THE WRIGHT MOUND REEXAMINED: GENERATIVE STRUCTURES AND THE POLITICAL ECONOMY OF A SIMPLE CHIEFDOM

Andrew J. Shryock

ABSTRACT

An effort is made to interpret burial data from the Wright Mound in both formal and processual terms. Special attention is given to aspects of exchange and alliance as they operate over time. The idea of "simple chieftaincy" is developed as an analytical device which identifies the generative structures of political economy. The construct is shown to account for certain temporal patterns within the Wright Mound data. Its general applicability to Late Adena and other simple, nonegalitarian social formations is suggested.

Introduction

I have focused this essay on two concerns: (1) the nature of political economy within simple, nonegalitarian societies and (2) the generation of rank within a specific Late Adena community. The term "generation" may require elucidation. Itrefers in this instance not to the genesis or evolution of a sociopolitical form, but to the manner in which that form is structurally constituted and actively reproduced. For our purposes,

Generation may be defined as the process of interaction between systemic variables which results in a specific set of "surface" relationships at a given point in time.

Rather than attempting to reconstruct whole systems... a generative approach selects for analysis patterned sets of ecological relationships or phenomena of interest, configurations of social relations, or their commensurable artifacts, etc. Observed patterns at any one point in time may be seen as end-states of the cumulative interaction of social or ecological processes and scheduling sequences, where the end-states are represented by spatial structures...or other analytically defined social structures (social formations, modes of production, means of subsistence, economies). (Ellen 1982:258, 227).

This definition stresses a synchronic aspect: the "end-state," the "given point in time." Its object is a conjuncture of events and processes. Its essen-
tial referent, however, is the course those events take through time and the manner in which processes interact in a temporal sequence. The formulation assumes diachrony. One need only add that, given the persistence of particular infrastructural relationships, interactions between systemic variables will produce a specific range of surface relations through time. Because it incorporates this temporal aspect, a generative emphasis will enable us to approach the Adena material along two analytical dimensions: the formal (i.e., as a set of structural relationships) and the processual (i.e., as change within a set of structurally related elements).

The point of analysis, then, is to construct a model which accounts for the operation of a social system as it moves through time—a system which, in its formal respects, articulates patterns of exchange and alliance with a structure of rank. The model is intended to make sense of a familiar data set: the Wright Mound, an Adena mortuary site near Mount Sterling, Kentucky. In its basic design, however, the construct may be applicable to other ranked societies, especially those that have elsewhere (e.g., Steponaitis 1978; Carneiro 1981; Wright 1984) been called minimal or simple chiefdoms. Before further defining terms, the available data should be examined and explicit assumptions made about the organization of the Wright Mound community.

Data and Assumptions

The Wright Mound material consists of fourteen burials and their associated artifacts. The mound itself was conical, 190 by 170 feet at the base and 31 feet high. It was built in four distinct stages, each intended to cover a previous arrangement of burials. The first burial of a new stage appears to have been placed in the center of the mound, with subsequent burials encircling it. Tombs were large, oval or rectangular pits with log boxes or platforms at the bottom. The corpses were placed on a bark floor, sealed in soft clay, and covered with bark. In a few cases, an additional roofing of logs was added, allowing the tomb to be occasionally reopened.

Most individuals were buried with copper bracelets and shell disc beads; a few also had marginella shell beads. Other items included mica (perhaps used as clothing decoration), scatterings of red ochre, stone pipes, snake skeletons, and so on. Table 1 shows the individual allotments of burial goods. The character of these mortuary data will determine, in large part, the kinds of social processes discernible; nonetheless, it is possible to deduce the rough outline of Adena social structure from a brief look at aspects of local ecology, means of subsistence, and settlement patterns.

The human community associated with the Wright Mound was engaged in a specialized subsistence strategy of hunting, fishing, and gathering—what Caldwell (1958) termed "primary forest efficiency"—supplemented by the harvesting of seed crops. Although foraging received the greater part of subsistence effort even through Hopewellian times (Struver 1968; Caldwell 1971), expanding interest in cultivation during the Adena period undoubtedly affected patterns of work, economy, and social organization.

