differentiation, but also in middle-range and simpler societies on a par with Hopewellian ones (Carr 1995b:162–163, 183–185; see also Ucko 1969:267, 268, 271). A minimum of one-third of the 31 societies surveyed by Carr with the Human Relations Area Files used multiple locales to dispose of different segments of their populations. Cross-culturally common criteria for partitioning the dead of a society were found to include the vertical social position and age of the deceased, the social classification of the deceased's circumstances of death, and a great variety of kinds of religious beliefs. The idea that one society might produce a differentiated array of cemeteries for burial of its different components was first formalized in archaeology by Peebles (1974; see also Peebles and Kus 1977) for complex societies and by Buikstra (1976; see also Buikstra and Charles 1999; Charles 1995; Charles and Buikstra 1983:134–140) for simpler ones, but was not carried forth as a major theme of Beck's (1995:xiii) compilation of regional approaches to mortuary analysis.

Communities and the Partitive View Meet

Recognizing that at least three distinct kinds of communities of varying natures and geographic scales may operate over a landscape, as well as the potential for functional differentiation of ritual sites within a community, leads to complex possibilities as to how people and their ritual activities may be organized across space. Three situations are most essential to the Hopewell cases considered in this book. First, ritual sites over a landscape may be differentiated into those that service a local symbolic community comprised of several neighboring residential communities and those that are the meeting grounds of the multiple symbolic communities within a broader sustainable community. An example is the respective distinction between bluff-top conical mound cemeteries and flood plain cemeteries with loaf-shaped mounds in the lower Illinois valley (see below). Second, a single ritual site may simultaneously function as a ceremonial center for a local symbolic community and a ceremonial center

for a broader, sustainable community. The Tremper mound in the Scioto valley of Ohio is a clear example (see below). Third, focusing specifically on mortuary ritual, different social segments of a local symbolic community may be buried in different cemeteries, one or more that are dedicated to members of the local symbolic community, but also one or more that serve a broader sustainable community of which the local symbolic community is a part. Cemeteries that served a sustainable community, and that each held members from several different local symbolic communities, are exemplified in the Scioto–Paint Creek area of Ohio by the multiroom charnel houses under the Seip–Pricer, Seip–Conjoined, Edwin Harness, Hopewell 25, and Ater mounds (see below). Finally, note that none of these organizational situations involve ritual sites for a single, residential community. Among northern Hopewellian peoples, single hamlets or hamlet clusters by themselves did not normally build mounds (see also Clay 1987, 1991 for the Adena case).

Each of these manners of organization of communities and their rituals over a landscape has characteristic material consequences. As a basic example, consider the material differences between a ritual site that is used by a single, local symbolic community versus one used by a broader sustainable community comprised of several local symbolic communities. These different kinds of sites will vary minimally in the size of their public space and layout, and likely in their artifact assemblages and facilities, because the two kinds of communities differ in their sizes, their degree of internal social heterogeneity, the social distance among their members, and the rituals relevant to them.

Cemeteries that are used as particular kinds of ritual sites by a local symbolic community, versus a sustainable community constituted by multiple local symbolic communities, provide a case in point. These two categories of cemeteries can vary substantially in their material nature because of the different kinds of mortuary rituals, with different goals, that are relevant to a local symbolic community versus a sustainable one and that are played out in their cemeteries. Particularly pertinent is the distinction between *ancestor cults* and *mortuary ceremonies*, as they have been called (Buikstra and Charles 1999; Gluckman 1937; Morris 1991). Ancestor cults aim at maintaining continuity of the living with the dead in an afterlife—commonly those persons within a unilineal group—and emphasize group unity and shared property. An ancestor cult has a clear purpose in the context of a local symbolic community that is bound together by kinship, and where such cults occur, they are associated with local symbolic communties. In contrast, mortuary ceremonies are rites of passage (van Gennep 1960) and, as such, focus on separating the living from the dead. Not emphasizing group unity through descent, they can serve as vehicles for expressing competition, defining power differentials, and working out power arrangements among different social groups. Commonly this is done through competitive material displays or gifting. These ritual enactments may or may not be relevant to a local symbolic community tied together by kinship, depending on its size, but are more likely on the meeting grounds of a sustainable community comprised of multiple local groups. In turn, the ancestor cults of a local symbolic community and the mortuary ceremonies of a sustainable community can produce cemeteries of quite different material features. The size and layout of public space, for small versus large and socially homogeneous versus heterogeneous gatherings, are obvious distinguishing material correlates. More specific differences also pertain. For example, ancestor cults of a local symbolic community based on kinship, in focusing on continuity, may involve tomb forms that provide repeated access to skeletons and grave accompaniments for their manipulation and for relating to and manipulating the souls of the deceased (e.g., Block 1971). Such facilities can be irrelevant to mortuary ceremonies of a sustainable community that are focused specifically on the separation of the dead from the living (e.g., Trigger 1969:106–112). Also, competitive mortuary ceremonies of a sustainable community can lead to the production of deposits of decommissioned and/or destroyed ceremonial paraphernalia and items of wealth used and displayed during the ceremony. These symbolic gestures and material deposits have little logic in ancestor cult rituals that are choreographed for expressing the

unity of a local symbolic community. (For qualification of the applicability of these archaeological correlates of local symbolic communities and sustainable communities to the Ohio case, particularly with regard to competition and cooperation, all Carr Chapters 1, 7, and 12.)

Reconsidering Hopewellian Communities, Ritual Landscapes, and Mortuary Programs

In this section, previous models of Hopewellian communities and ritual landscapes are briefly reviewed for the Ohio and lower Illinois valley regions. Potential areas of refinement of these models are offered, drawing upon the anthropological concepts introduced above and providing a broad context for the analyses of communities and mortuary programs presented in Chapter 4 by Ruby et al. and Chapter 7 by Carr. Seven topics of inquiry are considered, as follows.

Concerning ceremonies and ceremonial centers in general:

(1) Were Hopewell ceremonial centers differentiated in their ritual functions?
(2) Was a local symbolic Hopewellian community, which was comprised of multiple hamlets, organized around a single ceremonial center, either generalized or specialized in kind, or around multiple, functionally differentiated ceremonial centers?
(3) Were Hopewellian ceremonial centers differentiated into ones that served local symbolic communities and others that served larger sustainable communities?
(4) Did some Hopewellian ceremonial centers simultaneously serve one principal local symbolic community and multiple, other, local symbolic communities that were a part of a broad sustainable community?

Concerning mortuary ceremonies, specifically:

(5) Were all members of a local symbolic Hopewellian community buried in one cemetery, or were its different social segments buried in multiple, specialized cemeteries, in each case restricted to that community?
(6) Were the members of multiple local symbolic Hopewellian communities within a broader sustainable community ever buried together in one cemetery, were cemeteries ever used by only members of one local symbolic community, or did both situations occur?
(7) If the first alternative in Question 6 was the case, were all members of each local symbolic community buried together, or only certain segments of each community?

Previous Models of Hopewellian Communities, Ritual Landscapes, and Mortuary Programs

Current understanding of Ohio Hopewell community organization is a synthesis of three statements: (1) Prufer's (1964a:71, 1964b, Prufer et al. 1965:137) vacant ceremonial center–dispersed agricultural hamlet model; (2) Bruce Smith's (1992) elaboration of it, which specifies in greater detail the typical number of family units per hamlet and the nature of some activities in the corporate–ceremonial domain; and (3) Dancey and Pacheco's (1997a) reiteration of Prufer's model, the former of which emphasizes the full-year, residentially sedentary nature of domestic units, qualifies the degree of "vacancy" of ceremonial centers, and reaffirms the nontropical nature of the agricultural complex that supported Hopewellian communities. In essence, these models pose that Ohio Hopewellian peoples lived in dispersed settlements of one to a few households rather than villages, and that the scattered hamlets around a single earthwork were organized as a community of an unspecified type that, in part or as a whole, met within the earthwork at various times to hold ceremonies of several kinds. Settlement dispersion is held to have resulted from the swidden agricultural focus of Ohio Hopewellian subsistence, while ceremonial gatherings at a central earthwork are thought to have helped integrate otherwise isolated kin and community members. In the theoretical terms defined above, an earthwork–hamlet community would have been a local symbolic community of persons who did not have daily, face-to-face contacts but did foster and maintain a sense of

identity through their periodic meetings for ceremonies within the earthwork.

It is fair to say, from the statements of their models and the thrusts of their long-term research programs (e.g., Dancey 1991; Prufer 1967), that Prufer, Smith, and Dancey and Pacheco emphasized the domestic side of community organization, in response to concern then and earlier over the lack of documented habitations for the builders of the earthworks. In their focus on the domestic sphere, the authors did not dwell on the ceremonial organization of Hopewellian communities.[2] Specifically not considered by these researchers were the issues of possible functional differentiation of ceremonial centers and burial grounds, the use of multiple ceremonial centers and burial grounds by a single local symbolic community, and the use of a single ceremonial center and burial ground by multiple local symbolic communities within a sustainable community, per the six questions listed above. Prufer's, Smith's, and Dancey and Pacheco's models all posed one ceremonial center and burial ground per local symbolic community, and a lack of functional differentiation of ceremonial centers. The obvious difference between hilltop and flood plain enclosures in Ohio was taken by Prufer (1964a:49, 66–70, 1964b) to represent a change in settlement pattern over time. The view of one ceremonial center per local symbolic community was continued as an unstated assumption in Greber's (1997) attempt to explain certain geographic pairings of earthworks in the Scioto–Paint Creek area that have similar morphologies, such as neighboring Seip and Baum. Greber interpreted this pairing as the product of the sequential use of the two earthworks over time by a single local symbolic community. She did not consider or assess the alternative, that they had different functions and were used synchronically by a single local symbolic community, in spite of the fact that Seip contains burial mounds while Baum apparently has none at all.

In contrast to the Ohio situation, the Hopewellian ritual landscape in the lower Illinois valley was modeled more complexly by Struever (1968a; Struever and Houart 1972:60–64). He proposed that there were three kinds of functionally differentiated ceremonial sites in the valley. (1) Eleven bluff-top mound ceremonial centers were taken each to be the cemetery of a local community that inhabited a settlement below it. The bluff-top centers are characterized by smaller, conical-shaped mounds and the lack of midden deposits around them. (2) Six flood plain mound ceremonial centers—Merrigan, Kamp, Mound House, Naples–Chambers, Hilderbrand, and Baehr—were thought to have functioned as "local transaction centers", as points of interaction among members of multiple local, bluff-base settlements. Each of the six sites is characterized by one or more distinctively large and loaf-shaped burial mounds, sometimes arranged around a plaza, and by midden accumulations around the mounds. (3) A square-shaped earthwork at the mouth of the Illinois river—the Golden Eagle site—was said to have functioned as a regional transaction center that articulated the six social groups that were centered on flood plain ceremonial sites in the lower Illinois valley with each other, and then with groups from other regions in the Midwest. This site would have served a broad, interregional social network as well as the intraregional social groups that were focused on flood plain ceremonial centers. Thus, Struever saw a differentiated ritual landscape in the lower Illinois valley, with several functional categories of ceremonial sites, the use of multiple, functionally different ceremonial sites by members of a single local community, and the gathering of multiple local communities at a single ceremonial center.[3]

The simplicity of the settlement pattern and community organization that Prufer, Dancey, Pacheco, and Greber have envisioned for Ohio Hopewell peoples, in contrast to the multiscalar social organization that Struever had posed for the Illinois Hopewell, was reiterated in interpretations made of the burial programs for the two regions. Greber (1976, 1979a, 1979b, 1983; Greber and Ruhl 1989:46–64) took the large, loaf-shaped mounds of Seip–Pricer, Seip–Conjoined, Edwin Harness, and Hopewell Mound 25 within the Seip, Liberty, and Hopewell earthworks, as well as the Ater mound, each to have been a cemetery for a single local community of unspecified kind at some one point in its

history. She analyzed the burials from each of these mounds in order to reconstruct the social structure of individual, local Ohio Hopewellian communities under this assumption. When social differences were found among closely neighboring sites (Seip, Hopewell, Ater), the variations were taken to indicate differences in the structure of distinct societies, without considering functional alternatives, such as whether the sites differed in which social segments had access to burial in them and in the numbers of local communities that might have used them. Greber's theoretical viewpoint followed directly from Prufer's earlier vacant ceremonial center—dispersed agricultural hamlet model, in which one large cemetery equated with one local community.

Several aspects of Greber's (1976, 1979a; Greber and Ruhl 1983) mortuary analyses of the Seip–Pricer and Ater mounds and Hopewell Mound 25, beyond her conclusion that Scioto Hopewellian societies varied substantially from each other in their organization, indicate her implicit assumption that single mounds equated to individual local communities. First, her studies did not begin with or include a description of the regional landscape of mounds that occurred in the vicinity of the Seip–Pricer, Ater, and Hopewell Mound 25, and a consideration of whether these mounds might together have had complementary mortuary functions and burial populations. The Seip earthwork contained 17 other mounds within and outside of it besides Seip–Pricer, and the Hopewell earthwork had at least 38 other mounds within and immediately around it besides Hopewell Mound 25. Mound 23, in particular, had a burial assemblage complementary in several ways to that in Mound 25. Second, Greber did not test any of the three mounds for the one-to-one sex ratio or age distribution expectable for cemeteries of single communities of nonwestern, middle-range societies (Weiss 1973). Third, although she reported that the male-to-female ratio at Seip–Pricer was two-to-one, she did so incidentally (Greber 1979a:45), and was not moved by the statistic to question whether the mound might have been used to bury only a portion of a community. Instead, Greber held to her implicit mound-equals-local community assumption by explaining the ratio as perhaps due to "marriage patterns with half of the females of the society marrying outside the local unit and not being returned for burial, while outside females, marrying into the society, were not eligible for burial within (the) given group's space" (45). This post hoc accommodative argument is ethnologically unreasonable because it imposes an asymmetry on burial rules among neighboring, closely related societies that were supposedly intermarrying considerably (50%). Had Greber considered the possibility that a single local community might dispose of its dead in multiple mounds or other ways, a variety of other, ethnographically common burial practices of segregation of social segments could have been suggested and tested. Finally, Greber's (1979a:57) conclusion that closely neighboring Hopewellian peoples in the Scioto drainage lived in societies of markedly different structure is very unlikely, given ethnohistorical patterns of social homogeneity within regions of the Eastern Woodlands, as well as the extensive sharing among neighboring Scioto Hopewell local groups of socially sensitive material symbols and mortuary practices, social roles, and socially correlated worldview themes.[4] The one mound–one local community equation does not produce a reasonable sociological reconstruction for the Scioto region.

In contrast, Buikstra (1972, 1976:29–44) built on Struever's model of a functionally differentiated Illinois Hopewellian ritual landscape when making her mortuary analyses of cemeteries in the lower Illinois valley and reconstructing Hopewellian social organization there. Buikstra held that one social unit used both small, conical mounds in a bluff-crest cemetery and larger, loaf-shaped mounds in a flood plain cemetery. Prestigious individuals, perhaps of high rank, and possibly those who were influential in intercommunity relations and in the Hopewell Interaction Sphere, were concluded to have been buried in the flood plain cemeteries, while the bulk of the population was buried in the bluff-crest cemeteries. Buikstra supported her position with information on differences between the two kinds of mounds in the degrees of elaboration of their burials, the number of burials, the age and sex distributions of the burials, the

rules of mortuary treatment, and biological differences. Thus, Buikstra's reconstruction for Illinois Hopewell, in contrast to Greber's for Ohio Hopewell, involve multiple ritual sites per social unit, functionally differentiated ritual sites, and the burial of different segments of a social unit in different cemeteries.

Buikstra's (1976:44) initial model of Illinois Hopewellian spatial–ceremonial organization differed somewhat from Struever's (Struever and Houart 1972:61) in the interplay of local bluff-centered communities and broader, flood plain-centered social groups. Struever envisioned multiple local communities, each in the form of a bluff-crest cemetery and a habitation below it, as having been integrated through a shared, flood plain cemetery–ceremonial center, defining a broader social group. Buikstra envisioned a single local community, marked by a bluff-base habitation site, as having encompassed both a bluff-crest cemetery and a flood plain cemetery, and did not discuss the function of flood plain cemeteries as places of assembly of multiple local, bluff-based communities. She posed the functional differentiation of mortuary sites *within* the scope of a single local community.

Buikstra (1981, 1983) continued this line of thought in her study of Middle Archaic mortuary practices in the lower Illinois valley. In this case, she interpreted the Gibson bluff-top cemetery and the Koster Horizon 6 bluff-base settlement with burials in its midden as cemeteries of two different kinds that would have been used by a single Middle Archaic society. She founded her conclusion on the complementary age distributions and health conditions of those buried in the two cemeteries. The bluff-crest cemetery was dominated by healthy, middle-aged and young adults, while the bluff-base settlement midden contained primarily young or old persons or those in poor health. The idea that multiple, local, bluff-based communities gathered together at flood plain ceremonial and burial sites, defining a broader social group, entered into Buikstra's social interpretations only later, for both the Middle Archaic and the Middle Woodland Illinois valley landscapes (Buikstra and Charles 1999; Charles 1995).

The basis for the simpler ritual landscape, community organization, and mortuary program that Prufer, Dancey, Pacheco, and Greber posed for Ohio Hopewell peoples, compared to what Struever, Buikstra, and Charles inferred for Havana Hopewell peoples, is not to be found in the empirical archaeological records of the two regions. Ohio Hopewell ritual landscapes appear to have been more diversified, and Ohio Hopewell community organization and mortuary programs seem to have been more complex, than their counterparts in the lower Illinois valley. This revision is introduced below and documented in detail in Chapter 4 by Ruby et al., and Chapter 7 by Carr. Instead, the simpler ritual landscape, community organization, and mortuary program inferred by archaeologists for Ohio Hopewellian peoples compared to those in Illinois derives from the different histories of intellectual connections had by the researchers who worked in the two regions.

