

BIWEEKLY COLLOQUIUM

Semester topic “Challenging environment and social networking as drivers of change”

Monday, June 17th, 4:15 p.m.

Community structure as a novel method for evaluating
archaeological phenomena: a case study on copper supply networks
from the 7th – 4th millennium BC Balkans

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Recent studies on the beginnings of metallurgy in Europe revealed an unprecedented complexity of data demonstrating extensive production and consumption of copper artefacts among prehistoric communities in the 5th millennium BC Balkans. The provenance analyses indicated exploitation of local copper sources discovered across the Balkans, of which Majdanpek and Ai Bunar proved to be particularly prolific. However, although these data stand out in quality and precision, little has been done to address the complexity of networks of early metal movements in the Balkans. Here I present a joint study that uses complex networks (modularity) analysis to explore movements of more than 400 copper artefacts among c. 80 archaeological sites in the 7th – 4th mill BC Balkans using trace element analyses. Importantly, this method reveals high correspondence of resulting modules with the known distribution of archaeological phenomena at the time. I also demonstrate the existence of ‘shifting’ metal industries following the rise or collapse of archaeological phenomena in the central and east Balkans respectively. This novel method overcomes the noisy nature of available data and provides testable models for interpreting and explaining the dynamics of organisation of metal production at previously undocumented social, temporal and spatial scale.

Venue: Leibnizstraße 1, Seminar Room 204