The crops tended by the Adena (sunflower, squash, marsh elder) grew most successfully along river and creek terraces, where they were kept in artificially dense stands. This style of gardening required greater labor investment than plant collecting, but it produced a resource that (unlike many wild foods) was predictable, concentrated in both space and time, and suitable to storage. For Adena communities, the benefits gained from exclusive rights to cultivated, water-side land would have outweighed and necessitated the costs incurred by limiting the access of neighboring groups. Such conditions encourage increased territorial definition within foraging ranges and, at the same time, reduce mobility (Dyson-Hudson and Smith 1978). In the Adena case, reliance upon stored foods advanced the course of sedentarization while allowing greater clusterings of population, to which the advent of large Late Adena villages attests.

The practice of territoriality gives rise inevitably to notions of ownership and exclusion. Among tribal peoples these concepts of property are typically framed in an idiom of kinship, and claims to resources are legitimized through membership in groups defined by principles of descent. One can assume on these grounds that Adena societies exhibited some form of descent group organization. I would suggest that: 1) villages were composed of a small number of lineages or clans; 2) minimal kin groups married exogamously and postmarital residence tended toward virilocality; and 3) local descent groups participated in a regional network of intervillage alliances upheld by marital exchanges and trade arrangements. Just as corporate descent groups are, in part, the product of territoriality, regional social networks are a product of the decreased mobility that territorial claims entail (Braun and Plog 1982). The contracting subsistence bases of Late Adena communities would often have undergone fluctuations in productivity. The extensive flow of trade goods which characterized Adena economies (and the inferred connections of kinship and alliance) can be understood as means to offset localized occurrences of scarcity and surplus (Ford 1974:394).

General Properties of Social Structure

Given these organizational features, we can place Adena communities within that range of societies exhibiting a characteristically tribal design: that is, segmental societies composed of structurally equivalent, kin-ordered groupings (Service 1971:132; Sahlins 1968:16). This taxonomic des-
ignation provides a base structure which will inform and place limits upon the construction of a model. I offer it not as a complete or even adequate representation of tribal society, but rather as an essential one—one that locates the principle of tribal society against which chiefly polity operates and through which its structure is conditioned. The allusion here is to the interplay of centricity and segmentarism, or, stated otherwise, to the generation of vertical differentiation within a strongly horizontal social framework.

**Horizontal Differentiation**

The segmental (or horizontal) plan of the tribe can be depicted as a hierarchy of encompassed and encompassing units, usually a combination of genealogical and quasigenealogical categories (e.g., lineages, clans, phratries, moiety). It is important to realize that this hierarchy is one of inclusiveness alone; that is, encompassing units are larger, but they display no emergent qualities. A common organizational dynamic, one of inclusion and exclusion, pervades the tribal structure at all levels of segmentation.

The operation of the horizontal dimension can thus be adequately characterized by reference to its primary conceptual unit: the minimal segment (in most cases, the local lineage). Encompassing structures rarely, if ever, possess political or economic functions which cannot be accounted for by processes occurring at this “lower” level of organization. In reality, “no entity above the primary segment exists as such, but it is only called into consciousness or being by reference to its genealogically equivalent segment” (Sahlins 1961:329). Higher orders of segmentation consist in the elaboration and extension of principles defining affiliation in minimal segments and are arranged conceptually by the logic of oppositional balance which “governs” relations between lineages. From an operational standpoint they represent structurally redundant features; their inclusion in an operational model would increase its complexity without commensurably enhancing its explanatory power.

**Vertical Differentiation**

Vertical differentiation exists whenever social groupings at different hierarchical levels evince emergent, irreducible properties and perform functions which cannot be explained by reference to lower-level events or processes. Unlike the hierarchy of horizontal differentiation, which is only inclusive, that of vertical differentiation is, in varying degree, governmental; that is, actions undertaken at one level of organization regulate, predispose, or induce actions taken at other levels. Whereas the encompassing units of the tribal design are smaller in number yet larger in constituency, vertically differentiated units tend to be smaller in both size and number. Schematically, then, vertical differentiation yields a pyramidal structure. In terms of form it represents a fundamental departure from segmentarism. In processual terms it engenders what could be labeled a nonegalitarian tribal design, one in which interacting groups remain kin-ordered but are no longer structurally equivalent.

**Mortuary Analysis I: The Formal Dimension**

**Some Clarifications**

The particular forms in which vertical differentiation was expressed and organized within the Wright community should be manifest, albeit indirectly, in the patterned aspects of its burial program. I will take as given “that the form and structure which characterize the mortuary practices of any society are conditioned by the form and complexity of the organizational characteristics of the society itself” (Binford 1972:325). The mortuary forms and structures given attention here pertain largely to the demography of the burial population, patterns of burial segregation, energy expended in grave preparation, and so on. Social structures entail spatial structures; hence, the layout of the Wright community’s burial program should impart general attributes of its social organization.

