The Problem

Although previous research divides the greater Hohokam culture area of the Phoenix Basin into a core area with peripheries (Doyel and Elson 1985), few studies investigate the appropriateness of these divisions empirically (but see Hackathorn et al. 2002). This prior assumption that distinct blocks of variability existed within the Hohokam region is problematic for several reasons:

1. The designation of periphery versus core leads researchers to assume that sub-regional traditions and cultural affiliations within the same area are more similar to each other than to populations outside that area.

2. The coarse-scale spatial division of the Hohokam region is based on partitioning derived from general direction (i.e., north, south, east, west), and does not consider finer scale variability. Cultural developments are the product of both social and environmental factors, and these are not always uniform within the designated core and periphery zones.

3. The divisions of the prehistoric Phoenix basin are static through time. This assumes that sub-regional cultural traditions were maintained consistently across temporal periods. We argue that cultural practices are dynamic processes in constant flux. Therefore, one cannot uncritically assume that a spatial division adopted for one time period will be appropriate for a subsequent period.

Our study tests the validity of the division between the northern periphery and the core area by adopting a landscape approach. We examine changes in cultural and environmental data from archaeological sites in the Hohokam region at varying scales through time and space, using individual drainages, rather than the conventional cultural divisions, as the basic unit of analysis. The data we examine includes public architecture, ceramics, macrobotanical, and pollen remains.

The Study Area

We define the Hohokam Core as the area directly irrigable by canals originating on the Salt River. This area had significantly higher population than the other drainages. The Northern Periphery is located between the rise of the mesas and buttes defining the Transition Zone physiographic province to the north and the flatter basin topography of the Phoenix Basin to the south. The elevation ranges from about 1400 feet mean in the south to 2600 feet in the north. Numerous large sites are located along the four major drainages (Agua Fria, Skunk Creek, New River, and Cave Creek) flowing out of the mountains (some of which are the locations that are identified on the bajadas between drainages). The New River and Cave Creek drainages represent the Northern Periphery in our study. New River had a slightly higher population than Cave Creek, particularly during the late pre-Classic.

A comparison of agricultural features between the two Northern Periphery drainages shows that Cave Creek was most heavily cultivated during the period of 850 to 1250, a period spanning the transition from pre-Classic to Classic. This is true both in the number of features recorded as well as the variety, suggesting not just intensified agriculture, but greater variation as well. Agricultural sites were fully abandoned on New River in the late Classic, while some limited agriculture continued on Cave Creek.

The top graph reports counts of all public architecture recorded at sites along the drainages within the study area. Public architecture served as loci for socially integrative functions including trade and economic links between the inhabitants of these drainages. The lack of platform mounds in either Northern Periphery drainage suggests diminished ties between the Northern Periphery and the Core sites during the Classic period.

The lower graph shows the percentages of ceramic sherd types recorded at sites on the New River and Cave Creek drainages. Ceramics are divided by production location. The majority of ceramics recorded in these drainages were locally produced. However, New River had access to a slightly higher percentage of ceramics produced in the Salt River core than did Cave Creek, consistent with more intensive public architecture evidence. Very few ceramics recorded in the Northern Periphery were produced outside of the Hohokam culture area.

Agricultural Features by Drainage in the Pre-Class Period

Agricultural Features by Drainage in the Classic Period

Conclusions

1. There is a great degree of cultural variability between Hohokam populations within the Northern Periphery. In the Pre-Classic period, New River settlements more closely resemble those of the Salt River in the core area than those in the Cave Creek Northern Periphery settlements.

2. Spatially, within the Northern Periphery, settlements along New River and Cave Creek differ in agricultural strategy, population size, and degree of interaction with populations along the Salt River and areas outside the Hohokam region.

3. Temporally, cultural developments in the Northern Periphery and the Core undergo significant change. New River settlements resemble those along the Salt River in the Pre-Classic, but by the early Classic there is greater resemblance between New River and Cave Creek. In addition, when viewed at a large-scale, farming strategies practiced within the Northern Periphery did not change significantly throughout time. However, when viewed at the drainage-based scale, it is clear that New River and Cave Creek undergo significant shifts in their choice of farming strategies.

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Works Cited


American Southwest, edited by George J. Gumerman. Pp. 61-111. The Laboratory of Tree-Ring Research, University of Arizona.

The Arizona Archaeologist Number 34. Tempe.


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Ann Ann Kinzig

Charles Redman