Specifically, Struever studied under Binford in the course of his doctoral work at the University of Chicago, from 1962 to 1964, while he was in the midst of surveying the lower Illinois valley for Havana Hopewellian mortuary and habitation sites and excavating them. It was during those years that Binford (1964a) developed and published his seminal piece on the partitive nature of culture and society, and his concept of the subsistence-settlement system as a landscape of functionally diversified sites. Struever (1968a; Struever and Houart 1972) found the concept useful in trying to understand the distributions of Havana Hopewell domestic and ritual sites he was finding, and went on to describe their organization within the partitive and subsistence-settlement framework that Binford had proposed. The groundwork for this productive meeting of data and theory had been laid in 1960 to 1961 by Joseph Caldwell, who had encouraged Struever then to think about Hopewell in regional and broader terms rather than from the single-site, normative perspective that had dominated his Masters' work (Struever 1960) on the Kamp mound group in the lower Illinois valley (S. Struever, personal communication, 2003; see Dedication to Stuart Struever).[5] Buikstra also received her degree from Chicago,

and worked in conjunction with Struever in the lower Illinois valley, especially during the late 1960s and early 1970s, when he was actively writing about a functionally differentiated Havana Hopewellian cultural landscape. Buikstra (1976:44) used Struever's model as a foundation for her own regional, multisite analysis of the Havana Hopewell mortuary program and what it indicated about Havana social organization.

In contrast, Prufer received his doctoral training at Harvard, apart from and a few years earlier than the intellectual developments that occurred in Illinois. Prufer completed his doctoral dissertation in 1961, under Stephen Williams, within the normative approach. His dissertation reviewed the material culture of Ohio Hopewell in detail, with interpretation focused on chronology, extra-Ohio Hopewellian connections, and relations to Mesoamerica, Adena, the Mississippian Southern Cult, and historic tribes. Prufer's vacant ceremonial center–dispersed agricultural hamlet model was not an aspect of his dissertation. The model was published (Prufer 1964) in the same year as Binford's ideas on partitive culture and subsistence-settlement systems, which historically did not give Prufer the opportunity to work through his model in these terms. Thereafter, Greber, Dancey, and Pacheco each followed Prufer's lead. They did not use or cite the ideas in Binford's (1964a), Buikstra's (1976), or Struever's (1968a, 1972), publications or revisit Prufer's normative assumption of a functionally undifferentiated, Ohio Hopewellian ritual landscape.

A New Model of Scioto Hopewellian Communities, Ritual Landscapes, and Mortuary Programs

Building on the anthropological theory and previous ideas about Ohio Hopewell just summarized, Ruby et al. (Chapter 4) and Carr (Chapter 7) reanalyze the Hopewellian archaeological record in the Scioto valley–Paint Creek area of Ohio and, together, present a new picture of the organization of communities in that region, their ritual landscapes, and their mortuary programs. The authors' reconstruction answers the seven questions raised at the beginning of this section. (1) Scioto Hopewell earthwork–mound ceremonial centers were differentiated into no fewer than four kinds that had different ritual functions, at least most of which were used in a single time plane in some areas. (2) Multiple kinds of earthwork and mound centers were used by a single local symbolic community. (3) Some ceremonial centers in the Scioto area clearly served a large, sustainable community comprised of multiple local symbolic communities, while other centers may have served single local symbolic communities, alone. (4) At least one ceremonial center, and perhaps others, simultaneously served primarily one local symbolic community and multiple, other local symbolic communities that were a part of a broader sustainable community. (5) Different segments of a local symbolic community were buried in different, specialized cemeteries. (6) Members of multiple, local symbolic communities within a broader sustainable community were buried together in one to several cemeteries, depending on the time plane. (7) Not all members of such jointly burying, local symbolic communities were interred together. The evidence for each of these propositions is presented in detail in Chapter 4 or 7, and is summarized and brought together here.

Functional Differentiation of Earthworks and Mounds

This section addresses the most basic issue of whether Hopewellian ritual landscapes were differentiated as far as where various ritual activities occurred. Of the seven questions raised earlier, focus is placed primarily on whether ceremonial centers were differentiated in their ritual functions (Question 1), whether centers were differentiated into ones that served local symbolic communities and others that served larger sustainable communities (Question 3), and whether different social segments of a local symbolic community were buried in different, specialized cemeteries (Question 5). The issue of whether single, local symbolic communities used multiple kinds of earthworks at a time (Question 2) is interwoven in the discussions presented here but explicitly evaluated empirically in the next section.

No fewer than eight lines of evidence indicate that Hopewellian mounds and earthworks in the Scioto–Paint Creek area were of varied functions. Each form of evidence is now reviewed.

Formal and Locational Diversity. The differentiation of earthworks and mounds in their ritual functions is indicated directly by the great diversity of mound and earthwork forms, sizes, and locations. These kinds of variations could imply differences in the layout and purposes of rituals, the numbers of individuals who built and gathered at these sites, and their social roles and group affiliations. The variations include: small conical mounds, larger loaf-shaped mounds, and platform mounds, each occurring within and away from enclosures; effigy mounds; mounds and earthworks in valley trenches and upland settings; earthwork enclosures with and without burial mounds; and geometric earthworks with one, two, and three parts. This formal diversity is much greater than the three categories of ritual Hopewellian sites found in Illinois, which have clearly been documented to have varied in function, and suggests at least some functional differentiation of Scioto Hopewell ritual sites.

The formal and locational diversity of Scioto Hopewellian earthen constructions might be attributed to differences in the ritual and other functions of sites within and among local symbolic communities, or to variation in functions or earthen architectural style through time. For example, in the past, Prufer (1961a, 1964a:49, 66–70, 1964b:97–102) held that all hilltop enclosures were very late in time and served as defensive refuges during a period of unrest at the end of the Middle Woodland period, in contrast to lowland earthworks that were used in earlier, more peaceful times. Now it is known chronometrically that hilltop and lowland earthworks were sometimes coeval and that some hilltop enclosures probably varied between ceremonial and defensive functions over their life history (Riordan 1995, 1996, 1998).

At least two examples of contemporaneous variation in the forms and functions of earthen constructions that neighbor each other and probably fell within a single, local symbolic community can be cited for the Scioto–Paint Creek area. One is the contrast between the Mound City and the Hopeton earthworks. These were coeval, as new radiocarbon dates show (Ruby et al., Chapter 4), and adjacent to each other, on opposite sides of the Scioto river. Mound City is a one-part, subrectangular earthwork that was tightly packed with 24 conical or elongated burial mounds. Hopeton is a two-part, square-and-circle earthwork with a long causeway to the Scioto river flood plain. The work is almost completely void of construction within it, save two modestly sized, oval-shape mounds and one or two very small ones within the square (Squire and Davis 1848:52).[6] The pairing of these two sites and the contrasts between them suggest a differentiated ritual system that had mortuary and nonmortuary elements and that involved two different ceremonial grounds within a single, local symbolic community.[7]

The pattern of neighboring earthworks that varied ritually in whether or not they emphasized burial is repeated in the three earthworks of Seip, Baum, and Spruce Hill, all within a few kilometers of each other in Paint Creek. Seip is a lowland tripartite earthwork with 2 large loaf-shaped mounds that covered charnel houses and 16 smaller mounds, at least some of which were for burial. Baum is also a lowland, tripartite earthwork, but contained no burial mounds, only architectural mounds at the gate openings of its square enclosure. Spruce Hill is a very large embankment on a precipitous hilltop that overlooks Paint Creek, and has revealed no evidence of human remains, mounded or unmounded, and only low densities of Hopewellian diagnostics restricted to its gateways. Like numerous other Ohio Hopewellian hilltop enclosures, it is characterized by much burned, fused, or glazed rock and vitrified soils, which occur along its walls and would have required temperatures in excess of 1,100°C to produce (Ruby 1997b; Ruby et al., Chapter 4: Specialized Activity Areas). Evidence of such intense burning along the walls of lowland earthworks is unknown, save occasional burned soil and wood charcoal deposits, as at the sites of Hopeton (Ruby 1997b) and Hopewell (Pederson and Burks 2000), and suggests the distinctive function of Spruce Hill.

Although the contemporaneity of all three earthworks cannot be demonstrated chronometrically, the simultaneous use of at least Seip and Baum is strongly implied by the occurrence of two other pairings of functionally differentiated earthworks in the region that are also tripartite in form or have tripartite conjoined mounds. The additional pairs are Liberty and Works East in the Scioto valley, and Frankfort (Old Town) and Hopewell in the North Fork of Paint Creek. Liberty and Works East specifically reproduce the pattern at Seip and Baum in having, respectively, a major burial mound and only architectural, gatekeeping mounds. The similarities among the three pairs of sites are most easily explained as the product of a ritual system that involved spatially distinct ceremonial sites and that was practiced at once in three different valleys. Further, contemporaneity among various members of these three pairs of sites is documented. The charnel house floors under Seip's Pricer mound and Liberty's Edwin Harness mound are reasonably well demonstrated to have been coeval by suites of radiocarbon dates from the mounds (Greber 1983, 2003). Contemporaneity of the charnel house under Seip–Pricer and the charnel floor of Hopewell's Mound 25 is less well established chronometrically but is strongly implied by the occurrence of a rare, elite artifact class (copper nostril inserts), a rare mortuary practice (pearl-lined graves), and an extraordinarily large and similarly sized copper celt at both the sites (Carr Chapter 7). These and a variety of other kinds of evidence are used by Carr, (Chapter 7) to argue that all six earthworks were interrelated in the same time plane: each pair of earthworks as functionally differentiated ritual sites of a single local symbolic community, and all of the pairs of sites and their local symbolic communities through a three-way alliance that involved the communities burying their dead together in certain mounds. Thus, earthworks that were differentiated in their ritual function on a single time plane are evident.

When the requirement of demonstrated site contemporaneity is loosened, three kinds of earthworks that functionally complemented ones that held burial mounds can be cited for the Scioto–Paint Creek area: hilltop enclosures with open interiors (e.g., Spruce Hill), lowland enclosures lacking mounds or having few of them (e.g., Baum, Works East, Hopeton), and lowland enclosures with flat-topped mounds that appear to have served as stages for performance. The latter are exemplified by the Cedar Banks site, a singular square earthwork with one flat-topped mound inside it. Cedar Banks is only 2.5 kilometers upstream from the Mound City enclosure, which was full of burial mounds, and the Hopeton enclosure, which was not, and may represent another kind of ritual site used by the local symbolic community that gathered at Mound City and Hopeton. Between Hopeton and Cedar Banks is another flat-topped mound that may have been a part of this complex of sites: the Ginther mound. It was not enclosed, but was accompanied by a nearby, empty embankment-and-ditch circle. Ginther was fully excavated and found to contain no burials or artifact deposits.

In sum, Scioto Hopewell earthwork–mound ceremonial centers were differentiated into no fewer than four kinds that varied in ritual function: lowland earthen enclosures with burial mounds, lowland enclosures with flat-topped mounds, lowland enclosures with only or primarily open space, and a hilltop fort with open space. It is likely that at least some, single, local symbolic communities in the Scioto–Paint Creek area minimally used three or four of these different kinds of ritual sites at once. Isolated burial mounds or clusters of burial mounds without enclosures and an isolated flat-topped mound are variants that possibly reflect simply the shorter life history of these sites, for which surrounding embankments were not built. The minimally three or four-part spatial ceremonial organization of Hopewellian local symbolic communities in the Scioto–Paint Creek area is more complex than the dichotomous, bluff-crest and flood plain organization of Hopewellian local symbolic communities in the lower Illinois valley. This finding is not unreasonable, given the total picture of differences between the Havana and the Scioto Hopewell material records in their scale and complexity (e.g.,. J. A. Brown 1981; Struever 1965).

Earthwork Orientation. Differences in the ritual functions of earthworks in the Scioto–Paint

Creek area are evident in differences in their orientation as well as their form and location. Among Native Americans of the historic Woodlands, public community rituals, smaller client-oriented rituals performed by medicine persons, and magical rites used by individuals to control events in everyday life were each commonly choreographed spatially and expressed symbolically by reference to directions (Eagle Feather 1978:87–92; Hudson 1976:229, 318–319, 342, 346, 353; Mails 1978:98–99, 1979:57–58, 80, 97–98, 120, 127–130, 1991:48, 52–54, 58–60; Nabokov and Easton 1989:40; Swanton 1931:11). Cardinal, semicardinal, solstice, equinox, other astronomical, and geographically determined directions are among those that were used. Different directions were associated with different meanings and thereby useful in different rituals that varied in goal. The significance of the cardinal and semicardinal directions in Ohio Hopewell and earlier Adena cosmologies has been well demonstrated with evidence from artifacts and the internal layout of mortuary sites (Carr 1998, 1999b, 2000a; Carr and Case 1996). In the context of these historic and Woodland Period beliefs and practices, patterned differences in the orientations of earthworks in the Scioto–Paint Creek area, as places of ritual performance, would not be unexpected, and would suggest that they were differentiated in the kinds of rituals and the goals of the rituals enacted at them.

Romain (Appendix 3.1; 2000, 2004) has recently compiled the most complete suite of information on the orientation of various geometric earthwork features in the Scioto–Paint Creek area using state-of-the-art surveying equipment, a full array of aerial photographs, records of previous surveys, and statistical evaluation procedures. The empirical results of his work are provided in this book as yet another example of recently compiled, large data sets that, through their breadth and depth, are shifting our perspectives and understandings of Hopewellian material records.

Romain's survey information reveals several robustly defined patterns in the orientation of earthworks in the Scioto drainage. (1) Most frequent, and found within a limited geographic area around the confluence of Paint Creek and the Scioto river, is the orientation of one of the diagonals of the square element of certain earthworks to either of two similar, though distinguishable, directions: the summer solstice sunset or winter solstice sunrise. This I call Pattern 1. Summer solstice sunset alignment is found at Mound City and Hopeton near the confluence of Paint Creek and the Scioto river, and at Anderson in the North Fork of Paint Creek valley. Winter solstice sunrise alignment occurs at Hopewell in the North Fork of Paint Creek valley and at Seip in the main Paint Creek valley. The orientation of one of the diagonals of the Cedar Banks Work, just north of Mound City and Hopeton, falls within two to six degrees of the orientations of the previous five sites, depending on the site,[8] which may be culturally significant.

Both the orientation and the aspect of earthwork geometry employed in orientation tie all of these earthworks together nicely. (2) In contrast, within this same area, the orientations of the diagonals of the squares of Liberty, Baum, and apparently Frankfort and Works East, are each distinct from Pattern 1 and from each other. The diagonal of Liberty's square aligns to the equinox. That of Baum is certainly different from Pattern 1 as well as from the equinox. Romain concludes that the major axis of the square through its sides, rather than an orientation involving a diagonal, orients to winter solstice sunset. His data also show that the diagonal is almost as close in alignment to the summer solstice sunrise as it is to winter solstice sunset. These two orientations are a mirror to Pattern 1. The alignments of the squares at Frankfort and Works East cannot be specifically determined at this time, for lack of evidence of them on the ground. However, Squire and Davis's (1848) maps of the two works show that the diagonals of their squares are oriented very differently from each other and from the summer solstice sunset/winter solstice sunrise alignments found at Mound City, Hopeton, Hopewell, Anderson, and Seip, the approximation of this at Cedar Banks, the mirror orientation of Baum, and the equinox orientation of Liberty.[9] The High Bank squarish "octagon" is oriented yet differently. One of its diagonals falls about 8 degrees from the direction of a diagonal of Baum's square, according to Romain's maps. In addition, Romain finds

the minor axis of the octagon through its sides to align to the moon's maximum north rise—an orientation otherwise unknown in the central Scioto valley. (3) The Circleville work, north of the Scioto–Paint Creek confluence by about 37 kilometers, is shown by Squire and Davis (1848) to have one of the diagonals of its square oriented within several degrees of the major axis of the square of Baum through its sides and the parallel walls at Hopeton. Both of the latter are oriented to the winter solstice sunset. (4) Geographically peripheral to the earthworks around the Scioto–Paint Creek confluence, to the north and south of them, are two that have a diamond or subdiamond shape: Dunlap and Tremper, respectively. Their orientations from side to side, as well as the elongated zoomorphic mound within the Tremper work, are within a degree or so of each other according to the maps of Squire and Davis (1848) and Mills (1916), and their major axes from corner to corner fall within about 7 degrees of each other. Both sets of alignments differ from any of the above ones.

In all, repetition in the above-listed orientations imply an intentionality on the part of those who constructed the earthworks, while differences among repetitions possibly suggest the different symbolic loadings of the earthworks and the varying ritual functions they served. In particular, earthworks of differing orientation might have differed in their seasons of use (summer, winter, fall–spring) and the kinds of ceremonies tied to the cycles of nature and farming, as well as in their association with light (sunrise, summer) or darkness (sunset, winter). The duality of light and darkness is a fundamental theme in Hopewellian art generally (Carr 1998; Carr and Case 1996; Greber and Ruhl 1989:275–284).