In addition to indexical data (which merely accompany a structure or practice), the Wright material contains overtly symbolic items intended to project a persona or define a social identity. I will make limited use of these data as symbols; that is, I will not explore the significance of ritual objects or “sociotechnic” artifacts. I plan instead to use copper bracelets and shell beads—the commonest of these grave goods—in a strictly indexical fashion in order to analyze unseen processes of political economy.

I will consciously avoid dividing the burial population into status grades or affixing to them divergent social identities. Although there is significant variation among these individuals with reference to several criteria, it may well be variation within a type. Once again, examination centers on a system as it operates over a span of time. It would be a mistake to read temporal fluctuations in material flows and their structural effects as static, institutionalized differences in rank.

**The Question of Rank**

At this point, a further assumption must be made: the individuals buried in the Wright Mound constituted a distinct social group, or section of it, and their placement in the mound was determined by membership in this
group. I base this claim upon the fact that mortuary segregation typically follows lines of social differentiation. As those lines have been drawn in the discussion of tribal social structure, the individuals in question probably represent a descent group of some kind. According to Goldstein (1976:61): "If a permanent, specialized, bounded disposal area for the exclusive dis- posal of a group's dead exists, then it is likely that this represents a corporate group which has rights over the use and/or control of crucial but restricted resources." This proposition refers to a corporateness defined by economic cooperation and mutual rights to ecological resources. I would assert, however, that Goldstein's dictum can be extended to the sphere of social values, to the control of a restricted resource of another sort: namely, the prestige and power associated with superior social status. If the extension is valid, mortuary segregation can be interpreted as an instance of vertical differentiation within the Wright community. To test this idea, whether a structure of rank actually existed at the site and whether ranked groups were actually segregated in burial must be determined.

Status ranking is one expression of vertical differentiation. In keeping with precedent, I will follow Fried's definition: "A rank society is one in which positions of valued status are somehow limited so that not all those of sufficient talent to occupy such statuses actually achieve them" (1967:109). The product of rank, as noted previously, is a pyramidal social form, the limited factors being power, prestige, and their material correlates. Many of the methods used to detect rank through analysis of mortuary remains assume pyramidal hierarchy and proceed to elicit its consequences in mortuary practice. This logic is evident in Tainter's (1977) use of energy expended in burial ceremonies and Peebles and Kus's (1977) more general treatment of subordinate and superordinate dimensions.

It would be difficult in the present case to make precise applications of these analytical schemes. The Wright Mound burial sample represents only a biased fraction of the total population interred throughout the community's history. O'Shea (1984:38) has observed that "a mortuary population will exhibit demographic . . . characteristics reflecting those of the living population." A glance at the age and sex distributions of the Wright burials (Table 2) reveals immediate aberrations from a normal pattern. The sample skews toward younger adults; child and infant burials are totally absent; and of the older individuals, all are male.

Clearly, the criteria of age and sex, however loosely applied, determined placement in the Wright Mound. The distribution resembles a common Adena pattern: burial segregation based primarily upon age and, later in life, also upon sex. (Older females are usually set apart from other adult burials.) It is not necessary to conclude from this fact that considerations of rank had no influence upon mortuary segregation. More likely, age and sex operated in conjunction with rank as principles organizing mortuary practice. In other words, higher ranking groups separated from "commoners" might also have been internally segregated along traditional lines of age and gender, the inequalities of more egalitarian societies. One would expect such patterns especially among simpler-ranked societies, wherein burial forms reflect ideologies of rank which elaborate upon yet cannot fully re-shape a social ethic or, indeed, a social structure that remains in essential respects egalitarian.

It may be difficult, for this reason, to distinguish archaeologically between well-developed Big Man societies and small-scale chiefdoms. A good deal of status variability should persist in simpler nonegalitarian societies, blurring the conceptual divisions of rank. It is with this in mind that I emphasize mortuary segregation as a material sign of ranked social structure. Big Men come and go, but a chiefly lineage is durable, as are the social identities its members inherit. A sense of corporateness and status superiority would favor the occurrence of separate burial treatment for high-ranking individuals.

Since only a subset of the burial population is available, the existence of this dual pattern must be left to inference. The inference can be strengthened, however, through examination of the internal structure of the available sample. If the Wright Mound burials represent a set of highly ranked individuals, they should display characteristics of what Peebles and Kus (1977) term the superordinate dimension, while lacking those of the so-called subordinate dimension.

