Monopolistic control over goods and the political stability of the Moundville chiefdom

Paul D. Welch

Paper presented in a symposium, "Approaches to Mississippi Period Economy in the Southeastern U.S.," 56th Annual Meeting of the Society for American Archaeology, New Orleans, LA, 24-28 April, 1991

Introduction

In briefest terms, the Moundville chiefdom (see Figures 1-3) originated around AD 1050, quickly came to dominate west central Alabama and possibly more distant areas, and around AD 1500 began to decline in regional prominence, population, and strength of internal social inequality. In this scenario, the Moundville chiefdom was the prinicpal figure in the regional political scene for at least 350 years, without interruption. This view of Moundville emphasizes the prominence and stability of the polity, two aspects of the Moundville chiefdom that set it apart from the majority of Misssisippian polities. In this paper I review the "standard picture" of Moundville, and propose a potential reason for this unusual stability.

Structure of the Moundville Economy

The standard picture of the Moundville polity is a collage cooperatively assembled by a group of archaeologists loosely focused around C. S. Peebles. Periodically throughout the 1980s, Peebles (1981, 1986, 1987a, 1987b), Steponaitis (1983a, 1983b, 1986, 1989), and I (Welch 1983, 1986, 1989, 1991) pasted new scraps into the collage and tinkered with the rest until everything seemed to fit together in a tight composition. Currently, the collage emphasizes the Moundville paramount's control over several sectors of the polity's economy. Such control is visible principally in imports and manufactures, rather than in the subsistence sector.

The "received wisdom" of the 1960s and 1970s (Service 1971, 1975), of course, was that the fons et origo of chiefdoms was the critical economic role of the chief as redistributor of goods from geographically differentiated, specialized producers. By every measure we have yet devised, Moundville falsifies this expectation. These measures include catchment analysis, study of carbonized plant remains, and analysis of the patterned distribution of deer body parts.

Analysis of the catchments (Peebles 1978:400-410; Bozeman 1982:275-291; Welch 1991:114-121) of the outlying sites within the chiefdom shows that all sites were environmentally similar. The known outlying settlements are all on the floodplain of the Black Warrior River, and have no visible differences in access to wild food resources (see Figure 2). There are differences in the amount of cultivable land within a 1 km walk of each site, but this is true only if you assume that farmers did not cross any water to get to their fields. If you make the more plausible assumption that farmers could cross oxbow lakes and the Black Warrior River in order to get to their fields, then all sites have similar amounts of cultivable land nearby. This is consistent with local self-sufficiency in food production, as is the correlation ($r = .57$, see Welch 1991:119-120) between the size of outlying sites and the fertility of their catchments. While none of this proves that settlements of the Moundville chiefdom were self-sufficient, these data are consistent with self-sufficiency and are clearly not what would be expected for a classic redistributional economy.

Botanical remains from Moundville and the one outlying mound site that has had substantial excavation conform with the hypothesis of self-sufficiency. The catchment of the outlying site, the White site, is moderately fertile but is so poorly drained (see Figure 4) that even in average years major portions of the catchment are too wet for successful maize planting (Welch 1991:121-122). If the economy of the Moundville chiefdom were redistributional, diet at the outlying sites ought to be largely independent of catchment characteristics. On the other hand, if the economy emphasized settlement self-sufficiency, then we would expect the diet at this outlying site to have less maize than the diet in drier areas. Currently, the only comparative data we have come from one part of Moundville itself (Scarry 1986). It is an open question whether the plant food diet at this part of Moundville is representative of the Moundville community as a whole; these are the only data available.

The data from Moundville and from the outlying sites are best examined through comparison of ratios that remove the effects of different volumes of flotation samples, different plant part-to-sediment ratios, etc. The boxplots in Figure 5 compare three ratios for the two sites:

1) The top pair of boxplots compares the ratios of acorn shell to hickory shell. The medians, plotted as "+", are very similar, and the overlap of the two pairs of parentheses (simultaneous 95% confidence intervals for the medians) shows that there is no significant difference between the two medians. All other things being equal, we can say that

acorns and hickory nuts were consumed in the similar proportions at the two sites.

2) The lower pairs of boxplots compare the ratios of hickory shell to maize cupules, and acorn shell to maize cupules. In both instances, the median of the values from the White site is significantly lower than the median of the Moundville data. All other things being equal, it appears that maize was a lower percentage of the diet at the outlying site than at Moundville. This is precisely what we would expect if this outlying site were dependent on its poorly drained catchment rather than on chiefdom-wide redistribution.