The observed variability in earthwork orientation can be ordered within a tentative temporal and community perspective. In this framework, ritual differentiation of earthworks within local symbolic communities in the Scioto–Paint Creek area began with formal distinctions, alone, and proceeded to include contrasts in orientation. Specifically, Mound City and Hopeton belong to an early Hopewellian time plane and were coeval. The two earthworks are adjacent to each other and most likely fell within a single, local symbolic community in the Scioto valley (see above). Both share in the orientation of their square embankments and were functionally differentiated only in their form: Mound City having one part and being subsquare in shape and Hopeton having two parts, including a square. The single-square Anderson earthwork in the North Fork of Paint Creek has an alignment like that of Mound City and Hopeton, is very similar in size to the single-subsquare Mound City, and possibly dates to a similar, early time.[10] In the Scioto–Paint Creek area, the ancestral orientation established with Mound City and Hopeton, and perhaps Anderson, was continued later in time during a middle era when the two-part Hopewell earthwork was built, and yet later in time when the three-part Seip earthwork was constructed. However, within each of three local symbolic communities that seem to have existed during this later time plane—in Paint Creek, its North Fork, and adjacent sections of the Scioto valley (see Carr, Chapter 7)—were also built other tripartite earthworks that had squares with different orientations and that served as functional complements to earthworks built in the more ancient tradition of orientation in those valleys. Specifically, Frankfort was built and complemented Hopewell in the North Fork of Paint Creek, Baum was built and complemented Seip in main Paint Creek, and Liberty and Works East in the adjacent Scioto valley were each constructed in new directions different from the traditional and from each other. Thus, each of the three local symbolic communities in the three valleys came to have within it a pairs of earthworks that was differentiated ritually, which was expressed in both their orientation and their formal qualities (see above). This complex, late pattern contrasted with the simpler, ancestral one in which earthworks were distinguished functionally only by form. In addition, Frankfort, Baum, Liberty, and Works East each differ in orientation from one another, as best as can be told, which gave each of the three local symbolic communities their own ritual specializations. The ritual complementarity of the three communities' earthworks could have been a means for creating interdependence among them and integrating them in alliance (see Carr, Chapter 7).

Elsewhere along the Scioto valley, this developmental sequence did not occur. Earthworks were constructed with other orientations, and local symbolic communities were marked by only one earthwork rather than two complementary works. The Tremper earthwork, which was probably the earliest of Hopewellian enclosures in the Scioto valley (Carr et al., Chapter 13; Greber 2003; Prufer 1961, 1964a; Ruhl 1996; Ruhl and Seeman 1998) and far south of the Scioto–Paint Creek area, was an isolated earthwork and was aligned differently from any of the earthworks in the Scioto–Paint Creek area. The Dunlap work, which lay at the north end of the cluster of earthworks around the Scioto–Paint Creek confluence, also was aligned differently from any in that area. Its one-part morphology and its alignment, which are similar to Tremper's, may place it on a very early time plane like Tremper. The nature of these two works suggests a somewhat different and simpler ritual system than that which originated and evolved in the immediate Scioto–Paint Creek area, and perhaps one that was ancestral to it.

In sum, data on the orientation of earthworks in the Scioto drainage minimally suggest differences among them in their ritual functions. Changes in ritual function over time certainly account for some of the noted variation in orientation. Functional differentiation of earthworks within local symbolic communities and among them are also very likely causes of alignment variation.

Adena Roots. A third line of evidence suggesting the ritual differentiation of earthworks in the Scioto–Paint Creek area is the precedence for this pattern found in earlier Adena societies of Ohio and Kentucky. Adena ritual landscapes had at least five ritual architectural elements: (1) small circular earthen enclosures, usually with interior ditches, i.e., "sacred circles"; (2) large, free-form to oval earthen enclosures with exterior ditches; (3) burial mounds; (4) circular wooden charnel houses; and (5) circular wooden screens. The two kinds of earthen enclosures were segregated spatially from each other, while the small enclosures, mounds, screens, and charnel houses were built in various combinations, yielding in total a minimum of three kinds of ritual sites in the Ohio–Kentucky area (Clay 1987). The large oval enclosures are interpreted by Clay as having been used for acquiring raw materials within and surrounding them (clay and galena in the case of Peter village), whereas sacred circles, burial mounds, charnel houses, and screens served mortuary or nonmortuary ceremonial functions, or both.

To the extent that Adena ritual landscapes were functionally differentiated, one would suspect that later and partially derivative Scioto Hopewellian ones might be as well. The diverse forms, locations, and orientations of Scioto Hopewellian earthworks corroborate this suspicion.

At least two specific forms of site differentiation within Adena ritual landscapes may have provided foundations for site differentiation in later Scioto Hopewellian ritual land use. First is the Adena construction of earthen enclosures with and without burial mounds, evident in small circles that sometimes have a burial mound within them and sometimes do not, and in large oval enclosures without burial mounds and small circles within them. All three kinds of sites occur in the Scioto–Paint Creek area and neighboring areas (e.g., Clay 1987:48; Webb and Snow 1974:16). This ritual program seems to have had continuity in the very early, paired Scioto Hopewell earthworks of Mound City and Hopeton, and is found in the later Middle Woodland earthwork pairs of Seip and Baum and of Liberty and Works East. These paired Hopewellian earthworks have and lack mounds, respectively.

The second kind of differentiation within Adena ritual landscapes that extends into Hopewellian ones in the Scioto–Paint Creek area is the distinction between ceremonial centers that served small populations and those that served larger ones. Adena sacred circles vary in diameter from a few tens of feet to over 500 feet, or 4.5 acres (Webb and Snow 1974:31), and have the potential to have held ceremonial gatherings of very different sizes. The contrast between large oval enclosures and smaller circular ones is greater in these regards. The Shriver earthwork just south of Mound City and attributed Adena affiliation by Clay (1987:48) is 28 acres.

The Peter earthwork in Kentucky contains 25 acres. In addition, some Adena mounds and/or sacred circles occur in isolation or groups of a few, whereas other mounds and/or sacred circles occur in large clusters (e.g., the Junction group of 4 sacred circles, 3 crescents, 2 squares, and 4 mounds and the Chillicothe Northwest group of 12+ mounds and 2 sacred circle [Greber 1997:7; Squire and Davis 1848:plate XXII]). It is reasonable to infer that these site size variations represent social units that ranged from a single residential community to one local symbolic community or perhaps multiple ones that comprised a sustainable community.[11] The infrequency and widely spaced distribution over the Ohio–Kentucky area of large oval earthworks and large clusters of mounds and/or sacred circles (Clay 1987:48) compared to the commonality of small circles isolated or in small numbers support this conclusion. The differentiation of Adena ritual sites into those used by small portions of a local symbolic community and those used by a whole one or a larger, sustainable community is repeated in distinctions among Hopewellian ceremonial centers in the Scioto–Paint Creek area. Hopewellian centers range widely in size, number of mounds, and total burial populations, and in best estimates of the numbers of persons who gathered at them and made offerings to the deceased or who contributed to ceremonial deposits (see below and Carr et al., Chapter 13). In light of the various forms of differentiation of Adena ritual sites and the apparent continuities found between them and Hopewellian ceremonial centers in the Scioto–Paint Creek area, the functional differentiation of Hopewellian centers seems a very reasonable conclusion.

Age and Sex Distributions of Individuals Buried in Mounds. The questions of whether Scioto-Hopewellian earthworks and mounds differed in the social segments interred in them, and whether some were used to bury single, local symbolic communities, whereas others were used to bury broader, sustainable communities are answered by five kinds of evidence presented in Chapter 7 by Carr and Chapter 13 by Carr et al. The data include the age and sex distributions of burial populations, the treatment of corpses in mounds, the spectra of social roles represented in burial populations, the sizes of burial populations, and the intrasite spatial patterning among burials.

Information on age and sex distributions of persons buried in the Hopewell and Seip earthworks suggests that these ceremonial centers were distinct in function. The Hopewell burial population is highly biased toward adult males. The large Mounds 25 and 23 have very low percentages (2%) of subadults, and 11 of 15 smaller excavated mounds completely lack subadults. This compares to the 25% to 50% subadult population that might be expected in a horticultural–hunting–gathering society (Weiss 1973). Males outnumber females 12 to 8 in Mound 25, 6 to 4 in Mound 23, and 8 to 6 in five smaller mounds with sex information. In contrast, the age distribution of burials in the Seip–Pricer mound—the only one within the Seip earthwork for which data are available—largely corresponds to expectation, with 29% subadults. An exception is the underrepresentation of infants, which is common crossculturally. The sex distribution of individuals buried in Seip–Pricer is not significantly different from a balanced one (Konigsberg 1985).

When this demographic information is combined with the facts that the Hopewell site stands out relative to all other Scioto valley ceremonial centers in its total mound volume, the total amounts and diversity of fancy finished artifacts and exotic materials, the quality of certain kinds of crafted items, and the percentages of burials with artifacts indicating leadership or other prestigious roles of all kinds, it is clear that Hopewell was a special burial place reserved largely for those of importance: persons who had lived long enough to accumulate prestige or to demonstrate their inherited prestige. The male bias at Hopewell accords with the ethnohistoric Algonkian pattern for males to have occupied most positions of leadership. Seip–Pricer, on the other hand, demonstrates a much broader social spectrum, though still one biased toward persons who held leadership or other important roles (see below). In a regional perspective, Carr (Chapter 7) concludes that Hopewell was a specialized, largely elite burial site used by three allied, local symbolic communities in three neighboring

valleys, and stood in contrast to other earthworks (Seip, Liberty, Frankfort) in these valleys where proportionally more commoners were interred.

Treatment of Corpses Buried in Mounds. The specialization of the Hopewell site as a burial ground for primarily leaders and other important persons, relative to other earthworks of a similar time plane in the Scioto–Paint Creek area, is also seen in the kinds of treatment given to corpses in these sites. In the Scioto–Paint Creek area, from the middle to later Middle Woodland, as represented by the Hopewell, Seip, and Ater sites, individuals who were inhumed usually had higher prestige and more commonly were leaders of a kind than individuals who were cremated (Carr, Chapter 7; Greber 1979a:44, 51), by several material criteria. Significantly, the proportion of individuals who were inhumed rather than cremated in the Hopewell site far outweighs the proportions at Seip and Liberty, suggesting the more elite orientation of the cemeteries at Hopewell, and the functional differentiation of Hopewell from Seip and Liberty. At Hopewell 75% of the persons buried under Mound 25 were inhumed and in Mound 23, over 90% were, while at Seip, only 9% and 10% were inhumed, respectively, under the Pricer and Conjoined Mounds, and at Liberty, only 6% were inhumed under the Edwin Harness Mound.

Social Roles of Individuals Buried in Mounds. Further evidence of the differentiation of Scioto Hopewellian cemeteries in the social segments interred in them is found in the social roles of buried individuals. In Chapter 7, Carr reconstructs from a variety of kinds of evidence that copper headplates signified leadership over a local symbolic community or other large social unit. At the Hopewell site, 6% of all reported burials had headplates, and 8% of the burials in Mound 25 had them. In contrast, only 0.8% of the burials in the Seip–Pricer mound had headplates and none in the Edwin Harness mound had them. These differences reinforce the conclusion that Hopewell was a preferred place of burial for leaders.

Metallic breastplates and earspools are inferred by Carr to have marked membership or achievement within prestigious sodalities that spanned multiple, local symbolic communities. These were found in both Hopewell Mound 25 and the Seip–Pricer mound in about 35% of their burials—a much larger proportion of prestigious sodality members than one would expect if each mound had been the burial ground of a complete, local symbolic community. The result implies that a good proportion of common persons from the communities who used these mounds were buried or disposed of elsewhere, that is, that Scioto Hopewellian mortuary areas were differentiated in the social segments processed at them. Prufer (1964a:74) came to a similar conclusion.[12]

Sizes of Burial Populations. Scioto Hopewellian mounds and earthworks were functionally differentiated not only in the social segments buried in them, but also in whether they were the burial places for members of a single residential community, for representatives of a local symbolic community, or for representatives of a broader, sustainable community. This contrast is evident in large variations in the size of burial populations among sites, and in best estimates of the numbers of persons who gathered at them and made offerings to the deceased or who contributed to ceremonial deposits. Both kinds of information are assembled in Chapter 13 (Tables 13.1 and 13.11). Focusing on the immediate Scioto–Paint Creek area and a middle to late Hopewell time plane (Prufer 1964a:49; Ruhl, Chapter 19, 1992, 1996) reveals large earthworks with large loaf-shaped mounds that covered big charnel houses, each with approximately 100 to 200 individuals, and much smaller, isolated mounds that contained 1 to 12 individuals. The minimum numbers of persons who gathered at the large charnel houses, which can be determined from the number of gifts given to the deceased or placed in ceremonial deposits, fall in the 160 to 600 range. In contrast, gatherings at the small, isolated mounds were much smaller, in the 4 to 17-person range.[13] The numbers of people who were buried in and/or gathered at the large, loaf-shaped mounds are great enough to have constituted a local symbolic community or a wider, sustainable

community. The smaller, isolated mounds appear to represent very small local groups—a minor segment of a local symbolic community or perhaps a residential community (hamlet). Additionally, those buried in the small mounds seem to have commonly been higher-prestige representatives of such local groups, given their burial by inhumation, association at times with copper celts, breastplates, or earspools, and the occurrence of burials with these artifacts in frequencies similar to those found in the larger, loaf-shaped mounds (see Note 12).

Intrasite Spatial Patterning among Burials. The identification of those buried in the big charnel houses as the deceased from local symbolic communities or large sustainable communities, based on charnel house population sizes, agrees with a more particular interpretation made by Carr in Chapter 7. There, he argues that those buried in each of the charnel houses under the Hopewell 25, Seip–Pricer, and Edwin Harness mounds were representatives from three allied, local symbolic communities in three adjacent river valleys, i.e., a sustainable community. The reconstruction of the alliance rests on the observation that within each of these charnel houses are three clusters of burials that each have the mortuary signatures of a local symbolic community rather than other sociocultural units. In particular, at Hopewell and Seip–Pricer, where information on the spatial distributions of artifacts is available, each cluster had persons of a range of prestige levels and roles, as one would expect in a cross section of a community, including leaders of one to several kinds, as well as persons without grave goods. Each cluster also had sodality members marked by breastplates and/or earspools. At Seip–Pricer, where adequate age–sex information is available, two of the burial clusters had normal age distributions and all three had adults, subadults, and both sexes. In addition, at both mounds, the frequency of indicators of prestige in the burial clusters correlated with the number of burials in clusters. This inverse pyramidal distribution of prestige is what one would expect of a set of local symbolic communities: larger communities with bigger labor pools for organizing public efforts, acquiring material resources, and developing prestige were able to achieve more prestige. Further, the spatial segregation of the burial clusters, yet their unification under a single mound, would have been a natural and easily visualized symbol of communities separated in space over a region, but within a circle of cooperation. Finally, the concept of different local symbolic communities burying their dead within one charnel house fits well within a widespread, historic Eastern Woodland metaphor between domestic dwellings, on the one hand, and villages, tribal segments, ceremonial buildings, and/or mounds, on the other. These equivalences were used ethnohistorically to foster the familylike ties and cooperation one would find in a household at a broader social scale. In the case of each of Hopewell Mound 25 and the Seip–Pricer and Edwin Harness mounds, the burial of dead from three different local symbolic communities together within a charnel house and under a single mound would have symbolized a three-way alliance among the communities. Thus, there is ample evidence in the wide range of sizes of burial populations in large and small mounds, and in the spatial organization of burials and their attributes within the large mounds, that mounds in the Scioto–Paint Creek area were functionally differentiated between those that were burial places for representatives of a single residential community or a small segment of a local symbolic community, and those that were cemeteries for representatives of multiple local symbolic communities within a broader, sustainable community.[14]

In conclusion, corroborating data of a diversity of kinds and spatial scales indicate that, in the Scioto–Paint Creek area, ceremonial centers were differentiated in their ritual functions, in whether they served a single local symbolic community or a larger sustainable community. They also were distinguished in the particular social segments that were buried at them and in whether they were burial places for representatives of a small social unit like a single residential community or a portion of a local symbolic community, or cemeteries for representatives of multiple local symbolic communities within a wider sustainable community.

Multiple Ceremonial Centers within Single Local Symbolic Communities

In the above discussion of how Scioto Hopewellian earthworks and mounds were differentiated in their ritual functions, the very basic issue of whether local symbolic communities were organized around a single ceremonial center of a generalized nature or around multiple, functionally differentiated ceremonial centers (Question 2) was broached but not evaluated explicitly. This section summarizes several lines of evidence and argumentation that some Scioto Hopewellian local symbolic communities did use multiple, functionally differentiated ceremonial centers. Most of these modes of evaluation are laid out by Ruby et al. in Chapter 4.

Ceremonial Centers Are Too Close. The strongest argument that local symbolic communities in the Scioto–Paint Creek area used multiple earthwork ceremonial centers is that contemporaneous earthworks there are simply too close to each other to have each served as the focus of its own local symbolic community. Ruby et al. show this by comparing, in several ways, the distances between Scioto Hopewellian earthwork centers known or likely to have been contemporaneous to the catchment sizes of local symbolic communities that are expectable from both cross-cultural studies and some well documented Hopewellian communities elsewhere in Ohio. First, cross-cultural studies of recent swidden agriculturalists, who would be good economic analogs to Scioto Hopewell peoples (Wymer 1996, 1997), show that their exploitation catchments regularly are three to five kilometers in radius, with a maximum travel of seven to eight kilometers from a residential center. Agreeably, two well-surveyed Hopewellian local symbolic communities in the central Muskingum (Pacheco 1989, 1993, 1996) were found to have had radii of 3 and 5.5 kilometers. In these Muskingum cases, if an earthwork stood near the center of a local symbolic community, the earthworks of adjacent communities of replicated sizes would lie at least 6 to 11 kilometers apart. In contrast to these expectable catchments and distances among the centers of local symbolic communities, the neighboring and functionally differentiated Mound City and Hopeton earthworks, which are well dated and were contemporaneous (see above), are less than 2.5 kilometers apart, have catchment radii of less than 1.2 kilometers, and are less than an hour's walk from each other. This short distance, as well as their similar orientation and complementary mortuary and primarily nonmortuary functions (see above), suggests that the two earthworks were a complementary pair within a single, local symbolic community.

Second, Ruby et al. measure the *n*th-order nearest neighbor distances among 10 Hopewellian earthworks in the Scioto–Paint Creek area that are reasonably inferred to have been at least partially contemporaneous by multiple criteria (Carr, Chapter 7; Greber 1983, 2003; Prufer 1961, 1964a; Ruhl 1966; Ruhl and Seeman 1998). Three distance modes are found. One mode, at two to four kilometers (one to two kilometer catchment radius), again suggests multiple earthworks within single, local symbolic communities. A second mode, at 8 to 10 kilometers (4 to 5 kilometer radius), suggests the distances between local symbolic communities by comparison to the ethnographic and archaeological analogs, while a third, at 16 to 18 kilometers (8 to 9 kilometer radius), seems to indicate the distances between broader, sustainable communities.