The first, superordinate dimension, must be a partial ordering that is based on symbols, energy expenditure, and other variables of mortuary ritual, and which is not simultaneously ordered on the basis of age and sex. That is, membership in the class and some variability within the class are based on the ascriptive qualities of an individual's genealogy . . .

The second, subordinate dimension, will be a partial order based on symbols, energy expenditure, and other variables, which generally will be ordered on the basis of age and sex. That is, beyond the given features of age and sex, variability in this dimension will reflect achievement through life histories of individuals. (431)

Thus, in the sample, if status is largely achieved, males and older individuals will have generally higher status than females and younger individuals; if status is largely ascribed, some females and younger individuals will have higher status than some men and older individuals.

Relative status can be operationalized as time expended in grave preparation. Because persons of higher rank have larger personal networks and hold more people in relations of social debt, their burial ceremonies will receive wider participation than do those of low-status individuals. I will
assume that the time needed to build a Wright Mound tomb correlates directly with the number of people taking part in construction and subsequent funerary rituals. Hours invested in grave preparation should, therefore, provide an indirect measure of overall energy expended in an individual's burial treatment. Tainter (1977) neatly summarizes the relation between this latter value and social status.

A large array of status relationships, which is characteristic of persons of high rank, entitles the deceased to a larger amount of corporate involvement in the act of interment, and to a larger degree of disruption of normal community activities for the mortuary ritual. Both the amount of corporate involvement and the degree of activity disruption will positively correspond to the amount of human labor expended in the mortuary act. Directionally, higher social rank of a deceased individual will correspond to greater amounts of corporate involvement and activity disruption, and this should result in the expenditure of greater effort in the interment ritual. (332)

Table 3 suggests that a simple pattern of achieved status did not prevail in the Wright community. Most women outrank men, some young outrank the old. The distance between those of highest and lowest status is extreme, certainly more than individual differences in genealogy would warrant. One could argue that the mound contains both commoners and high-ranking persons. The argument is deceptive, however, in that it divorces the data from their temporal sequence and ignores the larger sociopolitical context in which they were produced. The lowest-ranking males, for instance, occur late in the series and complete a general decline in male status over time (Fig. 1). The inferior position of these men does not necessarily indicate a static, subordinate rank, but may instead signal economic processes which, in time, diverted flows of material goods from the Wright community, thus degrading the position of the local elite. Likewise, the status disparities between males and females should not be interpreted simply as internal and institutionalized gradations of rank. The relatively high status of females suggests a pattern of hypogamous marital exchanges through which local elites initiated and maintained political alliances. Given these possibilities, it would be misleading to attempt to fit the social identity of the Wright Mound group into a nicely defined quantitative expression; rather, the material counterparts of this social identity should be expected to undergo temporal variation in response to the changing political and economic fortunes of the local community.

Rank and Sociopolitical Form

Although these data lend themselves to multiple interpretations, the case for some form of minimal ascriptive ranking is sufficiently strong. The persons buried in the Wright Mound appear to represent a high-status group, perhaps a chiefly lineage, whose common identity consists in their occupation of a superior position within a simple-rank hierarchy. The pattern of vertical differentiation probably resembled the two-tiered pyramid common to minimally ranked societies: a chiefly figure and his/her lineage set above a number of commoner lineages. I take this structure to characterize a sociopolitical form—the simple chieftdom. In evolutionary perspective its development marks the first instance of what could be called, in a strict sense, "government," that is, a "permanent agency of coordination" (Service 1971:144).

According to Steponaitis (1978), simple chieftdoms are characterized by only one level of superordinate offices. Chiefs who fill these offices are only part time administrators, and are not exempt from the manual labor of subsistence production. Because the chief's household is expected to be self-sufficient, a chief does not live off the surplus food and gifts brought him by his subjects; most of the surplus collected gets distributed back to the populace. The flow of material goods between hierarchical levels is balanced, or sometimes even weighted in favor of the commoners. The chief is often forced to give away more than he takes in, the difference being made up by his household having to work harder at production. (420)

Such are the checks and balances. Though the chief rises above the fragmentary character of tribal design and, to an extent, subverts it, he remains fixed within a kin-ordered social structure. What influence he may possess derives largely from his ability to marshal the labor and support of kinsmen. His primary constituency, the economic and political weight behind his position, often centers within his own lineage. The segmental disposition of a lineage-based political economy limits the vertical differentiation of material flows and prevents their consolidation within the superordinate sector. The tribal base of structurally equivalent segments, though modified, has not been transformed into an alignment of superimposed and structurally dissimilar classes. Hence, the social obligations of kinship both constitute and constrain simpler forms of chiefly polity.

