Social Transformations and Climate Variation in the Prehistoric U.S. Southwest

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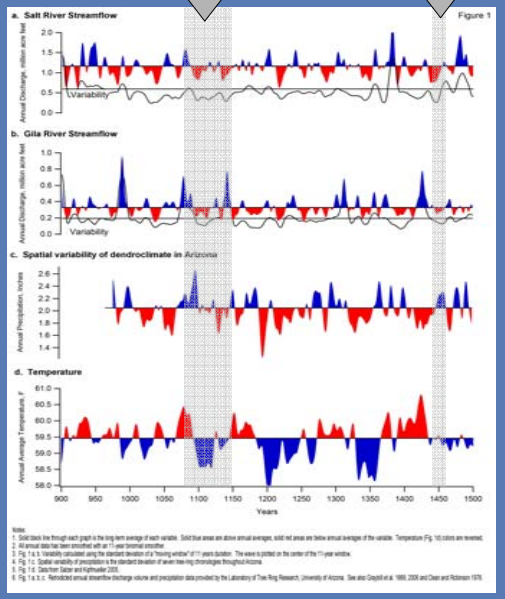
Research Question: What were the climatic contexts of several significant social transformations in the prehistoric U.S. Southwest?

Relevance: Global-scale climate change makes understanding the relationship between climate variation and human behavior increasingly important. Humans have a long history of coping with climate variation and its effects on food production. This history can inform our efforts to understand, anticipate, and prepare for climate variations in the future.

Changes in settlement patterns, architecture, mortuary practices, social networks, etc.

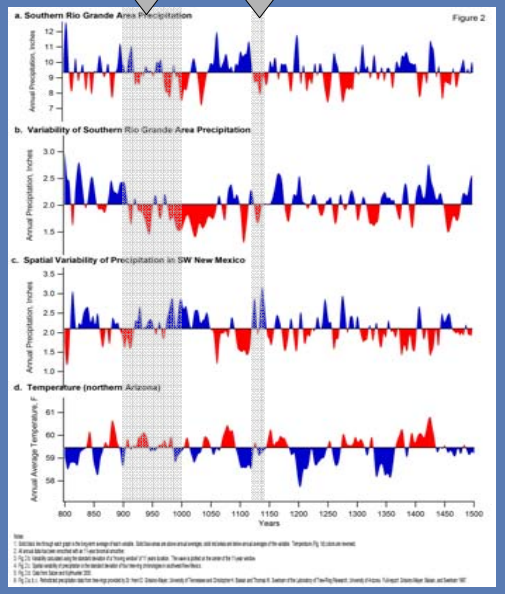
Depopulation of Lower Salt River Valley



Central Arizona: Hohokam

Aggregation, capitalization, inward focus

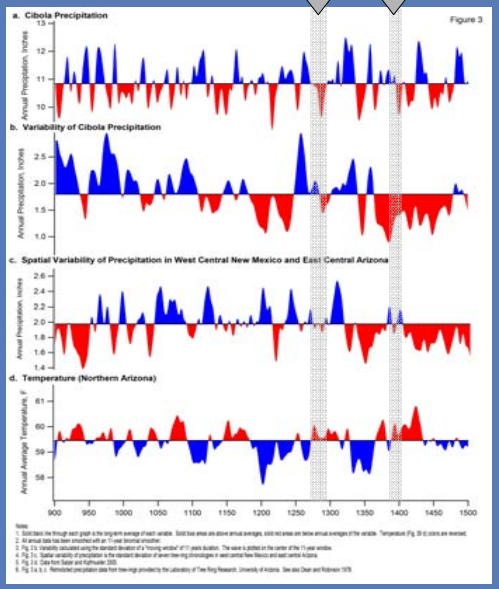
Reorganization from large villages to dispersed hamlets, extensive social networks



Southwestern New Mexico: Mimbres

Large scale aggregation

Large pueblos abandoned



West Central New Mexico, East Central Arizona: Zuni

Methods and Results: Archaeological research in the U.S. Southwest has documented periods when prehistoric societies have undergone social transformations. The climatic context of these transformations is presented with tree-ring based retrodictions of precipitation, temperature, and streamflow. A characterization of the climatic context of the social transformations is a first step toward assessing whether or not a relationship between the climatic conditions and the social transformations existed.

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