Third, the majority of the 10 earthworks are less than 4.5 kilometers, or an hour's walk, apart. When 5-km radius circular catchments of the estimated size of a local symbolic community are drawn around the sites, the catchments overlap extensively, implying multiple earthworks within single, local symbolic communities. The same holds true when the earthworks selected for scrutiny are limited to six in the Scioto-Paint Creek area that have tripartite symbolism (earthwork, mound, and/or charnel house forms) and that Carr (Chapter 7) reconstructs to have been the contemporaneous ritual sites of three neighboring local symbolic communities. In this rigorous case, the Seip and Baum earthworks in main Paint Creek valley, which differ in their orientations and mortuary versus nonmortuary functions, have overlapping catchments as one would expect of complementary sites within the same local symbolic community. The same is the case for the Liberty

and East Works in the Scioto valley, which differ in their orientations and mortuary versus nonmortuary functions. Likewise, in the North Fork valley, the Frankfort and Hopewell earthworks, which vary in their orientations and perhaps the social segments buried at them (see sections on Age and Sex Distributions, Treatment of Corpses, and Social Roles, above), have overlapping catchments as would be found for complementary sites within a single, local symbolic community. In addition, the three pairs of sites in the three river valleys are distant enough from each other that their catchments do not overlap. The total picture suggests three independent, local symbolic communities, each in its own valley and each having two, functionally differentiated ritual centers.

Supporting Areas. When a Thiessen polygon is constructed around each of the 10 likely contemporaneous earthworks, the territories allocated to the sites are highly variable: between 54 and 205 square kilometers. This variation in the supporting areas around the sites is not what one would expect for closely packed, independent, local symbolic communities, each with a single, central ceremonial site.

Labor Pools. Ruby et al. summarize a labor pool analysis by Bernardini (1999; see also refinements in Bernardini 2004), which complements their catchment studies. The analysis focuses on five of the six at least partially contemporaneous earthworks in the Scioto–Paint Creek area that have tripartite symbolism: Seip, Baum, Liberty, Works East, and Frankfort, but not Hopewell (see Carr, Chapter 7, for a summary of chronological evidence). The study estimates the minimum distances from these sites that persons would have had to have come to build them, assuming a reasonable population density of one person per square kilometer, maximum yearly work efforts, and the amount of work required to build each earthwork. The analysis robustly concludes that the labor pools required to build the earthworks would have overlapped extensively in space, implying that persons within a local area would have helped to build multiple earthworks during their lifetimes. Labor pools for the functionally complementary sites of Seip and Baum in main Paint Creek overlap almost completely, as do those of the functionally complementary sites of Liberty and East Works in the Scioto valley. The labor pools for the probably complementary sites of Frankfort and Hopewell in the North Fork valley also would have overlapped greatly, but Bernardini did not explicitly calculate the labor pool for Hopewell. In contrast, the labor pools for the sites in different valleys overlap mildly, approximately 15% to 25%. Together, these results suggest that a local symbolic community occupied each of the three river valleys (extensive labor-pool overlap within a valley), that each community had two, functionally differentiated ritual centers, and that the three communities cooperated to some extent with each other in the building of each other's earthworks (mild labor-pool overlap between valleys). The intervalley cooperative pattern, based on regional information, accords with Carr's (Chapter 7) conclusion, based on intrasite burial patterns, that the local symbolic communities in the three valleys were allied and comprised a wider sustainable community.

In summary, the very close distances between a good number of contemporaneous earthworks, variation in their surrounding support areas, and extensive overlap in their labor pools each suggest that some Scioto Hopewellian local symbolic communities were organized around multiple ceremonial centers.

Fabric Styles. Each of the above lines of evidence relates to major earthworks and the occurrence of multiple ones within single local symbolic communities. Some major earthwork centers also appear to have been complemented by smaller mound group ceremonial complexes, all within a single local symbolic community. An arguable example of this complementarity is the Seip earthwork and a neighboring complex of four burial mounds—the Rockhold site—within seven kilometers of each other in main Paint Creek valley. Whereas Seip had two large charnel houses, with 102 and 43 deceased persons under large, loaf-shaped mounds, and evidenced ceremonial gatherings of over 200 persons, the mounds at Rockhold had only 5 individuals

and evidenced ceremonial gatherings of only about 13 persons (Carr, Chapter 7; Carr et al., Chapter 13), probably from a small local group within the broader Seip community. The charnel houses at Seip and the mounds at Rockhold were roughly coeval by several chronological indicators (Greber 2000:92; Prufer 1964a:49; Ruhl 1992, 1996:91). Significantly, an analysis of the stylistic attributes of fabrics preserved in a number of sites in the Scioto–Paint Creek area (Maslowski and Carr 1995:328–339) showed Seip and Rockhold in main Paint Creek valley to share a local fabric style that was, in turn, distinctive from a second in the North Fork of Paint Creek and a third in the main Scioto valley. The three style zones in the three valleys correspond to three local symbolic communities defined with independent mortuary data (Carr, Chapter 7) and imply the use of multiple ceremonial centers—the large Seip earthwork with burial mounds and the much smaller Rockhold burial mound complex—by a single local symbolic community in main Paint Creek valley.

Ceremonial Centers That Served Multiple, Local Symbolic Communities

The question of whether multiple local symbolic communities gathered at single ceremonial centers, which is an aspect of Question 3, above, has been both explicitly and implicitly answered in the course of exploring the issues of functional differentiation of earthworks and multiple earthworks within single, local symbolic communities. These arguments are now assembled, along with a few additional ones specific to this question, as follows. First, intrasite spatial patterning of individuals and burial goods within the large charnel houses under the Seip–Pricer, Seip–Conjoined, Edwin Harness, and Hopewell 25 mounds indicate that three communities joined to bury representatives of their dead together within each of these charnel houses. Multiple lines of evidence triangulate on this conclusion (see above).

Second, the labor pools for building earthworks within three recognized local, symbolic communities in main Paint Creek valley (Seip, Baum), the North Fork of Paint Creek (Frankfort, Hopewell), and the adjacent Scioto valley (Liberty, Works East) were found to overlap somewhat. This indicates that individuals from multiple, local symbolic communities helped to build, and presumably used, each other's earthworks.

Third, burial population sizes of Hopewellian cemeteries in the Scioto–Paint Creek area, as well as estimates of the numbers of individuals who gathered and gave gifts to the deceased at these sites, vary widely. Small to medium-sized burial populations and gatherings are common, while large ones are rare. Both small local groups and much larger but rarer aggregations of multiple, small local groups are suggested by this variation. Specifically, in the cases of Tremper, Edwin Harness, Seip–Pricer, and Hopewell 25, burial population sizes and the sizes of the living social units that would have generated them fall within the lower to midranges of the minimal size of sustainable breeding populations (175–475 individuals [Konigsberg 1985; Wobst 1974]). These numbers could indicate use of the sites by multiple local symbolic communities that comprised a broader, sustainable breeding population and sustainable community. At Hopewell, Mound City, and Tremper, minimal estimates of the numbers of persons who gathered at a time and gave gifts to the deceased fall within the minimal size of sustainable breeding populations in six instances of ceremonial gatherings, and at Hopewell 25, one ceremony exceeded this range (Carr et al., Chapter 13, Table 13.14). Because these estimates of gathering sizes are conservative minima, they probably do indicate gatherings of multiple, local symbolic communities at single sites.

Fourth, the wide variation found among Hopewellian ceremonial centers in their burial populations and gathering sizes is preceded temporally by a parallel variation from very small but common to very large but rare Adena ceremonial sites in the vicinity of southern Ohio. Especially telling is the contrast between ceremonial sites comprised of one or a few mounds or sacred circles and sites comprised of large numbers of these. This contrast suggests the integration of Adena peoples into local symbolic communities and wider, sustainable communities. Hopewellian community organization appears to have grown out of this foundation.

Fifth, the Hopewell site has a very high percentage of burials of leaders, and ceremonial gatherings there involved a very high percentage of persons who were leaders and gave gifts for burial (Carr et al., Chapter 13, Table 13.17). Because leaders in a local symbolic community would have been small in number and proportion, their high percentages at Hopewell suggest that multiple, local symbolic communities must have contributed to the burial population and to gift-giving there. The situation is similar, but somewhat less extreme, for the Seip–Pricer mound.

Sixth, Hopewellian earthworks in the Scioto–Paint Creek area that have tripartite symbolism and that arguably were built and used about the same time (Carr, Chapter 7), including Seip, Baum, Frankfort, Hopewell, Liberty, and East Works, differ almost fully from each other in their directional orientations. This is not what one would expect if each earthwork in the region was used by a single, local symbolic community, granting two reasonable assumptions: that such communities in the central Scioto area embraced one worldview and cosmology, which seems likely from their art (Carr 2000), and that earthwork orientation pertained to cosmological principles and ritual function (see above; also Romain 2000). Under these assumptions, earthworks of all the communities within the region should align alike, reflecting their similar beliefs and ceremonies. On the other hand, if multiple, local symbolic communities together built, oriented, and used multiple neighboring earthworks in order to represent different cosmological principles and to express them through varying kinds of ceremony, then the earthworks in the area might be aligned to different orientations. This is what is found, empirically. One would not expect the differently oriented earthworks in the Scioto–Paint Creek area to have each been built and used by only one local symbolic community that specialized in one set of ceremonies pertinent to only one portion of the regionally shared cosmology. Such hypothetical communities would have been cosmologically and spiritually incomplete and vulnerable.

The final, corroborating argument that multiple, local symbolic communities gathered at single ceremonial centers is the contrast in the Scioto–Paint Creek area between the clustered distribution of Hopewell mounds and mound groups and the dispersed distribution of earlier Adena mounds and mound groups (Seeman and Branch n.d.). Adena mounds and mound groups abound north and south of the Scioto–Paint Creek confluence, in small tributaries, along the main valley trenches on higher ground, and on the open till plain north of the confluence. Their dispersion can be taken as a model of the distribution of a suite of small, local residential groups who, individually or several together, built a mound or mound complex within the approximate vicinity of the territory or territories they exploited for subsistence (Clay 1991, 1992). In contrast, Hopewell mounds are very clustered, primarily within and immediately around a few earthwork centers near the Scioto–Paint Creek confluence. Compared to the dispersion of Adena mound sites, clustered Hopewell mounds and earthworks are too close together to each represent the lands of individual or a few local, residential groups. The pattern suggests, instead, use of the centers by multiple local groups from a broad area, if Hopewell mounds can be taken as equivalent to Adena mounds in the kinds and sizes of social groups they represent. This last assumption appears to be correct. Adena and Hopewell mounds have similar size ranges, and the largest of Hopewell mounds are on a par in their size with the largest of Adena mounds, implying similar labor efforts and sizes of the social groups that built them. In addition, Hopewell mounds are less numerous than Adena ones. For example, of mounds that are large by a size threshold and that occur in the Scioto–Paint Creek area, Seeman and Branch find that 51 are Adena and 11 are Hopewell. Both the spatial and the frequency information suggests a focusing of Hopewellian ritual in a smaller area and on a more select set of burial structures than Adena ritual and, thus, the use of Hopewellian mounds and ceremonial centers by multiple local social groups and more local social groups than in the Adena case. Also significant is a shift from the Adena peoples' building of predominantly mounds, which could symbolize local social units through the burial of their deceased in them, to Hopewellian peoples' more common building of earthen enclosures,

which in their impersonal nature had potential for symbolizing multiple, local social groups.

In all, both intrasite and regional archaeological data suggest that multiple local symbolic communities built and used the large ceremonial centers in the Scioto–Paint Creek area.

Ceremonial Centers That Served Both a Local Symbolic Community and a Broader Sustainable Community

Of the seven questions about community organization asked near the beginning of this section, all have been answered except whether some ceremonial centers simultaneously served one principal local symbolic community and multiple others that, with it, formed a sustainable community (Question 4). Good evidence for this situation is found at the Tremper site (Weets et al. Chapter 14). The charnel house under the Tremper mound had a very large burial population (375+ individuals) that could easily represent multiple, local symbolic communities and a demographically sustainable community. The cremated individuals were divided among four crematories. One held three-fourths of the cremated individuals, was at one end of the charnel building, and possibly represents persons from the local symbolic community centered on Tremper. The other three crematories held the remaining quarter of the individuals, were at the other end of the charnel building, and possibly were comprised of persons from three outlying, local symbolic communities. Smoking pipes within a ceremonial cache under the mound were chemically found to be traceable to four or more social groups that used geographically dispersed sources of pipestone or that had access to these through different social networks, probably indicating four or more local symbolic communities.

Three other earthworks that also may have served a principle, local symbolic community and others are Hopewell, Seip, and Liberty. Charnel houses under the large, loaf-shaped mounds at these sites each contained individuals from three local symbolic communities from three different valleys. Individuals from the different communities were separated from each other on the charnel house floors (Carr, Chapter 7), seemingly analogous to the situation at Tremper. In addition, at least the earthworks of Hopewell and Seip were both located midway up their respective valleys and probably near the center of the local symbolic communities in those valleys, rather than between communities. This situation suggests that the sites functioned to serve as a burial place primarily for the local symbolic community in which they were centered and secondarily for other local symbolic communities elsewhere. The burial clusters on each of the charnel house floors at these sites are quite unequal in the numbers of persons that they contain, but do not always indicate a primary local symbolic community and secondary ones as clearly as in the Tremper case.[15]

Conclusion

The vacant ceremonial center–dispersed agricultural hamlet model of Scioto Hopewellian community organization constructed by Prufer, and Dancey and Pacheco, over the past 40 years has served the Ohio archaeological community well in guiding fieldwork aimed at recovering habitation sites and subsistence remains and in documenting the domestic side of local Hopewellian societies (e.g., Dancey 1991; Pacheco 1996, 1997; Prufer et al. 1965; Wymer 1996, 1997). However, consideration of both regional and intrasite kinds of Scioto Hopewellian data in light of recent anthropological perspectives on community organization, the partitive nature of culture and societies, and insights into geographically differentiated burial programs suggests the need for a substantial revision of our picture of Scioto Hopewellian communities and ritual landscapes. The two most basic changes that are empirically required are these: (1) Multiple earthworks of differing functions were sometimes used by and were part of the same single, dispersed, local symbolic community. (2) Some singular earthworks were constructed and used by multiple local symbolic communities, in particular to bury their dead together and to hold joint ceremonies that fostered intercommunity cooperation and forged wider, sustainable communities.

These features of community organization contrast with the vacant ceremonial center–dispersed agricultural hamlet model, which envisions each local symbolic community as having used only one earthwork center, and each center as having been built and used by only one local symbolic community.

Within these broadest of revisions, seven features of Scioto Hopewellian communities can be specified, in response to the seven questions asked near the beginning of this section. First, Scioto Hopewellian ceremonial centers were differentiated in their ritual functions into multiple kinds: lowland earthen enclosures with burial mounds for primarily leaders and other persons of importance (e.g., Mound City, Hopewell), lowland earthen enclosures with burial mounds for a broader but still prestigious spectrum of persons (e.g., Seip, Liberty), a lowland enclosure with flat-topped mounds (Cedar Banks), lowland enclosures with only or primarily open space (e.g., Hopeton, Baum, Works East), a hilltop fort with open space (Spruce Hill), and small, isolated mounds or mound clusters without enclosures (e.g., Bourneville, McKenzie, Rockhold, Shilder, West).

Second, some local symbolic communities used no fewer than three of these kinds of ceremonial sites at once. The use of the Seip, Baum, Hopewell, and Liberty earthworks (and possibly Spruce Hill) by one local symbolic community in main Paint Creek valley, the use of Liberty, Works East, Hopewell, and Seip by another local symbolic community in the Scioto valley, and the use of Hopewell, Frankfort, Seip, and Liberty by another local symbolic community in the North Fork of Paint Creek valley are likely examples, considering the many lines of evidence presented by Ruby et al. (Chapter 4) and Carr (Chapter 7). It is probable that other, smaller, isolated mounds for the burial of important persons were also used by local segments of these communities—for example, Bourneville and Rockhold in main Paint Creek valley, which are approximately coeval with Seip there (Prufer 1964a:49; Ruhl 1992,1996:91).

Third, Scioto Hopewellian ceremonial centers were differentiated into ones that served only a single, local symbolic community, or a portion of it, and ones that served multiple local symbolic communities within a sustainable community. This contrast is evident in the great differences in burial populations and in sizes of ceremonial gatherings witnessed in earthworks with large, loaf-shaped burial mounds and big charnel houses compared to isolated, small mounds.

Fourth, some Scioto Hopewellian ceremonial centers simultaneously served one principal local symbolic community and multiple other local symbolic communities that, with it, formed a sustainable community. This circumstance is most easily recognized at the Tremper earthwork, where a large number of individuals were interred, where one spatial group of individuals was very large and three were considerably smaller, and where an artifact sourcing study suggests the use of the site by at least four different groups who directly or indirectly obtained pipestone from geographically dispersed localities. Other single earthworks that were used primarily by one local symbolic community and secondarily by others may also include Hopewell, Seip, and Liberty, each of which contained charnel houses with three segregated clusters of burials that appear to have represented discrete, local symbolic communities and that varied in their numbers of burials.

Fifth, some Scioto Hopewellian local symbolic communities buried different social segments in different cemeteries. One example is the specialization of the Hopewell site as a burial grounds for primarily leaders and other important persons, but not all persons, from local symbolic communities in main Paint Creek valley, North Fork valley, and the Scioto valley. A second example is the underrepresentation of persons of low prestige among those buried at the Seip earthworks and the burial of those persons elsewhere.