Mortuary Analysis II: The Processual Dimension

It is necessary at this point to delineate the generative processes which, against these horizontal forces of organization, maintain a structure of rank and reproduce it over time.

The Structural Limits of Social Process

To begin, I should state that once in place, a social formation sets the terms of its own reproduction; that is, an existent set of structural relations—in this case, a sociopolitical form—necessarily conditions the processes which
generate, preserve, and transform it. The construction is appropriately circular. It poses social form as a parametric constraint on social process, and social process as the creation of social form. Structure, then, is more than a static representation of an operational dynamic (in which case it would represent merely an analytical fiction) but is in fact a determinate arrangement of operational processes which in itself holds causal power.

The social form in question is broadly characteristic of simple chiefdoms and, I would contend, of the Wright community as well. Its structure rests upon a disproportional movement of material goods and social values toward a vertically differentiated center. The actual distribution of these commodities may equalize over time, yet as Sahllins (1972:209) observes, "centricity is built into the structure." An ideal depiction of this social form, and the course of material flows through it, is given in Figure 2.

Such configurations cannot persist tightly bounded social systems. Unlike more complex chiefdoms, which reduce commerce across their borders, simple chiefdoms depend for their survival upon interaction with similarly structured units, especially when such polities encompass only two or three villages outside their chiefly center. Chiefdoms of this size are well represented ethnographically, yet they are rarely given adequate treatment in general discussions of chiefly society. Carneiro (1981), for instance, insinuates their rarity and thereafter ignores them—this despite hundreds of these truly minimal chiefdoms in aboriginal California alone. Many of the Californian polities had as few as two subordinate communities within them (Bean 1978).

In a political order of this scale the chiefly establishment must draw its surplus from a narrowly delimited subsistence base; as a result, the movement of goods toward the administrative center, already fractional, is easily disrupted by the vagaries of production. Moreover, the obligations of kin reciprocity continually reverse and decentralize the "upward" flow of materials. It is perhaps for these reasons that Carneiro (1981:47) calls the smallest of the minimal chiefdoms "fugitive and transitory." Their internal economies lack the intensity and scale required to sustain, over the long term, a permanent differentiation of chiefly from commoner ranks; the structural impediments to centricity limit the chief's capacity to intensity production. Given such conditions, alliance and exchange between chiefly elites come to play an essential part in the integration of regional economies, the intensification of local-level production, the regulation of material flows, and ultimately, the generation of political hierarchy.

**Interpolity Relations: Exchange and Alliance**

Within small-scale chiefdoms, the mechanism of interpolity exchange assumes more than a simple calculus of supply and demand, although similar push and pull factors are basic to its function. Both external and internal economy are structured by three articulated, mutually conditioning aspects:

1) A social economy of status—in which intangible social values of relative status and prestige are produced and interrelated with their material correlates (in this case, shell beads and copper);

2) A practical economy of subsistence—in which food is produced and distributed;

3) A political economy of rank—in which generative processes of vertical differentiation cause status values, their material correlates, and surplus production to move differentially toward the superordinate sector.

Each aspect exhibits a peculiar organizational dynamic, responds to a distinct array of proximate causes, and exercises an independent effect on the constitution of the sociopolitical system. Yet their influences upon the operation of that system are not equally weighted. As I hope to show, it is the political economy of rank which links the creation of status to the production and distribution of food, and directs both toward the ends of local elites.

The Wright Mound data provide clear indications of interpolity exchange at work. Participation in trade networks, for instance, is amply evidenced by the prevalence of burial goods of foreign origin; namely, bracelets of Lake Superior copper and beads of Gulf Coast shell. Marital alliance, the political vehicle of exchange, can also be inferred from the marked status disparities between highest-ranking males and females. It is possible, considering the size and contents of their tombs, that most of these women married in from a higher-status community, one which held a superior position within a local alignment of political units.

