Re-examining Mogollon Pithouse Chronology - A Bayesian Approach

Lori Barkwill Love (University of Texas at San Antonio)

OBJECTIVE
Test the traditional Mimbres Mogollon chronology and determine when major cultural changes occurred during the Mogollon Pithouse period.

SIGNIFICANCE
Under the traditional Mimbres chronology, the shift from the Early Pithouse period (AD 200-550) to the Georgetown phase of the Late Pithouse period (AD 550-600) is often associated with a further commitment to agriculture and sedentism, especially in the Mimbres Valley.

METHODS
Bayesian Chronological Modeling

DATA
Excavated Mogollon pithouse sites, Site landform designations, Pithouse chronometric dates

ANALYSES
1). Examine the timing and duration of Mogollon circular pithouses with Plain Brown ceramics only, circular pithouses with Red-slipped ceramics, rectangular pithouses, communal pithouses;
2). Compare Bayesian model with generally accepted pithouse dates with model using stringent data hygiene;
3). Determine landform use for circular and rectangular pithouses in the Mimbres Valley, General Mimbres, Upper Gila, and Reserve areas;
4). Examine the timing of circular and rectangular pithouses by landform type

RESULTS/CONCLUSIONS
- The chronometric data and landform use does not support the traditional Early Pithouse period and Georgetown phase chronology.
- The lack of chronometric dates, "old wood," and other date issues hamper and ask our understanding of Mogollon Pithouse chronology.
- The results suggest that caution should be used when assigning sites/structures to a time period or cultural phase based on pithouse shape, presence of red-slipped pottery, or site location.
- There does not appear to be a major settlement shift from high to low landforms around AD 550 in the Mogollon region.
- Both circular and rectangular pithouses can be found on high and low landforms throughout the Pithouse period in the Mogollon region.
- There are no dated circular pithouses on low landforms nor dated rectangular pithouses on high landforms in the Mimbres Valley.
- Given the lack of data, the settlement patterns in the Mimbres Valley cannot be compared to other areas in the Mogollon region.
- More chronometric dates (multiple dates per structure) are needed for the Mogollon Pithouse period.
- We need to move beyond just trying to place a site in some cultural phase and provide more precise date estimates for individual structures. In doing so, we are giving agency to those who lived there, and we have the potential to gain greater insight into the past.