Sixth, multiple local symbolic communities within a wider sustainable community sometimes buried their dead together. The charnel houses within the Tremper, Hopewell, Seip, and Liberty earthworks each document this practice (Carr, Chapter 7; Weets et al., Chapter 14).

Seventh, not all members of such jointly burying, local symbolic communities were interred together. This situation is evident in the greatly imbalanced representation of local symbolic communities among the deceased at Tremper (see above), the small sizes of some of the burial clusters that represent local symbolic communities in the charnel houses under the Hopewell 25, Seip–Pricer, and Seip–Conjoined mounds (see Note 15), and the specialized function of the Hopewell site for the burial of elite from three local symbolic communities in main Paint Creek valley, North Fork valley, and the central Scioto valley.

Recognizing these complexities in the organization of Scioto Hopewellian local symbolic communities and their interrelationships, and bringing them into archaeological thinking, is absolutely essential if archaeologists are to proceed with accuracy in investigating more subtle anthropological topics, such as the social and political organizations of Scioto Hopewellian peoples and peer–polity interactions. For instance, knowing whether members of a local symbolic community (society) were buried together within single or multiple earthworks is necessary to archaeologically measure internal social complexity, intrasocietal and intersocietal biological diversity, community and society size, and intercommunity material exchange, genetic exchange, and stylistic interaction, and to reconstruct religious beliefs based on earthwork formal variation. If, for example, a single society used several different earthworks for burying their dead, and buried persons of different prestige in different earthworks, then assuming that each earthwork represented a whole and distinct society would erroneously give a picture of internal societal homogeneity and differences among societies in wealth and reputation. Seeing, alternatively, that the multiple earthworks were used by one society would give a picture of an internally complex society with social personae who differed in prestige, wealth, and/or rank. Linking rich burials at the Hopewell site to less spectacular ones at Seip and Liberty, rather than seeing these burial populations as representing three distinct communities, as they have been (e.g., Greber 1979; Greber and Ruhl 1989; Pacheco and Dancey n.d.), is a case in point.

A Scioto Valley Example of Hopewellian Communities

A richly detailed reconstruction of Scioto Hopewellian communities at multiple geographic scales and on one particular time plane is presented in Chapter 7 by Carr. The example illustrates the many and complex ways in which Scioto Hopewellian communities were organized internally and interrelated to each other within a ritual landscape, as enumerated in more general terms immediately above and in Chapter 4. Specific cultural mechanisms and metaphors for community integration, and the issue of built social identity, are discussed, bringing anthropological depth to the general model of Scioto Hopewellian communities.

Through mortuary analyses of five charnel houses spread across the Scioto–Paint Creek area, Carr identifies three, coeval, local symbolic communities in three interconnecting river valleys—main Paint Creek, the North Fork of Paint Creek, and the adjacent Scioto—and reveals that they buried some of their dead together in charnel houses in each other's homelands (see Intrasite Spatial Patterning among Burials, above, for the evidence). Each local symbolic community also is found to have encompassed at least two earthworks that were functionally complementary. In each of main Paint Creek valley and the Scioto valley, one earthwork had burial mounds and served minimally to hold mortuary rituals, while the second lacked burial mounds and was used for other, unknown purposes. In the North Fork valley, both earthworks had burial mounds and served as places for mortuary rituals, but one earthwork was predominated by or restricted to social leaders or other prestigious persons from each of the three local symbolic communities. The earthworks of each pair are too close to each other to have comprised the central ceremonial precincts of separate local symbolic communities (Ruby et al., Chapter 4), given the sizes of catchments of communities of swidden farmers crossculturally, estimates of Hopewellian community sizes in better surveyed

parts of Ohio (Pacheco 1989, 1993, 1996), and an analysis of the geographic size of labor pools necessary to build the earthworks (Bernardini 1999).

The analysis clearly illustrates six of the seven characteristics of Hopewellian local symbolic communities enumerated at the beginning of this section: their ceremonial centers were functionally differentiated; multiple centers of differing function were used by single local symbolic communities; some centers were used and probably built by multiple local symbolic communities; different segments of a local symbolic community were sometimes buried in different, specialized cemeteries; members of multiple local symbolic communities were sometimes buried together, in one to several cemeteries; and not all members of such jointly burying communities were interred together. The analysis does not examine whether the earthworks with charnel houses primarily served one local symbolic community and secondarily contained representatives of the other two communities, although this situation is possible (see Note 15), and is documented for one Scioto valley ceremonial center from an earlier time by Carr et al. in Chapter 14.

At the same time, the study goes deeper anthropologically than these generalizations, in several ways. First, it reveals a probable, explicit, cultural metaphor by which local symbolic communities, in general, can be interlinked. Through burying some of their dead together, the three communities wedded together their ancestors in an essentially permanent afterlife existence and, by implication, gave strong reason for the living members of those communities to uphold the principle of social unity they were attempting to construct. This metaphor was also used historically by Algonkian and Huron tribes to bind their localized social units together through their Feasts of the Dead (Heidenreich 1978:374–375; Hickerson 1960; Trigger 1969:106–112).

Second, the study indicates that the three, interlinked, local symbolic communities probably did not conceive of themselves as one integrated "society" or "tribe." The earthwork in which primarily leaders and prestigious persons from the three communities were buried was not located at the center of the space covered by the three communities, at the meeting point of their lands, which would have neatly symbolized the unity of the three. Instead, it was built in one of the river valleys of one of the communities—that which various evidence suggests was probably the wealthiest and demographically largest of the communities. The three communities appear to have been tied together through a negotiated alliance, rather than by social tradition. That this was the case is corroborated by a suite of data that indicate that the alliance broke apart after only a few generations; only the two wealthiest and largest of the local symbolic communities continued to bury there dead together afterward.

Similarly, the asymmetric positioning of the cemetery for primarily leaders and prestigious persons does not support the notion that the three local symbolic communities were structurally integrated through one or more strong, centralized leadership positions with multicommunity domains of power, instead of by negotiated alliance. Cross-culturally, in incipient kingdoms and chiefdoms, elite residences and/or burial grounds may be placed centrally within the polity and associated with the center of the cosmos, symbolizing the political and/or religious power of the polity's leader and the identity of the leader with the polity and its well-being. (Huntington and Metcalf 1979:123).

Third, in the context of interpretive theory, the study indicates that the alliance among the three, local symbolic communities was a mature one, of the kinds that immediately precede the crystallization of a tribal sociopolitical unit bound together by pan-residential sodalities. Ecological–evolutionary theory (Slobodkin and Rappaport 1974) applied to the issue of alliance networks with cross-cultural corroboration (Carr 1992a) suggests that stable alliances generally develop in a regular way. They proceed from reversible, energy-expensive, short-term economic transactions and political mechanisms to less reversible, energy-efficient, longer-term, social–structural, political, and economic commitments via intermarriage, and eventually may culminate in binding sacred agreements, such as burial of the dead from multiple communities in a

common cemetery. Pan-residential sodalities, which are essentially permanent structures, and a common sense of social identity, that is, ethnicity, clinch the solidification of tribal organization. The fact that the three, local symbolic communities in the Scioto–Paint Creek area buried their dead together for several generations indicates a mature alliance among them. So, too, does a long-term view of the escalating kinds of alliance mechanisms used by peoples of the upper Ohio valley area from the Late Archaic period through the Middle Woodland period. Archaeological data on these developments are summarized by Carr in Chapter 7.

Fourth, the chapter infers that at least two sodalities operated within the Scioto–Paint Creek area and were marked, respectively, by copper breastplates and earspools. The frequencies, age–sex distributions, and artifactual associations of each of these kinds of items suggest that they symbolized either membership, or an attained level of achievement, in a sodality Likewise, Ruhl (Chapter 19) notes the corporate quality to earspools that is witnessed in their ceremonial decommissioning and deposition in large numbers in altars and other proveniences without human remains at Hopewell, Liberty, Old Town (the Porter Mound), and other sites. The cooperation indicated by these deposits was accentuated in at least one case (Hopewell Mound 25, Altar 1) where some earspools were bound together, forming a group offering.

The sodalities marked by breastplates and earspools were present in each of the three local symbolic communities that participated in the tripartite alliance. However, it is unclear whether this distribution reflects two sodality organizations that drew members pan-regionally from all three communities and that were essential structural aspects of the tripartite alliance or, instead, whether the distribution indicates two kinds of sodalities that were repeated in each of the three communities and that drew their members from only within communities. Either way, the two sodalities would have been important to integrating dispersed Hopwellian households. In addition, it is known through grave associations that sodality membership was not tied to clan, in contrast to many historic Algonkian organizations (Callender 1962), and that a person could belong to one or both of the sodalities.

Finally, it is likely that the tripartite alliance was facilitated in part through the dispersion of some clans with the same animal totemic eponyms among multiple communities. Chapter 8, by Thomas et al., documents that the artifactual markers of the Canine, Feline, and Raptor clans were each found in multiple burial clusters under Hopewell Mound 25, indicating their presence in multiple local symbolic communities. The same pattern holds for artifact markers of the Feline clan under the Seip–Pricer mound, also indicating that its members lived in multiple local symbolic communities. Some other clans may have been localized within one local symbolic community, suggesting the utility of the joint mortuary ceremonies of the tripartite alliance, beyond clanship, in bridging communities.

Interregional Comparisons of Hopewellian Communities and Ritual Landscapes

The organization of Hopewellian communities and ritual landscapes elucidated in the above several sections for the Scioto area is compared to that of the Mound House Hopewellian phase in the lower Illinois valley and the Mann Hopewellian phase in the lower Ohio–Wabash area in Chapter 4, by Ruby et al. The authors apply the concepts of the residential community, local symbolic community, and sustainable community to the archaeological records in all three areas and find both key similarities and substantial differences in community organization among the areas, for both the domestic and the ceremonial spheres of Hopewellian life. In turn, many of the differences turn out to be relatable to environmental distinctions among the regions, which the chapter summarizes. The insights developed in this chapter are made possible by much new information from the Mann and Scioto areas, which is reviewed and evaluated along with data from previously published reports.

For the domestic sphere, the authors document that Middle Woodland peoples in all three areas lived in small households comprised of a

nuclear or extended family. Households typically were isolated from each other or occurred in clusters of one to a few, in response to their extensive agricultural and collecting practices. In no region did village life exist. However, the degree of household aggregation did vary among regions. In the Scioto area, no hamlets of more than two or three possibly contemporaneous households are known. In the lower Illinois valley, some bluff-base settlements were certainly larger, but by how much is unknown. In the lower Ohio–Wabash area, dispersed households over much of the landscape were complemented by a substantial residential area within the Mann site. It covered over 40 hectares and contained a 100 square meter by 1 meter deep trash midden, other discrete midden patches indicating distinct households, and large pit features for food processing and storage. Occupational remains of this magnitude are not known from any other site in the northern Hopewellian world. Household sedentism was probably greater in the lower Illinois valley than the Scioto area. Ceramic counts per unit area at even a small, Illinois hamlet (Smiling Dan) are 3 and 200 times greater than at two typical hamlets in Ohio (McGraw and Murphy, respectively). Chert debitage density is five to seven times higher in the Illinois case. These contrasts would be much greater considering larger Illinois hamlets.

These differences in household aggregation and sedentism across regions neatly reflect environmental distinctions. Natural food productivity and agricultural potential related to climate are both greatest in the Mann region, where the growing season is two to four weeks longer, an extensive slough and backwater lake system exists, and duck and geese migration densities are high. These conditions would have supported larger, longer, and more aggregated occupations there. The lower Illinois valley and central Scioto valley are not as optimal in climate, and the Scioto further lacks backwater lakes and has impoverished duck and geese migrations. In addition, the greater circumscription, linearity, and patchiness of productive lands and waters in the Illinois valley than the Scioto valley would have restricted mobility and encouraged aggregation more so in Illinois.

For the ceremonial sphere, all three areas had diverse kinds of ceremonial centers that varied in their size, layout, and ceremonial functions, and in the size and composition of social units that assembled at them. Some centers were the gathering places of single local symbolic communities, or portions of them, for burial of the deceased. In each region, these sites are marked by conical burial mounds. At other sites, larger, sustainable communities comprised of multiple local symbolic communities assembled for a broader spectrum of rituals that emphasized religious and sociopolitical matters in addition to burial. In each region, these sites were usually marked by large, loaf-shaped mounds. Some ceremonial centers in Indiana and Ohio were also functionally distinctive in having had platform mounds, and in Ohio, others were largely or fully empty, enclosed ritual spaces. In all three regions, at least some local symbolic communities had multiple, functionally differentiated ceremonial centers within them. However, there were also critical differences among the three regions in the organization of their ritual landscapes. In the lower Illinois valley, ceremonial centers that served a local symbolic community for burial were spatially segregated from those used by a sustainable community for largely nonmortuary rituals. In the lower Ohio–Wabash and Scioto–Paint Creek valleys, sometimes these two kinds of sacred precincts were joined in the same site; other times they were segregated over the landscape in different sites. Further, local symbolic communities focused on conical mound groups in the lower Illinois valley were likely territorial, given their fairly regular spacing down the valley, their placement with bluff-base habitations at critical food patches, and the demographic profiles of their burial populations, which are representative of a community. Their territoriality is expectable, given the circumscribed, linear, and patchy distribution of natural food resources in the lower Illinois valley. In contrast, ceremonial centers in the Scioto–Paint Creek area are too close to each other to have marked the distinct territories of local symbolic communities, and suggest places where, instead, multiple local symbolic communities gathered together. Finally, the probable territoriality of local symbolic

communities in the lower Illinois valley implies their relatively fixed social composition, whereas such communities in the Ohio case could have been fairly fluid in their membership. There, community membership could have been readily negotiated and redefined when multiple local symbolic communities met in ceremonial centers.

The variations in Hopewellian community organization revealed among the three study regions, as well as their multiscalar complexity and linkage to differences in natural environmental conditions, mark a significant advance in our understanding of Hopewellian domestic and ceremonial life. Smith's (1992) model of Hopewellian community organization, based upon Prufer's (1964b) earlier statement, was monolithically applied to the entire Eastern Woodlands and masked over interregional differences. The model posed only one, unspecified kind of community rather than three at different geographic scales, held each community to have had only one ceremonial center rather than possibly multiple ones, did not admit the functional differentiation of ceremonial centers within and among communities, did not recognize the use of single centers by multiple communities, and implied each community to be territorial and fairly fixed in membership rather than variable in these regards. In overcoming these characterizations, the new models of Hopewellian communities presented in Chapter 4 describe a much more dynamic landscape of intracommunity and intercommunity interaction than does Smith's model.

LEADERSHIP

In social anthropology, the topic of leadership is one aspect of the broader matter of vertical social differentiation, which also includes social ranking, differential prestige, and differential wealth. All of these forms of vertical distinction, as well as other, horizontal ones, are essential to characterizing a society's organization and describing changes in sociopolitical complexity over time (Fried 1967). However, in mainstream American mortuary archaeology, theory for reconstructing and analyzing the nature of leadership, and investigations of leadership in particular prehistoric societies, have largely been neglected. Instead, efforts have been focused primarily on social ranking, its origins, and determining whether or not particular past societies fit to Fried's (1967) models of egalitarian or rank-organized societies. James Brown's (1981) essay entitled "The Search for Rank in Prehistoric Burials" epitomized and engrained the agenda. This focus has also been true of mortuary analyses of Hopewellian cemeteries (e.g., Braun 1977, 1979; Buikstra 1976; Cole 1981; Goad 1980; Greber 1976, 1979; Mainfort 1988a; Tainter 1975a, 1977). A noble exception to the norm is Howell's (1996) mortuary study of how Zuni leadership positions, filled equally by men and women in the late prehistoric, became male-dominant in the historic period in response to the influx of Athapaskan and Spanish peoples in the region.

The anthropological topic of leadership has many facets that archaeologists might investigate. Among those that, in my experience, appear archaeologically tractable for the Hopewellian record are (1) the range of *roles* had by leaders, i.e., the duties, tasks, and domains of action of leaders, such as heading military ventures or managing subsistence operations and schedules; (2) the nature of the *power bases* of leaders, including ties to the sacred, and secular power bases such as kinship ties, military achievement, and material wealth; (3) the means of *recruitment* of leaders, including achievement in some domain, or ascription by kinship, residence, or sodality; (4) the degree to which leadership roles were *centralized or segregated* among persons; (5) the degree to which leadership roles were *institutionalized*, i.e., standardized in their constellation of duties, tasks, domains of action, and symbology; and (6) the *geographic expanse* of the domain of power of leaders, including the "local" hamlet or village, the "supralocal" neighborhood or community, or some larger, "regional" unit of identity or consolidation. Beyond these descriptive issues lies (7) the critical question of how, in societies of middle-range complexity, supralocal, institutionalized leadership *arises* and solidifies.

In ethnology, four distinct kinds of theories about the development of supralocal, institutionalized leadership have been offered. Three

of them are material–secular in nature, and one is socioreligious. In the realm of the material–secular is Sahlins's (1968, 1972) political–economic argument. He posed that substantial leadership and social hierarchy arise when a person of strong character, physical strength, and/or talent—a potential Big Man—manipulates the labor and resources of his kinsmen to accrue valuables and/or staples that he can then give away to others in need, in order to draw them into debt to him and in support of him. The Big Man's "calculated generosity" commonly involves helping others with bridewealth, blood money, war reparations, feasts and giveaways at rites of passage, and other social obligations. With time, the resources that the Big Man gathers to give away may come not only from local kin, but also from networks of regional ceremonial exchange, in which the Big Man acts as a spokesperson for his local group (Braun 1986; Wiessner and Tumu 1998, 1999).

The second, material–secular theory of the rise of supralocal leadership and social hierarchy was offered by Chagnon (1979). Disagreeing with Sahlins's political economic interpretation, he posed a demographic one. In his view, supralocal leadership and social hierarchy in middle-range societies derive from the greater or lesser reproductive success of potential leaders and lineages, which make for larger or smaller pools of labor, women for marriage exchange, and material resources. These demographic and material differentials equate to differences in social power, prestige, and leadership potential.