Though other marital arrangements were no doubt possible, hypogamous unions would have conferred immediate benefits upon the ranking members of the Wright community. Such marriages are, in their simplest terms, good politics. For wife-givers they insure the fealty and social indebtedness of status inferiors. For wife-takers they bring influential rivals into relations of affinity and subject them to the promptings of kinship reciprocity. Subsequent exchanges between high-status affines replenish the working capital of chieftaincy, which is continually dissipated by the extractive demands of local kinsmen and commoners. In this way, alliance opens and maintains a flow of goods between chiefly establishments, thereby creating a superordinate economic sector fueled by, yet partially insulated from, the decentralizing tendencies of localized subordinate sectors.

**The Political Economy of Ceremony**

The interconnection of superordinate economic sectors brings into relation not only prominent individuals but entire sociopolitical systems as well; accordingly, exchanges between local elites become, as it were, primitive.
Discerning Social Process in Mortuary Remains

In its ideal form the model above depicts a closure of politicoeconomic process which is, of course, artificial. In reality, the causal sequence may be invaded at a number of points by purely extraneous influences (warfare, shifts in trade routes or rates of supply, etc.). Nonetheless, such external forces will inevitably feed into the existent cycle and produce calculable effects. Simply put, the relations within the model are implicational. They should therefore generate a specific range of empirical associations (i.e., “surface relationships”).

First, and most obviously, the operations in question will produce a direct correspondance between the amount of wealth items flowing through a sociopolitical unit, the relative status accorded its chiefly establishment, and the size of a high-status individual’s political following or personal network. Hence, throughout the Wright Mound sequence, the previous measure of relative status (hours expended) should positively covary with the quantity of shell and copper placed in tombs. Table 4 summarizes the distribution of these trade goods within the burial sample.

Figure 4 shows that, as expected, the overall correlation between interred wealth and hours given to grave preparation is positive. The pattern reflects the articulation of rank hierarchy and material flows and, perhaps, grants us a general index of structural centricity. Though the social identity (e.g., as member of chiefly lineage) of the Wright Mound individuals may have been fixed through time, the prestige and personal influence attached to this identity apparently rose and fell with varying intensities of exchange and, probably, of alliance as well. The centralizing processes of chiefly political economy both predict and dictate this pattern, though they cannot explain its particular causes in the Wright Mound case.

The presence of high-status, possibly in-married females reveals an empirical relation of another kind. Since bracelets and beads probably served as media of bride price payment, fluctuations in their supply would have affected the ability of local elites to arrange prestigious marriages. The number of bracelets interred with an individual provides a rough indication not only of personal status, but also of the availability of these items at the time of burial (per Winters 1968). If the Wright community held an inferior or intermediate position within a local network of marital alliance, as sex-based status disparities imply, then increases in its supply of trade goods would have permitted its chiefly establishment to finance marriages with females of higher relative status, thus enhancing its position within the prestige hierarchy. Therefore, that an increase or decrease in the amount of copper and shell placed in males’ burials would be followed in time by a similar change in the amounts placed in females’ burials should be expected. (Women married around the time of a given man’s death would enter the burial sample at later dates; thus, the temporal delay in effect.) Here I am using quantity of interred copper and shell as an indicator of status; the relation would apply equally, however, to time expenditures.
Reconstruction of Temporal Process

Taken together, the factors discussed thus far enable a tentative reconstruction of the Wright community's development. For males the clear pattern is one of general decline in status and wealth, marked by a brief upturn toward the end of the second stage. The position of females also begins to improve at this point and soon eclipses that of the represented males. Although the indicators of female status and wealth undergo a parallel decline in the third and fourth stages, it is less pronounced. These trends point to a surge in material flows midway through the burial sequence. The Wright community may have derived short-term advantage from this influx of goods, but the rising status of females suggests that another community (a partner in marital exchange) controlled the flow and was its primary beneficiary.

In this regard our model bears an interesting consequence: in a local network of alliance and exchange between small-scale chiefdoms, a phase of economic growth within the superordinate sector of one polity, if sustained over time, would tend to depress the economies of other sociopolitical units within the network. Through articulation, positive feedback in loop A creates and is created by negative feedback in loops B and C. This spiral may be initiated by an infusion of trade goods, a series of unusually large production surpluses, continued production failures in surrounding communities, and so on. The result would be an increase in political influence and available labor for one chieftain, a loss of both for others. In the Wright Mound case it would seem that, for whatever reasons, a local polity entered such a growth cycle toward the latter part of the second stage, thereafter diverting trade goods and status values from the Wright community's chiefly establishment.