Analysis of animal bones from sites of the Moundville chiefdom reveals that at least some elite members of the society were preferentially provided with meat. First, Lauren Michals (1990) has shown that the faunal assemblages from several parts of the Moundville site itself are markedly different from each other. The sample sizes are low, but taken at face value these data show that different social segments of the Moundville community ate, or avoided eating, specific meats such as turkey and beaver. The second line of evidence for a connection between social status and meat consumption is the pattern of deer body part abundances at the only outlying mound site with excavated faunal remains. The bones came from a refuse deposit that included refuse from high status occupants of the site (Welch 1991:56-58). Compared to other body parts, upper hind limbs were present in greater than expected numbers, while upper forelimbs

were less abundant than expected (see Figure 6). Fragmentation and preservation biases can be ruled out as causes for this pattern (Welch 1991:88-98; see Scott [1981] and Jackson and Scott [1989] for analytic procedures). Several social factors may account for the pattern, including:

1) Upper hind limbs may have been consumed preferentially by elite persons throughout Moundville society.
2) Upper hind limbs may have been consumed preferentially by the elite at the outlying sites, while the upper forelimbs may have been passed upward to higher-ranking persons at Moundville.

Our picture of the Moundville chiefdom deals with craft production as well as subsistence production. Here, we have the same problem that confronts most Southeastern archaeologists: no preserved organic artifacts such as basketry, fabrics, cordage, leather, wooden tools, or even that most ubiquitous of historic Southeastern artifacts, the cane knife. We may note that site catchments do not confer on any site any environmental advantage in the acquisition of materials for organic crafts. We have not done the stone tool microwear studies that could tell us what people in different settlements actually did with the available organic raw materials.

We do have information about the production and distribution of nonorganic crafts. The raw materials for chipped stone tools were equally accessible from all sites, and there is nothing in the debitage from these sites that suggests any specialization of

production. Clays for pottery were also widely available. Lacking evidence to the contrary, we assume that most pottery was domestically produced, for domestic use. There is evidence for some specialized production of burnished vessels. Some of the burnished vessels are so similar in construction technique, shape, decorative motif, and the treatment of the motif that it is reasonable to conclude that the set of similar vessels was made by a single potter (or a single pottery team; Hardin 1981). Simple statistical analysis shows that a few of these potters produced a disproportionately large percentage of the burnished vessels (Welch 1991:139-144). Six large (max. 5.7 x 1.2 m), irregularly shaped, intensively fired (max. 25 cm thick) areas west of the plaza at Moundville (Peebles 1979:817-825; see Figure 7) may be the pottery firing areas of these specialist potters, though they could equally well have other functions or origins. I emphasize that these data indicate only that some pottery was produced by some kind of specialist; we do not know whether these were part-time or full-time specialists.

There is also evidence that production of ground stone axes was restricted to the Moundville site (Welch 1991:163-166). The stone--greenstone and other metamorphics--comes from sources at least 80 km distant, and at least some of it was brought in as blocks of raw material. Excavations at Moundville yielded axes in all stages of the production process. The absolute quantity of manufacturing debris is small, suggesting either that axe manufacture was only an occasional activity, or that debris was regularly cleaned away. Nevertheless, the manufacturing debris

found at Moundville is unmatched in character by the material from any of the other settlements in the chiefdom. In contrast, finished axes and broken bits thereof are found throughout the chiefdom: at Moundville, outlying mound sites, isolated farmsteads, and nonsite areas (fields?).

There is not much other reliable data on the production of crafts in the chiefdom. Impressionistic accounts by early excavators, and a few fragmentary finds suggest that sandstone "palettes" (Webb and DeJarnette 1942:287-241) and red stone pendants (Steponaitis 1983b:138, Fig. 10g) may have been made at the Moundville site, and that manufacture of shell beads may have been concentrated in one precinct of the site (Peebles and Kus 1977:442; Welch 1991:166-170). Comprehensive restudy of the Moundville artifacts may reveal whether such specialization existed, but the restudy is just beginning. To summarize the evidence for manufacturing in the chiefdom, there is evidence for some specialization of production of burnished pottery and ground stone axes, and in both instances the production appears to have taken place at Moundville itself.