The third material–secular theory was presented by Flannery (1972). It is political in character. Flannery held that supralocal leadership and social hierarchy have their origins in the expansion of the domains of power of war leaders, irrigation managers, or other organizationally important figures during periods of chronic stress. Initially temporary, the broader scope of power of these persons becomes regularized as the stress continues, and then is not given up when normal conditions return. Flannery called this process "promotion."

In contrast and complementary to these three material–secular models are several socioreligious ones that dovetail into one framework. Netting (1972) argued from multiple ethnographic cases that becoming a leader of groups beyond one's own kin and community involves the fundamental problem of developing a supralocal identity independent of kin and residential affiliations, which have divisive effects. He, and Peebles and Kus (1977:424–427), noted that establishing and demonstrating ties to a spiritual world in which multiple communities believe is effective in overcoming this problem. A spiritual leader may convince others over a large region of his or her ability to secure well-being for them by evoking the supernatural to heal, to ensure good crops or hunting, to help settle internal disputes, to keep peace in public places and among communities, to facilitate material exchange, to help in external warfare, and/or to maintain good relations with spiritual ancestors and the recently deceased. In so doing, such a leader may actually come to symbolize the spiritual and material well-being of the multiple communities as a whole society (e.g., Metcalf and Huntington 1991:133–188).

The pathway to sociopolitical complexity that is implied by the ethnographic cases of supralocal religious leadership described by Netting, Peebles and Kus, and Huntington and Metcalf has been modeled in greater detail, and is given substantially more empirical support, by Winkelman (1989, 1990, 1992). Using the Human Relations Area Files and a sample of 47 societies of varying complexity, Winkelman found that with a progression from small-scale hunting-and-gathering and horticultural societies to larger-scale horticultural and agricultural ones, classic shaman as generalized leaders with multiple functions are replaced by multiple, more specialized magicoreligious practitioners. Publicly oriented, religious–political leaders who serve multiple communities as priest–chiefs, and individual client-oriented, religious practitioners who do healing, divination, and such at the local level, become differentiated from each other as societal size increases. Thus, the origins of supralocal, institutionalized leadership was found by Winkelman to go hand in hand with socioreligious developments.

The six facets of leadership and four theories of the rise of supralocal, institutionalized

leadership just summarized are explored in the context of Ohio Hopewell and related societies in Chapters 5, 7, 8, and 18 of the book. In each of these chapters, the approach taken goes beyond the standard, contemporary one of interpreting socially significant artifacts simply as "status symbols" or as symbols of static "social positions" or "social identities" (e.g., Binford 1962:219; 1971:17; Braun 1979:67; Brown 1981:29; Hohmann 2001; Loendorf 2001; Peebles and Kus 1977:431; Struever 1964:88; Struever and Houart 1972:49). Instead, the chapters' authors focus analysis on specific and dynamic social roles: the rights and duties of positions relative to others that define their domains and forms of action in given social contexts (Goodenough 1965:312; Nadel 1957:28, 29; see Carr, Chapter 1, for details; for similar critiques see Bayman 2002:70, 74; Pearson 1999:84). This vantage not only personalizes Hopewellian archaeological records, as called for by Carr (Chapter 1), but also opens investigation more easily to several of the above named, dynamic dimensions leadership–especially the power bases of leaders, their means of recruitment, and the degree of centralization and institutionalizing of their roles–as well as the pathways to supralocal leadership.

In Chapter 5, Carr and Case identify the six facets of leadership and evaluate the relevance of the four theories about leadership development, as summarized above, for Ohio Hopewellian societies, especially those in the Scioto drainage. The data they use for these purposes are diverse and mutually corroborating: artistic representations of elite, ceremonial costumery and paraphernalia from mortuary contexts, patterns of grave association and dissassociation among artifactual markers of specific kinds of leadership roles, and the particular artistic style and raw materials with which leadership markers were manufactured.

The authors make a critical distinction among three kinds of social personae: (1) classic shaman, who are generalized magicoreligious practitioners who employ soul flight and the powers of nature to perform a diversity of community and client-oriented tasks (Eliade 1972; Harner 1980; Wallace 1966); (2) shaman-like practitioners who perform a more specialized subset of shamanic tasks and arise in larger societies, per Winkelman's (1989, 1990, 1992) survey; and (3) the broader community, which may follow religious beliefs and practices that have a shamanic tone and within which the orthodox, esoteric beliefs and practices of classic shaman or shaman-like practitioners exist (Eliade 1972). The authors find that shamanic features of one kind or another run pervasively through Ohio Hopewell and earlier Adena and Glacial Kame material culture. These characteristics include a great variety of equipment for performing particular shamanic tasks (e.g., mirrors and cones for divination, sucking tubes for healing); smoking pipes carved with apparently personal power animals with which the smoker communicated and/or merged in trance; transparent, translucent, and reflective raw materials that are metaphorical for extrasensory shamanic "seeing"; materials that are at once shiny and dark, such as obsidian, which evokes the idea of shamanic seeing into darkness and the hidden; metals that can vary from dull to shiny and back again as they cyclically are polished and oxidize, which recall the shamanic theme of transformation; and the Hopewellian art style, which is built on figure–ground reversal and, again, implies the idea of transformation. At the same time, the authors find only a few pieces of evidence of the classic shaman: a couple of Ohio Hopewell and five Adena artistic depictions of individuals in trance or soul flight and using the powers of nature. Much more frequent are signs of specialized, shaman-like practitioners and other kinds of nonshamanic leaders. These include Ohio Hopewell, Adena, and Glacial Kame animal masks and animal headdresses, which indicate animal impersonation and the practice of "becoming" one's power animal but not soul flight; depictions of elite in headgear lacking animal referents and that headgear itself; artistic representations of important persons with elaborate facial tatooing or painting but lacking shamanic features, which recall historic warriors of the Woodlands; and real and effigy trophies of warfare that apparently marked military achievements and lack shamanic character. A broad public that subscribed to the essentials of shamanic concepts, symbology, and practice without implying the commonality of

the classic shaman is indicated by the visual and transformative qualities of Hopewellian raw materials and artistic style, which are widespread in Ohio archaeological records. In sum, Carr and Case conclude that the deep shamanic quality to Ohio Hopewell material assemblages reflects societies with differentiated, specialized shamanic practitioners who operated within a broader shamanic cultural worldview, rather than societies with classic shaman.

The commonality in the Ohio Hopewell material record of depictions of leaders, paraphernalia, raw materials, and styles that have sacred qualities leads Carr and Case to conclude that the power bases of Ohio Hopewellian leaders were primarily, though not exclusively, socioreligious in nature. Netting's, Peeble and Kus's, and Winkelman's socioreligious theory of the origins of institutionalized, supralocal leadership, perhaps supplemented by Flannery's idea of promotion of war leaders, seems applicable to the case.

The authors go on to quantitatively test the applicability of Winkelman's more particular model of the rise of supralocal leadership through segregation of the roles of the classic shaman, and to characterize Ohio Hopewellian leadership in relation to the five dimensions of leadership summarized above. Carr and Case examine patterns of association and dissociaton of artifactual markers of leadership and other important positions among 767 burials in 15 Ohio Hopewell ceremonial centers to make their studies. They find a very large number of sets (21) of associated artifact classes that correspond to the roles, or bundles of roles, of leaders and other persons of importance. The roles included shaman-like and apparently non-shaman-like leaders of public ceremony, war or hunt diviners, other kinds of diviners, body processors/psychopomps, healers, high achievers in warfare, high achievers in sodality organizations, and several unknown kinds of roles. The roles turn out to be highly segregated from each other rather than centralized: 91% of the burials with markers had evidence of only one or two roles. In addition, the roles appear to have been institutionalized to only a moderate degree: the average strength of association of artifact classes within a same set/role is moderate. The shamanic nature of most of the roles, their great number and segregation, and their moderately institutionalized quality all fit well with Winkelman's model of leadership development—specifically, the segregation of the classic shaman's many roles among multiple, specialized shaman-like practitioners.

The authors then track in detail the partitioning of critical social roles over the course of the Ohio Middle Woodland by examining the changing patterns of association and dissociation among artifact markers of leadership and importance over a sequence of three major cemeteries. Of the burials having such markers, the percentage of burials with evidence of only one or two roles is found to have steadily increased, from 73% to 100%, over the Middle Woodland, defining a trend for increasing segregation of critical roles, in line with Winkelman's model. In addition, the authors show that the endpoint of Winkelman's transformational model, where a public chief–priest and an array of individual, client-oriented religious practitioners have segregated and formalized, had not been reached by the last of the Middle Woodland period. However, moving toward this end point, two roles of public ceremonial leadership had by then become fully segregated from other roles and appear to have had multicommunity domains of power, although shared with other localized kinds of leaders. The multicommunity scope of power of the two roles is evidenced by their geographic distributions within and across ceremonial centers. In sum, Ohio Hopewell societies were clearly in transition sociopolitically, and leadership roles were being actively redefined, as in the midstages of Winkelman's transformational model.

The applicability of Winkelman's model to Ohio Hopewell societies is also shown in Chapter 13, by Carr et al. The authors estimate the sizes and social compositions of ceremonial gatherings at 22 Ohio Hopewell ceremonial centers from the counts of redundant artifacts found in graves and nongrave ceremonial deposits. Redundant artifacts—those that normally would have been owned one per person in life because they normally occur one per deceased person but, instead, are found in multiples in a given burial (e.g., 94 breastplates instead of 1 in a

burial)—are interpreted as gifts by others to the deceased. The number of such redundant artifacts is seen as an indication of the number of gift givers who gathered. All redundant artifacts in a ceremonial deposit are used to figure the number of gift givers who gathered. Employing this procedure, Carr et al. find that over the course of the Middle Woodland, over a sequence of large ceremonial centers in the Scioto valley, the proportion of classic shaman or shaman-like leaders to nonshamanic, religious, and/or secular leaders who gave gifts decreased steadily. This trend implies a shift in the nature of community leadership, from the more idiosyncratic ceremonial ways and leadership styles that characterize classic shaman and shaman-like practitioners cross-culturally to more institutionalized leadership styles approaching those embodied in priests and chief-priests, as modeled by Winkelman. Significantly, this trend is paralleled by increases over time in the size and complexity of the earthwork ceremonial centers, the number of communities that can be documented to have gathered at them, and the sizes of gatherings. These changes would have created a need for more effective communication of the intentions of leaders at multicommunity ceremonies, which appears to have been achieved through the standardizing and making predictable of leadership behaviors and rituals.

The issue of recruitment into roles of leadership and importance in Ohio Hopewell societies is taken up in Chapter 8, by Thomas et al. The authors assess which Ohio Hopewell clans had more and less success in attaining positions of leadership and importance. Analytically, this is done by examining the degree of association of artifactual markers of clan membership with markers of leadership roles and other roles of importance in 85 clan-marked burials from 16 sites. The clan markers are identified by ethnohistoric and archaeological criteria for a total of 9 or 10 clans. The key social roles that are considered include seven segregated shaman-like roles, three apparently nonshamanic roles, two community-wide leadership roles, and two roles in important sodalities. The authors find that, in total, roles of leadership and importance were distributed widely across clans rather than concentrated in the hands of a few. However, different clans were more or less successful in gaining access to different key roles. Often, these clan–role associations make sense in terms of the qualities of the clan totem animal and the nature of the role; and in a fair number of cases, the same clan–role associations were found ethnohistorically in the Woodlands. For example, war or hunt diviners were frequently recruited from the Canine, Raptor, Raccoon, and Beaver clans. Wolves and raptors are predatory, as is war, and the Wolf clan led war parties among the historic Shawnee and the Hawk clan did so among the historic Winnebago. The association of the raccoon with death is expectable, given its nocturnal nature, and apparently was associated with warfare in later, Mississippian shell iconography. As another example, other kinds of divination activities using mica mirrors and such were performed most commonly by the Raccoon clan. The raccoon's ability to see through the night would logically associate it with divination. As a final example, trancing and other ceremonial equipment were significantly associated with Raptor clan markers. The association recalls the close relationship between the trance experience of soul flight and the experience of becoming a bird in flight.

Thomas et al. (Chapter 8) go on to assess whether a clan's success in filling social roles of leadership and importance correlated with the clan's size, its wealth, and the degree of social networking of it through sodalities and sodality achievement. The factor of clan size pertains to Chagnon's demographic theory of the foundations of social power, while the factor of clan wealth relates to Sahlins's political–economic theory of the bases of social power. The authors find that a clan's size relative to the size of others, to the best it can be estimated, did not influence the clan's success in filling leadership and other important social roles. In contrast, clan wealth and clan networking were found to be highly correlated with access to key social roles. However, most clans were fairly similarly privileged in wealth and social networking, so in the end, a wide variety of clans filled most key social roles. The results show that Chagnon's demographic theory of social power is not important for

the Ohio Hopewell case. The applicability of Sahlins's political–economic theory is more ambiguous. Specifically, the correlation analysis does not distinguish whether clan success in filling key social roles followed from clan wealth or whether clan wealth followed from clan access to key roles, in turn based on more fundamental clan characteristics—such as the capturing of a broad, religious identity, as argued by Netting. It is also possible that religious and economic factors stood in combination as root causes of the mild sociopolitical differentiation of Ohio Hopewell clans.

In Chapter 18, Turff and Carr focus on the important role of the panpiper across eastern North America. Although the specific roles that panpipers played within Hopewellian societies are unknown, their integration with various other key roles, and by implication the activities in which panpipes possibly were integral, is documented from the grave goods with which panpipes were associated and is based on evidence that panpipes typically were buried with their owners rather than given as gifts to others. Turff and Carr find that the role of panpiper was combined very fluidly with diverse roles, both within and among regional traditions. The associated roles include (1) shaman-like persons buried with items such as quartz points, mirrors, and sucking tubes, which would have been used in shamanic tasks; (2) apparent community-wide leaders marked by copper celts; (3) members or high achievers in apparently two prestigious sodalities, marked by copper breastplates and earspools; (4) clan leaders or members buried with real or effigy power parts of animals; and (5) other persons of social standing buried with gorgets and pearl and shell beads. The shaman-like roles indicated by the grave goods associated with panpipes are equally broad and include public ceremonial leadership, manufacture of ceremonial items with exotic raw materials, trance work of unspecified kinds involving smoking, divination in general, hunt or war divination, healing, and philosophizing.

The fluidity with which the role of panpiper was associated with other roles of key importance indicates that they were not firmly institutionalized, were probably reworked situationally, and were recruited primarily by achievement, which would have encouraged such reworking, rather than by birthright or rank. The adult male-biased age–sex distribution of deceased persons buried with panpipes supports this view. All of the above situations imply the fairly informal political organization of Hopewellian societies across the Eastern Woodlands.

Turff and Carr also document that the important social roles with which that of the panpiper did and did not associate varied among Hopewellian regional traditions in a patterned way. Four broad, geographic areas were so distinguished: (1) the central Midwest, including the central Scioto, Muskingum, Miami/Indiana, Havana, and Crab Orchard traditions; (2) the northern Midwest, including the Goodall and Trempealeau traditions; (3) the Northeast, including the northern Ohio, Point Peninsula, and Saugeen traditions; and (4) the Southeast, including the Santa Rosa–Swift Creek, Southern Appalachian, Porter–Miller, and Marksville traditions. It is clear that Hopewellian societies over the Eastern Woodlands varied significantly in their organization of leadership and other positions of importance.

Chapter 7, by Carr, identifies and characterizes two further leadership roles, marked by copper headplates and celts. Both of these artifact classes are identified as symbols of community-wide leadership, or leadership within two sodalities with community-wide functions, by their forms, precious metal composition, rarity, age–sex distributions, and disproportionate burial in Hopewell Mound 25—a cemetery reserved primarily for important persons. The two leadership roles were almost never combined in the same person and tended to be recruited from different clans. In Chapter 8, Thomas et al. find that headplates occurred at statistically unexpectedly high frequencies in graves with markers of the Canine and Raccoon clans, whereas celts occurred at unexpectedly high frequencies in graves with markers of the Raptor and Nonraptorial Bird clans. The authors suggest that the distinction between headplates and celts may have marked a division between peace and war leader positions, respectively, which were widespread across the Eastern Woodlands historically. However,

archaeological and ethnohistoric evidence do not fully support this notion.

In sum, by taking their mortuary analyses beyond the search for rank, Carr, Case, Thomas, Keller, and Turff are able to reveal many facets of Hopewellian leadership, a pattern to its development that aligns with what is seen in certain other middle-range societies and modeled in anthropological theory, and its diversity among societies interregionally.

SOCIAL RANKING

Modern Americanist studies of mortuary records for their cultural information began in the mid 1960s (Binford 1964b) as a part of the New Archaeology's broad interest in reconstructing past social organization using mortuary remains, ceramic styles, and settlement patterns (e.g., Binford 1968; Deetz 1965; Hill 1968; Longacre 1968; Whallon 1968). In the arena of mortuary analysis, attention quickly came to focus on the issue of how to determine whether a past society was organized by principles of rank: "the search for rank" (J. A. Brown 1981). This topic was seen as central to evaluating the size and complexity of past social systems, to classifying prehistoric societies into sociopolitical types (Fried 1967; Service 1962), and to tracking "one of the thorniest problems in cultural evolution ... the origin of hereditary inequality—the leap to a stage where lineages are 'ranked' with regard to each other ..." (Flannery 1972:402).