In all probability, the highest-ranking males in the Wright community (those absent from the mound?) were closer to high-ranking females in both social status and wealth. If so, we may assume that toward the end of the community's development, when the gap between females and represented males widens considerably, chiefly figures were bestowing fewer goods on an ever-tightening circle of kinsmen. Such a diminution of chiefly largess would have lowered the standing of the chief within his own lineage and in the eyes of commoners as well. Sometime during the fourth stage, the Wright community ceased to function as a chiefly center and was either absorbed by a newly dominant local polity or simply reverted to a more egalitarian social order.

The pattern brings to mind the gunlao-gumsa oscillations observed among the Kachin of Highland Burma (Leach 1954). In this system, chiefly (gumsa) societies rise up intermittently, envelop neighboring settlements, and guarantee their fealty through the establishment of affinal debt relations. The growth of stable, regional hegemonies is prevented, however, by violent insurrections which abruptly reinstate egalitarian (gunlao) social forms. The Wright Mound perhaps bears witness to a similar course of events. I would suggest, merely as conjecture, that Late Adena chiefdoms cycled between phases of expansion and contraction in which polities came to dominate their local networks, extended and intensified exchange/aliance relations, and carried politicoeconomic processes to a point of diminishing returns, thereby forcing the network's collapse or a reduction in its density and scale. Such expansions probably entailed a purely horizontal spread of influence, in most cases without the direct annexation of separate polities. Growth would likely have been checked by the inability of chiefs to secure a centralized flow of goods or alleviate the economic stresses imposed upon elites within satellite polities (social debt, population movements, exchange imbalances, for example). The immediate cause of demise was perhaps more often a breakdown and realignment of the interpolity alliances binding elites than a gunlao-type rebellion. (The appearance of mica in the final stage of Wright Mound burials may signal such a shift in channels of exchange.)

The intensification of maize horticulture would have broken these cycles or lengthened them, allowing for the enlargement of chiefly domains, attendant increases in vertical differentiation, and the gradual internalization of politicoeconomic process. The model presented here represents a base structure conditioning these developments. With refinement it may be of use in treating the initial transformations in the evolution of complex, Mississippian societies.

Conclusion

It would be impossible to "prove" these claims with the data at hand, and I will resist further speculation. The articulation of subsistence production
and the superordinate economy of status, essential to the operation of simple-ranked societies, cannot be adequately reconstructed. We must settle instead for its surface relationships, a good deal of inference, and perhaps too little in the way of firm conclusions. The utility of the ideas presented here must be determined in their application to other Late Adena materials, or to the simple chiefdoms of another time and place. Our model, itself but a structure of implications, is fortunately prone to the proofs and disproofs of particular test cases.

In the end, however, it is the kind of analysis undertaken here, not its specific conclusions, which is of interest to the archaeology of social evolution. Generative models offer a means to address the proximate mechanisms through which prestate political structures are produced and transformed, as opposed to a more traditional emphasis upon broad, developmental changes. Analysis of this sort creates a much-needed result: a political economy which grants precedence to the internal dynamics of social forms—that is, one which tempers the current preoccupation with external forces. It is only through the study of local-level processes, the immediate structures of social reproduction, that broad-scale political changes (e.g., the emergence of complex chiefdoms, social stratification, and the state) can be accurately modeled and more fully understood.

Acknowledgments

I am grateful to David Anderson, who read and commented on an earlier version of this paper, and to Henry Wright, who offered some much needed clarifications and revisions. I should confess, however, that I am not an archaeologist. Despite the help of those who know better, a few of my errors have undoubtedly slipped by. The responsibility for each remains my own.

University of Michigan
Department of Anthropology

Fig. 1. Sex-based temporal distribution of hours expended in grave preparation.
Fig. 2. Ideal pattern of material flows within a simple chiefdom.

Fig. 3. The superordinate sector of chiefly political economy. The model is an adaptation of ideas developed by Friedman (1976) and Ruddell (1973).