Having examined the evidence for production activities within the chiefdom, let's turn to the evidence for control over the distribution of goods within the chiefdom. The best evidence comes from imports. There are literally dozens of kinds of artifacts found at Moundville that are either imports or are made of imported raw materials. These range from copper and marine shell objects, to marble chunkee stones, to a small carved amethyst human head, to shark teeth, asphalt, amber, and

obsidian. There are also literally dozens of varieties of diagnostic, imported pottery found at Moundville, both as whole vessels and as sherds recovered from sheet midden (Steponaitis 1983a; Welch 1989, 1991:171-172). In contrast, the outlying sites have yielded chips from Mill Creek chert hoes, a few projectile points made of north Alabama cherts, three pieces of galena, one copper ornament, and no diagnostic imported ceramics (DeJarnette and Peebles 1970; Bozeman 1982; Steponaitis 1986; Mistovich 1986, 1987; Welch 1991). Axes made of nonlocal stone are also found at the outlying sites. While the small scale of excavations at outlying sites partly explains the apparent paucity of imports at the outlying sites, this cannot explain the absence of imported pottery in the extensive surface collections from those sites. It is clear that access to the majority of imported goods was restricted to occupants of Moundville itself, and that at least some of the items of nonlocal materials (greenstone axes) that were found at outlying sites were made at Moundville itself.

The evidence for production and distribution of goods within the Moundville chiefdom has a clear pattern. Most subsistence goods and utilitarian items were produced by ordinary households throughout the chiefdom. Meat, at least, was provided to elite members of society by the commoners. A couple goods--polished axes and some of the burnished pottery--were only made at the paramount center. Imported goods were restricted almost exclusively to elite persons residing at the paramount center, with only small quantities of a few classes of goods being

distributed to outlying settlements. To put it succinctly, the subsistence economy was decentralized, but the economy of politically valuable goods was tightly centralized.

Dynamics of the Moundville Chiefdom

There are several sources of evidence about the political dynamics of the Moundville chiefdom. By "political dynamics" I mean the changing political fortunes of the chiefdom regionally, as well as the changing political fortunes of communities and factions within the polity. Most of the available evidence relates to the role of Moundville in the regional scene, and comes in the form of information about the changing abundance of imports through time. In this discussion I assume that the ability to import goods in general, and especially "elite paraphernalia," is related directly to the ability to maintain alliances and reciprocal exchange relations with other polities. Shell ornaments and items made of copper are examples of Mississippian "elite paraphernalia," while pottery vessels may have been components of either elite or nonelite exchanges.

We can trace the changing abundance of shell ornaments, copper items, and imported pottery by counting the number of these items per dated burial (Peebles 1987a:32-33; Steponaitis 1989; see Figure 8). Shell and copper were most common in burials of late Moundville I or early Moundville II date, between AD 1150 and 1350. Imported pottery seems to have been most common in Moundville I (AD 1050-1250) and then again in late Moundville II/early Moundville III (between roughly AD 1350 and

1450). These data suggest that members of the Moundville chiefdom were most active in extralocal exchange fairly early in the polity's lifespan, and that the Moundville chiefdom may have achieved regional prominence by A.D. 1200. This rise to early prominence was followed by a lengthy, gradual decline, culminating around or shortly after A.D. 1500.

It is much harder to discern any changing political fortunes of factions and communities within the chiefdom than it is to discern changing external relations. One of the striking aspects of the Moundville chiefdom is that once the Moundville site became the paramount center, it remained visibly and unambiguously the paramount center until the dissolution of the polity. Current evidence suggests that Moundville was the paramount center, without interruption, for at least 300 years. I do not suggest an absence factionalism and disputes over succession to chiefship, but any such political competition seems to have focused on roles tied a fixed, geographic center. To put it simply, you had to be **at** Moundville to **be** the chief.

Relation between Economic Structure and Political Dynamics

I propose that there is a relationship between the economic structure of the Moundville chiefdom and the political dynamics of the chiefdom. The archaeological evidence shows that the subsistence economy of the chiefdom was decentralized, and the elite to some extent depended on tribute from commoners. The evidence also shows that the political elite at Moundville were in a position literally to oversee (from residences atop the

mounds) two important sectors of the economy. These sectors were the production of axes, needed for clearing agricultural fields, and the importation and distribution of nonlocal prestige goods, needed for deictic statements about individuals' social position. The Moundville paramount chief was in a position to monopolize these sectors of the economy. How would such monopoly affect the political dynamics of the chiefdom?

Monopoly control on key sectors of an economy in effect provides control over the economy as a whole. The holder of the monopoly can affect other sectors of the economy through indirect--and especially through "multiplier"--effects. In the Moundville chiefdom, there is no evidence that the paramount chief directly controlled subsistence production. Yet, by being able to control access to axes the chief would have had indirect control over subsistence production. By controlling access to imported elite paraphernalia, the Moundville paramount chief was in an ideal position to dominate factional competition for social prestige and political power. I suspect that this monopoly control over the society's economy is one reason the Moundville chiefdom has so little visible internal political dynamics, and is also the reason that the chiefdom remained regionally prominent for such a long period.

References Cited

Bozeman, Tandy K.
1982 Moundville Phase communities in the Black Warrior River valley, Alabama. Ph.D. dissertation, Univ. of California, Santa Barbara. University Microfilms, Ann Arbor.