Both fortunately and not so fortunately, the development of middle-range theory for identifying social ranking with mortuary data historically involved Hopewellian societies—in the Havana tradition in Illinois (Braun 1977, 1979; J. A. Brown 1981; Buikstra 1976; Tainter 1975a, 1977) and the Scioto tradition in Ohio (Greber 1976, 1979a; Greber and Ruhl 1989). The studies gave the first systematic looks at how Hopewellian mortuary records are structured and first impressions of how Hopewellian societies might have been organized. At the same time, the sociological interpretations that the studies offered have difficulties because the analyses were carried out when ethnological theory about the nature of ranking and archaeological theory for identifying ranking in prehistory were first crystallizing and incomplete. Conclusions were drawn from the data that we would not draw today with broader understandings of ranking and its archaeological correlates. Also, in total, the studies provided contradictory or ambiguous conclusions about whether Havana and Scioto Hopewellian societies exhibited ranking. Specifically, Buikstra and Tainter concluded that Havana societies of the lower Illinois valley were organized by principles of rank, and Brown did so in a qualified manner. Braun did not find Havana Hopewell societies to have ranking. These opposite conclusions were derived in spite of the fact that the core of the data used by these researchers was the same site: the Klunk–Gibson cemetery in the lower Illinois valley. Regarding Ohio Hopewellian societies, Greber posited that they exhibited ranking in the course of examining the nature and organization of their social divisions. However, she did not formally derive an identification of ranking from the correspondence of mortuary data to middle-range theoretical principles about the archaeological correlates of ranking. Thus, for the multiple studies of Hopewellian cemeteries that have been done, we still do not have firm answers to the question of whether Havana and Scioto societies exhibited ranking.

The reasons that contradictory and ambiguous conclusions about ranking were drawn in the Havana and Scioto Hopewell studies are several, but two are most essential and shared by most of the studies. The problems are simultaneously conceptual and methodological in nature. First, material, archaeological indicators of four, distinct vertical dimensions of social differentiation were confounded in various combinations in the studies. These dimensions are: achieved social prestige, wealth, rank, and leadership. The archaeological correlates of these distinct forms of social differentiation were not adequately defined theoretically at the time of writing of Buikstra, Tainter, Brown, Braun, and Greber, and are yet to be adequately addressed in current published theory on mortuary practices.

Second, all of these researchers except Buikstra used the cemetery as the unit of study, implicitly assuming or erroneously stating the

equation of a mound complex or mound with a community, and the burial of most if not all members of a local community in that mound (cf. Konigsberg 1985). However, in the Havana and Scioto areas, it can be shown (see above, Community Ceremonial-spatial Organization; Carr, Chapter 7; Ruby et al., Chapter 4) that multiple cemeteries were used by single, local Hopewellian communities to bury their different social segments; and in the Scioto region, single cemeteries were used to bury substantial numbers of people from multiple local Hopewellian communities. A regional-scale, multi-cemetery perspective on mortuary programs and societies, rather than a site-centered one, is necessary in these cases to resolve past social organization. This perspective was understood and used by Buikstra (1976) in her analysis of Havana Hopewell social organization, but had to wait almost 20 years to emerge formally as a part of mortuary analysis (Beck 1995).

Chapters 6 and 7, by Carr, aim at correcting current uncertainty about whether Havana and Scioto Hopewell societies were organized through ranking. The chapters revisit the above, previous studies of Havana and Scioto mortuary records in light of current ethnological understanding of the diversity of ranking systems, and in accordance with refinements made in Chapter 6 in archaeological, middle-range theory about the expression of ranking in mortuary data. The analyses in the two chapters segregate ranking from leadership in concept and archaeological correlate, and take a regional perspective on burial programs.

Chapter 6 summarizes the key characteristics of social ranking systems cross-culturally and updates their archaeological correlates. Although social ranking has sometimes been defined ethnologically as merely differences in prestige among individuals, whether achieved or inherited or ascribed by other means, Fried's (1957, 1960, 1967) definition forms the foundation for the understanding of social ranking used in the chapter. Social ranking is defined as the differential allocation of prestige to individuals on the basis of criteria other than age, sex, or personal attributes, which results in a limited number of social categories that vary in distinction. Ranks can be assigned to individuals, families, lineages, or clans, on the basis of descent or without reference to descent. Ranks may be defined finely, approaching a continuum, coarsely, finely at the top and more coarsely for lower ranks, or amalgamated into two or three broad "conceptual classes." None of these distinctions allow differential control over access to strategic resources. Leadership in a rank society, in contrast to rank, may be achieved, ascribed by rank, or ascribed by other criteria. Achievement commonly is the criterion used to fill leadership positions that require a special talent, such as leading war or interfacing with the supernatural. In rank societies where leadership roles are relatively centralized, rank tends to be used as a primary criterion to select leaders.

Social ranking is expressed materially and can be identified archaeologically from "symbols of rank," in contrast to markers of achieved prestige, achieved leadership, and leadership ascribed by rank. Following directly from Fried's definition of social ranking, symbols of rank are artifact classes or mortuary traits that indicate a degree of prestige through their labor investment, workmanship, exotic material source, relative infrequency, context of deposition, or symbolic flamboyance. In cemetery contexts, they are found with persons of all ages beyond puberty, rather than restricted to those in the prime of life most capable of achieving prestige. They also occur with persons of all physical predispositions to power or not, rather than with just those most physically capable of achieving prestige, and are found with both sexes. In coarse systems of ranking where many persons fill each rank level, the demographic profile of persons of one rank approximates that generated by a whole living population. In coarse systems of ranking, symbols of rank are common, whereas symbols of leadership are infrequent and symbols of achieved prestige may be infrequent. Symbols of rank, like symbols of leadership ascribed by rank, differ qualitatively rather than quantitatively from symbols of other rank levels or leadership positions, whereas symbols of achieved prestige or achieved leadership vary quantitatively from each other. Symbols of different rank levels may form a pyramidal distribution in their frequencies within a

society when ranks are calculated finely but not necessarily when they are calculated coarsely, as in the cases of ranked moieties, dual divisions, clans, sodalities, or communities (contra Buikstra 1976). Symbols of rank do not typically form covarying, redundant sets indicative of a rank level; this is a quality of centralized and institutionalized roles within a leadership position, and such positions need not be recruited by rank (contra Braun 1979; Peebles 1974; Peebles and Kus 1977). The term *symbols of authority* is not suggested for use, because it confounds ranking with leadership that may or may not be tied to ranking (contra Braun 1979; Peebles and Kus 1977).

Drawing on these more contemporary understandings of social ranking and its material correlates, Carr sifts through the many mortuary patterns found by Braun (1979), James Brown (1981), Buikstra (1976), and Tainter (1975a, 1977) for the Havana Hopewell bluff-top Klunk–Gibson cemetery and/or the complementary Peisker and Kamp flood plain mound complexes, and retrieves those patterns relevant today for assessing whether ranking was present. He finds that weak ranking is indicated for lower Illinois valley Havana Hopewell societies by small differences in the labor expended on three modes of burial at Klunk–Gibson. Each mode includes subadults and adults, and males and females, in approximately equal frequencies. Together, the three modes define a pyramidal distribution of prestige. The three burial modes are: burial on an original ground surface, peripheral subfloor pits lacking limestone and/or log construction, and peripheral subfloor pits elaborated with limestone and/or logs. These burials Carr contrasts with the well-known, fairly elaborately constructed, "central" tombs that contained most fancy artifacts in the cemetery, are infrequent, housed predominantly adult males, and are associated with secondary handling of the deceased much more commonly than are the first three modes of burials. The characteristics of the central tombs suggest leaders recruited through unspecifiable means—ranking, achievement, or both—whereas Buikstra, Tainter, and Brown saw these tombs as segregating individuals and lineages of the highest rank. Leadership roles do not appear to have been centralized into one or a few positions because the mortuary traits of the central tomb burials do not covary much. Carr also places the Klunk–Gibson cemetery in a regional perspective, as did Buikstra. He suggests that the central tombs in the bluff-top Klunk–Gibson cemetery, and larger and richer ones found in the flood plain Peisker and Kamp mound complexes, may represent a two-level hierarchy of leadership positions, perhaps recruited from two different social ranks or through other criteria.

In all, the study shows the potency of taking a personalized and contextualized approach to studying the archaeological record. By decoupling, defining, and searching for social roles and dimensions that in previous studies had been lumped together—especially rank and leadership gained through achievement or ascribed by rank—and by taking a contextualizing approach in which local mortuary patterns in bluff-top mounds were placed in the broader perspective of a regional mortuary program, a clear answer on whether lower Illinois valley Havana Hopewellian societies were organized by principles of rank is obtained. Certain characteristics of Havana Hopewell leadership are also revealed.

GENDER

Within the realm of anthropological and archaeological theory, gender is defined as the culturally constructed and interpreted categories of personhood that frequently are tied to differences in biological sex, age, and/or labor (Claassen and Joyce 1997:2–5). In my view, the anthropological study of gender is a part of the broader field of inquiry into the nature of social differentiation (Blau 1970)—both horizontal and vertical—its cultural construction, and its biological–demographic foundations. In this regard, the anthropology of gender focuses on women, men, and alternative genders as "social–structural groups or categories" (*sensu* Evans-Pritchard 1940; Fortes 1945; Murdock 1949a:1–112; Radcliffe-Brown 1952b:90–104, 15–31; Radcliffe-Brown and Forde 1950) as well as the

"roles" that persons in those categories play as agents of action, function, and change (*sensu* Firth 1951; Goodenough 1965; Nadel 1957). The perennial issues of the field of social structure and organization at large are found in anthropological gender studies: (1) the social *roles*—rights, duties, activities—of genders and the other societal positions that they may fill; (2) *relations* of symmetry or asymmetry in prestige, power, and authority among the genders; (3) *recruitment* and identity formation—how a person is enculturated and personally comes to identify with a gender through familial and societal practices and rites of passage; (4) the *cultural construction* and continuously negotiated reformation of gender through the prescribed and proscribed rituals of mundane daily life, sacred events, public celebration, semiprivate or private observances, etc.; (5) the *ideology* of gender—the meaning(s) attributed culturally in a given social or cultural situation to being male, female, or an alternative gender, or being in relationship to the same or a different gender; (6) the *symbolism* of gender and its meaning, expressed in material stylistic or other cultural ways; and (7) the *ultimate causes* of gender distinctions, like other social categories, including demographic, biological, psychological, economic, and evolutionary factors, in contrast to proximate cultural factors. Different subsets of these topics have been recognized or emphasized by different researchers of gender (e.g., Claassen and Joyce 1997:6–7; Conkey and Spector 1984:15). What is clear is that the issue of gender is crucial for a full understanding of social organization.

The archaeology of gender formally began with Conkey and Spector's (1984) call for archaeologists to explore gender issues like their sociocultural and social science colleagues, and has quickly led to conferences (see Hays-Gilpin and Whitley 1998:6) and now hundreds of articles on gender by archaeologists, as surveyed by Claassen and Joyce (1997:1). With the revealing and recognition of the clear andropocentrism of many previous archaeological, sociocultural, and physical anthropological studies, gender studies have naturally and with welcome tended to focus on the woman side of the balance (but see Knapp 1988). Archaeological studies of gender have developed along three fronts, at least, which might be termed *womanism gender proper*, and *feminism*, following the lead of Claassen and Joyce (1997:1).

The goal of womanism is most basically to find archaeological evidence of women of the past and their activities. This goal, though deceptively simple in statement, calls for fundamental changes in the traditional assumptions and operations of archaeology. Womanism challenges the traditional ethnographic finding that there are cross-cultural near-universals in the division of labor among the sexes, with women working soft and pliable materials and men working hard, difficult-to-process materials (Murdock 1949b; Murdock and Provost 1973), and with women avoiding dangerous tasks (Burton et al. 1977). It also challenges the contemporary stereotypical view of what activities women and men are capable of, in light of potential biological distinctions among them in robusticity and strength and the actual difference of child birthing. The methodological consequence of these new ideas is that inferring the past actions and the presence of a man or a woman in the archaeological record cannot be done by the commonplace archaeological means of simply determining the utilitarian function of an artifact and evoking stereotypic linkages between task and biological sex (see Conkey and Spector 1984:8, 11–12). Further, decoupling women from soft and decayable materials undermines the traditional notion that female activities, being involved with such materials, are less visible archaeologically than male activities (e.g., Isaac 1978:102).

The second front of development of gender studies in archaeology—gender proper—potentially encompasses all seven of the topics of social structure and organization listed above, but practically has focused primarily on women's and men's social roles, their complementarity or asymmetry, and their relative prestige, power, and authority (e.g., Claassen and Joyce 1997; Crown 2000; Hayes-Gilpin and Whitley 1998). Archaeological studies of gender proper also question the two long-standing assumptions, that division of labor by biological sex is a

cross-cultural universal that runs deep in time (see references in Conkey and Spector 1984:9), and that male-dominant sexual asymmetry is a universal fact of human social life (Rosaldo and Lamphere 1974).

The third area of development—feminism—aims at empowering women today by revealing through critical theory the androcentrism of traditional anthropological research and the gender stereotypes that it has implicitly assumed, which have academically supported sexism and gender asymmetry in popular Western culture (Conkey and Spector 1984:3). In addition, feminist studies have attempted to empower women today by documenting women in positions of power in the past and the potentials that are truly women's, in contrast to limiting, contemporary Western stereotypes.

In this book, gender issues under the heading of womanism and gender proper are explored in Chapters 9, 10, 11, and 18, by Field et al., Rodrigues, Keller and Carr, and Turff and Carr, respectively. Each chapter finds archaeological evidence of women and their activities in past Hopewell societies, and goes on to discuss the social roles and degree of prestige held by women, and sometimes by men.

In Chapter 9, Field et al. make a very detailed examination of the social roles filled by women compared to men in Ohio Hopewellian societies, variation in role assignments across regions, and the implications of these patterns for reconstructing kinship, gender equality or inequality, multiple genders, ethnicity, and the nature of interregional Hopewell. The study that the authors make is gender-balanced and neutral, rather than specifically oriented toward women. It is based on the distributions of artifactual role markers in the graves of females and males in three regions: northeastern Ohio, the central Scioto valley, and southwestern Ohio. The social roles that are considered include shaman-like leadership in the arenas of war or hunt divination, other divination, and heading public ceremonies; apparently community-wide, nonshamanic leadership marked by metallic headplates and celts; prestigious sodality membership or achievement marked by metallic breastplates and earspools; perhaps more secular war achievement indicated by trophy skulls; and importance in one's clan signaled by animal power parts.

The authors uncover striking geographic variation in role assignments and gender dominance. In northeastern Ohio, only graves of males contained markers of the above-listed kinds of important social roles, and even utilitarian items were found much more commonly with males than females. In the central Scioto valley, roles of importance were distributed more equitably among the sexes, with some male predominance in most roles and female equality or predominance in a few. Males and females shared, with male predominance, in metallic breastplates and earspools that marked prestigious sodality positions, copper celts that apparently symbolized community wide leadership, shaman-like divination items not associated with warfare or the hunt, tortoise shell ornaments and copper nose inserts used in unspecifiable shaman-like activities that probably involved trancing; conch shells used in leading public ceremony, and, with much more male predominance, items for war or hunt divination and body processing/psychopomp work, and trophy skulls perhaps indicating war achievement. Females were buried largely or exclusively with two kinds of wind instruments—panpipes and flutes—while males alone were buried with metallic headplates that probably indicated community-wide leadership and with barracuda jaws and batons that marked leaders of public ceremony. In southwestern Ohio, in contrast, roles of leadership and prestige—shamanic and nonshamanic, war or hunt-related and not—were exclusively or largely held by females. This is the case for roles marked by artifacts used in war or hunt divination, other divination, body processing and/or psychopomp work, and public ceremonial leadership, as well as metallic breastplates and earspools that indicated prestigious sodality positions.

The strong assignment of key social roles to males in northeast Ohio suggests a patrilineal ethic, which would accord with the patrilineal kinship systems of historic Central Algonkian tribes of the northern Woodlands. The dominance of females in positions of prestige and power in southwestern Ohio suggests a matrilineal ethic, and recalls the matrilineal kinship systems of

historic tribes of the southern Woodlands. The more equitable but still male-biased distribution of important social roles between the sexes in the central Scioto valley is less easily correlated with kinship, but may reflect weak patrilineal, cognatic, or dual systems of descent and role allocation.

The regional differences found in the sexes that filled various social roles, in the relative prestige and power of women and men, and possibly in kinship suggest that these gender-related aspects of social organization were local issues rather than an integral part of any pan-Woodland, Hopewellian ideology, identity, or practice. If interregional Hopewell was a social–symbolic form of a kind, as proposed by Seeman (1995), gender and kinship were not the essential social components of it. On the contrary, Field et al. suggest that regional differences in the roles and prestige of women may have been essential aspects of constructed identities by which Hopewellian groups came to distinguish themselves from each other, i.e., ethnicity. The authors summarize some key ethnological works that link gender and ethnicity in their mutual construction.

The role analysis made by Field et al. also reveals an interesting bit of the cultural fabric—a socioreligious theme—of central Scioto Hopewellian societies. There, three social roles related to death and the life–death contrast were each strongly filled by males: war or hunt diviners, war achievers, and body processors/psychopomps. This social pattern may indicate a masculine polarity to death in the worldview of central Scioto Hopewell peoples, and a gender dimension to the dualism that pervades Hopewellian art of that region and others (Carr and Case, Chapter 5; Greber and Ruhl 1989:275–284).

Another topic addressed by Field et al. is the relationship between gender dominance and the religious roles played by women. Deprivation theory proposes that in male-dominated societies, women sometimes seek out religious roles, especially as mediums, as the only refuges of power and prestige (Lewis 1971; see also Winkelman 1989, 1990, 1992). In contrast, Sered (1994) found that women played dominant religious roles in matrifocal societies, especially matrilineal and matrilocal ones. The Ohio Hopewell record follows the latter generality. In southwestern Ohio, where key leadership roles were exclusively or largely held by females and matrilineal kinship is inferred, women exclusively held the shaman-like roles of war or hunt diviner, diviner in other matters, and public ceremonial leader, whereas men shared in only one shaman-like role—that of body processor or psychopomp. Persons that held multiple shaman-like roles and had broader spans of religious power, as indicated by grave inclusions, were all women. In contrast, in northwestern Ohio, where males do appear to have dominated politically (see above), the mortuary record would suggest that women did not take harbor in religious roles.