Fig. 4. Correlation of hours expended and units of copper and shell interred. Burial 5 has been omitted from the graph. It was uppermost in the mound and lost most of its pit volume to erosion.
TABLE 1
Burials and Contents

<table>
<thead>
<tr>
<th>Phase</th>
<th>Tomb #</th>
<th>No. of Logs</th>
<th>Pit Vol.</th>
<th>Age</th>
<th>Sex</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>5</td>
<td>4</td>
<td>80</td>
<td>J</td>
<td>F</td>
<td>4 Cu Bracelets, Mica, Conch Shell, disc beads.</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>20</td>
<td>560</td>
<td>A</td>
<td>?</td>
<td>4 Cu Bracelets, Mica, Ocher.</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>13</td>
<td>600</td>
<td>Y</td>
<td>F</td>
<td>2 Cu Bracelets, Cu Headpiece, Disc Beads.</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>4</td>
<td>150</td>
<td>Y</td>
<td>M</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>4</td>
<td>210</td>
<td>Y</td>
<td>M</td>
<td>2 Tubular Pipes, 2 Combs, 2 Spatulas, 1 Stone.</td>
</tr>
<tr>
<td>III</td>
<td>15</td>
<td>6</td>
<td>120</td>
<td>Y</td>
<td>M</td>
<td>Disc Beads</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>9</td>
<td>1400</td>
<td>Y</td>
<td>F</td>
<td>4 Cu Bracelets, Disc &amp; Marginella Beads, Sandstone Cylinder.</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>7</td>
<td>450</td>
<td>O</td>
<td>M</td>
<td>4 Cu Bracelets, Disc Beads, Snake Skeleton.</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>9</td>
<td>810</td>
<td>Y</td>
<td>F</td>
<td>2 Cu Bracelets, Disc Beads.</td>
</tr>
<tr>
<td>II</td>
<td>19</td>
<td>6</td>
<td>300</td>
<td>Y</td>
<td>F</td>
<td>Disc Beads, Ocher.</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>8</td>
<td>240</td>
<td>O</td>
<td>M</td>
<td>1 Cu Bracelet, Disc Beads.</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>13</td>
<td>420</td>
<td>Y</td>
<td>M</td>
<td>2 Cu Bracelets, 1 Tubular Pipe, Ocher, Disc Beads.</td>
</tr>
<tr>
<td>I</td>
<td>18</td>
<td>9</td>
<td>250</td>
<td>O</td>
<td>M</td>
<td>2 Cu Bracelets, Disc Beads, Snake Skeleton.</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>8</td>
<td>540</td>
<td>J</td>
<td>M</td>
<td>1 Cu Bracelet, Disc &amp; Marginella Beads, Snake Skeleton.</td>
</tr>
</tbody>
</table>

No. of Logs: those around the burial, not including roofing.
Pit Vol.: volume in cubic feet as measured from plans and sections.
Age: C=child (5–12), J=juvenile (13–17), Y=young (18–35), O=Old (35–55),
A=adult (approx. 18–55).
Cu: copper. All beads are of shell.

For a more detailed catalogue of burial associations see Webb, 1940.
### TABLE 2

<table>
<thead>
<tr>
<th>Age and Sex Distributions</th>
<th>Child (5–12)</th>
<th>Juvenile (13–17)</th>
<th>Young (18–35)</th>
<th>Old (35–55)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Female</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>2</td>
<td>8</td>
<td>3</td>
<td>13</td>
</tr>
</tbody>
</table>

The occupant of tomb 5 (not included above) was an adult of undetermined age and sex.

### TABLE 3

<table>
<thead>
<tr>
<th>Hours Expended in Grave Preparation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomb</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>23</td>
</tr>
<tr>
<td>22</td>
</tr>
<tr>
<td>21</td>
</tr>
<tr>
<td>24</td>
</tr>
<tr>
<td>19</td>
</tr>
<tr>
<td>18</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>17</td>
</tr>
<tr>
<td>26</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

### TABLE 4

<table>
<thead>
<tr>
<th>Quantity of Shell and Copper Interred</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomb</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>24</td>
</tr>
<tr>
<td>23</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>22</td>
</tr>
<tr>
<td>8</td>
</tr>
<tr>
<td>16</td>
</tr>
<tr>
<td>21</td>
</tr>
<tr>
<td>18</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>19</td>
</tr>
<tr>
<td>15</td>
</tr>
<tr>
<td>26</td>
</tr>
<tr>
<td>17</td>
</tr>
</tbody>
</table>

Quantity of shell and copper was calculated as follows: disc beads = 1 unit; marginella beads = 2 units (by virtue of scarcity); copper bracelets = 1 unit; copper headpiece = 2 units.

Time expenditures were calculated as follows: 10 minutes per cubic foot of pit volume; 90 minutes per log.
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Ford, R.

Fried, M.

Friedman, J.

Goldstein, L.

Kan, S.

Leach, E.

O’Shea, J.

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Steponaitis, V.

Streuer, S.
Tainter, J.

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Winters, H.

Wright, H.

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