Ritual intensification, social evolution and climate change: the Carrizo collapse in the far west.

The development of social complexity -- bands and headmen, or simple chiefdoms -- is a key concern in hunter-gatherer archaeology. Two commonly cited variables in this process are ritual intensification and climate change. Ritual intensification remains understudied, despite widespread recognition of its potential importance, partly because of a presumed absence of empirical evidence in the archaeological record. Rock art provides a good body of evidence to examine the religious (as opposed to economic) side of ritual intensification, and to look at the contribution of religious processes to social change. Climate change, in contrast, was once thought a key factor but is now often dismissed, especially in neo-Darwinian models. Empirical case studies provide insight into the appearance of a chiefdom along the California coast, and bands and headmen in the Great Basin. The results are somewhat unexpected: ritual intensification accompanying the appearance of Numic bands, but the collapse of a significant ritual system as a prelude to the appearance of the Chumash chiefdom, which emphasized secular authority. In both cases the Medieval Climatic Anomaly appears to have played a more significant role than previously appreciated, and was probably a central factor in the transformations that led to the late prehistoric/protohistoric cultures of western North America.