A final subject that Field et al. consider is the social construction of gender—specifically the construction of more than two gender categories, termed *gender variance*. Third genders are relatively common in Native American societies, where they are associated with spiritual power (Fulton and Anderson 1992:609; Holliman 2001:128; Nanda 2000; Roscoe 1999:8, 26). More broadly over the globe, third genders are associated with shamanism. The transformation of males into shaman sometimes involved the neophyte taking on the hair style, clothing, and/or work of women and a composite, masculine–feminine gender identity (Eliade 1972:257–258; Joan Halifax 1979:22–28). The association of third genders with religious practitioners appears to hold for the Hopewellian mortuary records from the Scioto valley and southwestern Ohio, as well. Field et al. found three cases of persons who were buried with shamanic equipment and who had additional shamanic or other ceremonial artifacts that typically were buried with the opposite sex in that geographic region. These instances of cross-gender artifact associations interestingly included both male and female burials.

The study by Field et al. in Chapter 9 is continued with more detail and a narrower geographic focus in Chapter 10 by Rodrigues. She compares the musculoskeletal stress markers (MSMs) of male and female skeletons, the mortuary features of their graves, and the cooccurrence of these biological and cultural traits at the Turner site, southwestern Ohio, in order

to examine several topics. Her subjects are: the sexual division of labor and leadership, and the relative workloads, health, and prestige of men and women in the Turner community.

MSMs are hypertrophied ("bumpy") areas on bone where muscles, ligaments, or tendons attach and, because they have been chronically or traumatically stressed in bearing loads, net bone growth has increased. The size and placement of MSM on a skeleton can indicate the tasks that the person repetitively and stressfully performed because different tasks involve different sets of muscles, ligaments, and tendons, with different places of attachment. Rodrigues's study is one in a line of pioneering methodological research (Angel et al. 1987; Hawkey 1988; Hawkey and Merbs 1995; Kennedy 1983, 1989; Merbs 1983; Nagy 2000) that has developed the explicit measurement and the interpretation of MSMs for activity reconstruction (see also Capasso et al. 1999; Peterson and Hawkey 1998). Her specific methodological contribution is the compilation of functional–morphological, kinematic, ergonomic, electromyographic, and sports medicine data on the stress markings produced by particular activities, and then the positing of specific combinations of MSMs that can be expected to be caused by particular tasks among peoples with traditional technologies. Previous studies have commonly focused on overall differences between men and women in the kind of work they did and workload, rather than the specific activities undertaken.

Rodrigues's study seriously challenges conventional Western stereotypes of the activities performed and the social positions held by men and women in hunter–gatherer and horticultural societies. In contrast to Murdock's (1949b; Murdock and Provost 1973) cross-cultural generalizations, she concludes that females in the Turner community, rather than males, may have been more involved in flint knapping, as well as running that might have had a hunting association. Females may have more commonly performed hide preparation with an endscraper, which Murdock did not think was linked to sex. Both sexes may have ground nuts and seeds, females with a nutting stone and pestle, males with grinding stones, in contrast to the stereotypic notion of women processing plant foods. Other activities of Hopewellian women and men are also concluded. In contrast to some woman-oriented studies of gender, Rodrigues attempts to reveal the division of labor among both women and men, in a gender-balanced and neutral manner, as completely as possible.

Rodrigues goes on to document the nature of leadership in the Turner community, using the same archaeological data as Field et al., but extending and qualifying their analysis with osteological information. Like Field et al., Rodrieges finds that females as well as males at Turner held positions of leadership and high prestige, that females more than males were buried with shamanic artifacts and other artifacts of institutionalized leadership, whereas males more than females were buried with prestigious personal items, and that only females were buried with artifacts indicating more than one leadership role. Harmonious with the conclusions of Field et al., Rodrigues postulates that institutionalized leadership roles in the Turner community may have rested primarily with women, that they may have been inherited through the female line, and that male positions of prestige may have instead been achieved. At the same time, Rodrigues notes that leadership roles appear to have sheltered males from extensive work but not females, and that an increase in the number of leadership roles held by females seems not to have led to a decrease in their workload. She also finds that individuals with high status—both males and females—often had strong cases of pathologies, whereas those of lower status commonly had only mild cases. These health distinctions were not tied to differences in workload. These joint biological and archaeological assessments paint a more complex picture of the on-the-ground lifeways of males and females at Turner than that inferred from only the archaeological data used by Field et al.

Chapter 11, by Keller and Carr, documents the social hands of Hopewellian women and men through the study of clay figurines found in the Havana, Mann, and Scioto regions. The figurines depict women and men in equal abundance, some children, and individuals whose sex cannot be determined. The authors argue that

the figurines were most likely made by women, based not simply on ethnohistorical analogy, but also on archaeological patterning. The authors point out that there is a very strong tendency in historic North America and in the Woodlands (Driver 1969) for women to have made ceramics, which should not be undervalued by feminist theory. They also note the naturalistic style of the figurines, their manufacture from clay, which was readily accessible to women, and the common domestic contexts of deposition of figurines in regions where habitation areas have been well excavated (the Havana and Mann regions). All of these ethnohistorical and archaeological characteristics generally point to women and their familial world. These traits also contrast from those of other Hopewellian artworks that are geometric and/or were made of stone or metals obtained from great distances ethnohistorically traversed largely by men (e.g., copper earspools, breastplates, headplates, and celts and mica polygonal mirrors; see Chapter 16), that were restricted to mortuary contexts, and that were more commonly or exclusively buried with males, at least in Ohio (Carr and Case, Chapter 5). Thus, figurines probably provide a woman's view of Hopewellian society and gender, and it is on women that Keller and Carr focus their attention.

The ornamentation and hair styles that the figurines depict suggest that women in the Havana region, compared to the Mann and Scioto regions, had greater access to positions of leadership and/or prestige, and were more active in communicating their positions and power in society. Female figurines in the Havana region have earspools, which were markers of prestige of a kind (Carr, Chapter 7; Carr and Case, Chapter 5; Ruhl, Chapter 19; Greber 1979), somewhat more commonly than do male figurines. Female figures also have topknots and heads shaven on one or two sides—which reveal and call attention to earspools—in equal proportions to male figurines. In contrast, in the Scioto and Mann regions, earspools, topknots, and shaven heads on two sides are found primarily or exclusively on figures of males. Variation in the height of sitting postures depicted by figurines from the Havana region suggests that some males had higher prestige relative to other males and to females, who were more equal to each other but distinguished in posture form.

Ceramic figurines and vessels in the greater Scioto region may also record a change in the role of women in society and, perhaps, their increased prestige over time. During the Early Woodland Period, utilitarian pottery vessels were used during Adena graveside rituals but not placed with the dead. By the Middle Woodland Period, utilitarian ceramics were placed with some Scioto Hopewell burials. If women produced and used these ceramics, then through time women apparently became more involved with caring for the dead. The addition of fine Hopewell ware and clay figurines to Scioto Hopewell burials could record other roles that women came to assume in the mortuary domain, if women made and used these items. A final step in this sequence may be represented by the inclusion of finely executed clay figurines with effigies of Lower World monsters, copper geometric symbols of status, and many other prestigious items. These were placed not in a burial but, rather, a cremation basin filled during an apparently large and symbolically important ritual gathering at the Turner site. Turner probably dates to later in the Middle Woodland (Prufer 1964a:49). This ceremonial deposit may indicate the elevated role of a woman who was involved not only in the Middle World affair of caring for the deceased, but also in relationships among cosmological realms and/or their beings more broadly.

There is some indication that women within each of the Havana and Scioto Hopewell regions actively created and maintained their social positions, prestige, and identity as women through their frequent interaction with each other in the domestic and mortuary rituals in which figurines were probably used. Common, close interaction among Hopewellian women within each of these two regions is indicated by similarities in the kinds of status markers depicted on figurines and in obscure technological and stylistic traits of the figurines within each region.

Chapter 18, by Turff and Carr, corrects the observation of Griffin et al. (1970), that use of Hopewellian copper and silver jacketed panpipes was exclusively the domain of adult males, by documenting the burial of panpipes with women

and men of diverse ages, as well as children. The authors offer the alternative view that, in at least some regional traditions, panpipes may have functioned in age and gender-related rites of passage of several kinds, including naming, attainment of puberty, menopause, passage into elderhood, and/or the death of persons at such ages. This interpretation seems most plausible for Hopewellian societies in the neighboring Point Peninsula, Saugeen, and northern Ohio regions, where panpipes are found in unusually high frequencies with children, adolescents near puberty, and the elderly—both females and males. In support of their idea, the authors recall the use of panpipes among the Columbian Desana to mark sexual development, as well as Hall's (1979) broader findings of association between panpipes or flutes and sexuality/fertility in the New World. In the course of documenting the rituals in which Hopewellian panpipes were used, Turff and Carr describe four burials that are especially significant to their "rites of passage" argument as well as to womanist studies. At LeVesconte Mound 1 in Ontario were buried an old woman of 45–60 years and a child, each with the very unusually high number of four panpipes. Another child in the mound had one panpipe, as did a child in the nearby Cameron's Point Mound C. All of these individuals had panpipes that were silver-jacketed—a rare form over the Woodlands. The number of panpipers who gathered at one time at LeVesconte and gave panpipes as gifts to the deceased could have ranged between four and nine, and possibly indicates a ceremonial society of panpipers in this region—perhaps like the historic Algonkian sacred pack organizations (Calendar 1962; Skinner 1915; Tax 1937) and perhaps one focused on women and/or restricted in membership to women.

The roles of leadership and prestige that Field et al., Rodrigues, Keller, and Turff and Carr each document for Hopewellian women of multiple regional traditions counterbalances the generally accepted view of Hopewellian women as subordinate, which is drawn from Buikstra's (1976) and Braun's (1979) detailed mortuary analyses of the Klunk, Gibson, and other Havana cemeteries. Both Buikstra (1976:34, 40–41) and Braun (1979:76) found that only males were given individual burial in the most energy-expensive, central tombs of the mounds. Females, when found in central tombs, were always accompanied by a male. Males also were buried with a very much greater number and diversity of Hopewell Interaction Sphere goods than were females (Braun 1979:79; Buikstra 1976:35, 42).

CONCLUSION

The opening chapter of this book points out that, despite the richness of Hopewellian material culture and the deep curiosity of professionals and the public in the social and ritual lives that produced those remains, we know amazing little of the details of Hopewellian ways. The discussions offered here and in the following chapters in Part II, on Hopewellian community ceremonial–spatial organization, leadership and its development from shamanism, social ranking, gender, and other aspects of the social, political, and ritual organizations of northern Hopewellian peoples, demonstrate that detailed, ethnographic-like understandings of them are feasible when a locally contextualized, personalized, and generative approach to their archaeological remains is taken. For instance, the identification of shaman-like leaders involved in divination, healing, public ceremony, or soul guidance in Ohio Hopewell societies; the documentation of their animal–totemic clans and the success of clans in filling particular leadership roles; and the increasing role of some Hopewellian women in mortuary ceremonies through time lend to culturally richer and more humanized understandings of Hopewell than does the discussion of generalized social categories such as "persons of prestige" and "horizontal social segments." Reconstructing sociological and cultural details of the kinds just mentioned and sought out by the authors in this book—thick description in archaeology—does not require any loss of scientific, empirical validation. Such work does require the desire and commitment on the part of archaeologists to contextualize and personalize Hopewellian studies, and to assemble the comprehensive and detailed data upon which firm sociological conclusions can be drawn.

NOTES

1. The term, sustainable community, is an unfortunate one because the word, community, implies a self-identifying unit, as in "a sense of community," but sustainable communities need not have this feeling or be self-recognizing. Network is a less presuming and more appropriate word.
2. An exception is Pacheco's (1993:42–45, 1996) interpretation of earthwork functions via ethnographic analogies to the Mapuche and Chachi. See also DeBoer (1997).
3. Struever did not publish on the burial programs of Hopewellian peoples in the lower Illinois valley, and specifically on the residential affiliation(s) of those buried in flood plain cemeteries.
4. Specifically, Greber (1979a) thought that Seip–Pricer represented the remains of a rank society of complexity, with three differentially ranked divisions whose membership was ascribed (Greber, p. 45), whereas Ater represented a society of less complexity, with two divisions that were about equal in rank and whose burials were focused around individual leaders and/or their kin (Greber, p. 50–51). This diversity in social ranking and segmentation aligns with organizational differences found among middle-range societies that span distinct ecological settings separated by distances of the order of 100 to 300 kilometers (e.g., Flannery 1967; Sahlins 1968; Wiessner 1999). In the historic Eastern Woodlands, organizational contrasts of the kind Greber posited are approximated by the distinction between northeastern societies and the simpler of southeastern societies, which are widely separated. In contrast, Seip–Pricer and Ater are located a small distance from each other (ca. 17 kilometers by air, 49 kilometers by river), in similar ecological settings, and are not separated by any major topographic barrier. They were likely components of directly neighboring societies in adjoining river valleys (main Paint Creek and its North Fork), considering Pacheco's (1996; Pacheco and Dancey n.d.) estimates of the catchment size of some Ohio Hopewellian local symbolic communities, and mortuary and stylistic evidence (Carr Chapter 7). Thus, the societal diversity proposed by Greber for Seip–Pricer and Ater is out of sync with ethnographic analogs.
5. Caldwell asked Struever to think about Hopewell from a regional perspective, and specifically in relation to Caldwell's concept of interaction spheres, in preparation for giving a paper in a symposium organized by A. R. Kelly for the 1961 American Anthropological Association meetings. The result was Struever's (1964) article on the Hopewell Interaction Sphere considered in a regional, adaptive, ecological, and demographic framework (Struever, p. 96–105) that centered on mudflat horticulture and that was suggested by his survey findings of Havana Hopewell site distributions in the lower Illinois valley.
6. The modestly sized mounds, after decades of cultivation, are now spread out over an approximately 25 meter diameter circular area and a 20×40 meter oval area based on topography, only (Jarrod Burks, personal communication, 2003). Their original areal expanses would have been significantly smaller.
7. It is also likely that at least the Mound City cemetery served as a burial grounds for leaders from multiple, local symbolic communities (Carr et al., Chapter 13).
8. Romain analyzed a rectified USDA aerial photo of the Cedar Bank works. He found that if the earthwork was a square, with all sides equal to the intact eastern wall of the works, then given the azimuths of the wall segments that appear on the air photo, the diagonal southeast–northwest axis of the Cedar Bank Square extends along an axis of 125.5° in one direction and 305.5° in the other. The diagonal axes through opposite corners of the squares of other earthworks in the Scioto–Paint Creek area are oriented similarly. These squares and the azimuths of their diagonal axes in each direction are as follows: Hopewell (123.0/303.0°), Anderson (120.5/300.5°), Mound City (119.0/299.0°), Seip (123.2/303.2°), and Hopeton (121.9/301.9°) (William F. Romain, personal communication, June 11, 2003).
9. Squire and Davis's (1848) maps of the earthworks in the Scioto–Paint Creek area vary in the accuracy of their directionality from contemporary measurements between 2 and 12 degrees, depending on the site. Although these accuracies are not good enough to determine the orientations of the earthworks to specific celestial events, they are sufficient to say whether Frankfort and Works East are oriented differently from each other and from other earthworks in the vicinity. The differences in orientation shown by Squire and Davis are greater than their mapping error levels.
10. The similarity of the Anderson earthwork to Mound City in size and morphology suggests their similar time of construction according to seriation principles developed by DeBoer (1997:232). He has shown a reasonable association between the morphology and the size of earthworks as wholes and between these traits and the morphology and size of their component shapes. These associations, coupled with some chronometric information, suggest that the earthworks can be seriated over time according to these traits.
11. An Adena circular earthwork with a diameter of 500 square feet has an area of 4.5 acres, which is larger than the 3.5 acres enclosed in the Scioto Hopewell Tremper earthwork. The charnel house under the Tremper mound contained about 375 deceased persons—enough to constitute a small sustainable breeding population. Between 136 and 1,175 persons, from three to five social units, are estimated to have gathered at the earthwork (Weets et al., Chapter 13)—within the range of a local symbolic community, if not a sustainable community.
12. Prufer (1964a:74) concluded that all persons buried in the "great" Ohio Hopewell burial mounds were privileged and that places of disposal of commoners had yet to be found.
13. The large, loaf-shaped mounds considered here, and their numbers of burials and of gatherers, respectively,

are as follows: Hopewell Mound 25 (98, 580), Seip–Pricer (110, 229), and Edwin Harness (183+, and unknown). The smaller, isolated mounds, and their numbers of burials and of gatherers, respectively, are as follows: McKenzie (10, 17), Rockhold (5, 13), Ginther (0, 12), Bourneville (11, 10), and Shilder (1, 4).

14. Alternative cultural interpretations that were ruled out empirically for the three burial clusters under each of the Hopewell 25, Seip–Pricer, and Edwin Harness mounds include the following: that they were different rank groups, that they were places of burial of leaders versus nonleaders or leaders of particular kinds, that they contrasted in other kinds of social roles, that they comprised different age sets or gender groups, that they differed in how the deceased died and social categories of death, and that they varied in the land of the dead to which the deceased was thought to have gone.
15. The sizes of burial clusters under the Pricer mound at Seip are 47, 37, and 18 individuals. The sizes of burial clusters in three rooms under the Conjoined mound at Seip are 24, 19, and 0 individuals. The sizes of burial clusters under the Edwin Harness mound at Libery are 68, 48, and 22 individuals. The sizes of burial clusters under Mound 25 at Hopewell are 35, 13, and 30 individuals.

Gathering Hopewell

Society, Ritual, and Ritual Interaction

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