DeJarnette, David L., and Christopher S. Peebles
1970 The development of Alabama archaeology: the Snow's Bend site. Journal of Alabama Archaeology 16:77-119.

Hardin, Margaret
1981 The identification of individual style on Moundville Engraved vessels: a preliminary note. Southeastern Archaeological Conference Bulletin 24;108-110.

Jackson, H. Edwin, and Susan L. Scott
1989 Mississippian homestead-village symbiosis: faunal exploitation in the Tombigbee Valley. Paper presented at the 54th Annual Meeting of the Society for American Archaeology, Atlanta, Georgia.

Michals, Lauren
1990 Faunal exploitation and chiefdom organization at Moundville, Alabama. Paper presented at the 55th Annual Meeting of the Society for American Archaeology, Las Vegas, Nevada.

Mistovich, Tim S.
1986 Excavations at Sites 1Tu265 and 1Tu423, Oliver Lock and Dam, Tuscaloosa, Alabama. Report of Investigations No. 51, University of Alabama Office of Archaeological Research, Tuscaloosa.

1987 The Mill Creek Site, 1Tu265, Black Warrior River, Alabama. Report of Investigations No. 54, University of Alabama Office of Archaeological Research, Tuscaloosa.

Peebles, Christopher S.
1978 Determinants of settlement size and location in the Moundville phase. In Mississippian Settlement Patterns edited by Bruce Smith, pp. 369-416. Academic Press, New York.

1979 Excavations at Moundville, 1905-1951. University of Michigan Press, Ann Arbor.

1981 Archaeological research at Moundville: 1840-1980. Southeastern Archaeological Conference Bulletin 24:77-81.

1986 Paradise lost, strayed, and stolen: prehistoric social devolution in the Southeast. In The Burden of Being Civilized: An Anthropological Perspective on the Discontents of Civilization, edited by Miles Richardson and Malcolm C. Webb, pp. 24-40. Southern Anthropological Society Proceedings 18.

1987a Moundville from A.D. 1000 to 1500 as seen from A.D. 1840 to 1985. In Chiefdoms In the Americas, edited by Robert Drennan and Carlos Uribe, pp. 21-41. University Press of America, Lanham, Maryland.

1987b The rise and fall of the Mississippian in western Alabama: the Moundville and Summerville phases, A.D. 1000 to 1600. Mississippi Archaeology 22:1-31.

Peebles, Christopher S., and Susan M. Kus
1977 Some archaeological correlates of ranked societies. American Antiquity 42:421-448.

Scarry, Margaret M.
1986 Change in Plant Procurement and Production During the Emergence of the Moundville Chiefdom. Ph.D. dissertation, University of Michigan. University Microfilms, Ann Arbor.

Scott, Susan L.
1981 Economic and organizational aspects of deer procurement during the late prehistoric period. Paper presented at the 38th Annual Meeting of the Southeastern Archaeological Conference, Asheville, North Carolina.

Service, Elman R.
1971 Primitive Social Organization: An Evolutionary Perspective. 2nd ed. Random House, New York.

1975 Origins of the State and Civilization: The Process of Cultural Evolution. W.W. Norton, New York.

Steponaitis, Vincas P.
1983a Ceramics, Chronology, and Community Patterns: An Archaeological Study at Moundville. Academic Press, New York.

1983b The Smithsonian Institution's investigations at Moundville in 1869 and 1882. Midcontinental Journal of Archaeology 8:127-160.

1986 The University of Alabama excavations at 1Tu50, a Moundville I Phase center in the Black Warrior Valley. Paper presented at the 43rd Annual Meeting of the Southeastern Archaeological Conference, Nashville, Tennessee.

1989 Contrasting patterns of Mississippian development. Paper presented at a seminar, "Chiefdoms: Their Evolutionary Significance," held at the School of American Research, Santa Fe.

Webb, William S., and David L. DeJarnette
1942 An Archaeological Survey of Pickwick Basin in the Adjacent Portions of the States of Alabama, Mississippi, and Tennessee. Bureau of American Ethnology Bulletin 129.

Welch, Paul D.
1983 Research at a Moundville phase subsidiary site. Paper presented at the 40th Annual Meeting of the Southeastern Archaeological Conference, Columbia, South Carolina.

1986 Models of Chiefdom Economy: Prehistoric Moundville as a Case Study. Ph.D. dissertation, University of Michigan. University Microfilms, Ann Arbor.

1989 Chronological markers and imported items from the Roadway excavations at Moundville. Paper presented at the 46th Annual Meeting of the Southeastern Archaeological Conference, Tampa, Florida.

1991 Moundville's Economy. University of Alabama Press, Tuscaloosa.