



# EAA 2023

## BELFAST

30<sup>TH</sup> AUG - 2<sup>ND</sup> SEPT 2023

# WEAVING NARRATIVES



# ABSTRACT BOOK

# 29<sup>TH</sup> EAA ANNUAL MEETING

30<sup>TH</sup> AUGUST - 2<sup>ND</sup> SEPTEMBER 2023



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## 29<sup>th</sup> EAA Annual Meeting (Belfast, Northern Ireland 2023) - Abstract Book

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**Design and layout:** Kateřina Kleinová (EAA)

**Design (cover):** Emily Good

**ISBN:** 978-80-88441-05-2

European Association of Archaeologists

Belfast, August 2023

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**29<sup>TH</sup> EAA ANNUAL MEETING**  
**Belfast, Northern Ireland**  
**2023**

**ABSTRACT BOOK**

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random trait loss. Their outputs suggest that relative population clustering affects the shape of the adoption curve and that different combinations of travel costs, LRA, and population density result in spatial diffusion propagating along different types of wavefronts.

'Realistic' models are run on networks reflecting the Aegean's interesting geography, consisting of two land masses connected by an archipelago, with natural boundaries that create relatively isolated sub-populations; they additionally incorporate the effects of different landscape types and the location of the innovation's origin. Their outcomes are quantitatively compared to empirical adoption curves for the potter's wheel innovation and suggest that the location of origin can determine the shape of the curve, especially its position on the East – West axis defined by the land-masses of Greece and Anatolia.

The study showcases the potential of simulation modeling for addressing questions about cultural transmission using archaeological data. It shows that abstract models with empirically supported assumptions can be informative, even when the empirical data are recorded at varying levels of granularity and originate from a scholarly tradition resisting large-scale quantitative approaches.

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## 184 MATERIAL WEALTH? NEW APPROACHES TO THE ARCHAEOLOGY OF SOCIAL INEQUALITY AND COMPLEXITY

**Session theme:** 4. People of the Present – Peopling the Past

**Session organisers:** Lawrence, Dan (Durham University) - Ortman, Scott (University of Colorado Boulder; Center for Collaborative Synthesis in Archaeology; Santa Fe Institute)

**Session format:** Regular session

Over the last decade, social inequality has emerged as a major research area in the historical sciences. New methods for assessing wealth and living standards from the archaeological record have been developed, from the use of Gini coefficients on artefactual and architectural data to bioarchaeological approaches to health and wellbeing. These have been marshalled to make comparisons at a variety of geographical and temporal scales, and to discuss the causes and consequences of inequality in a wide range of societies. Through this work, a series of tensions have emerged. Broad scale studies covering long periods and large areas have recognised a general trend towards increasing inequality over time, often correlated with societal scale and levels of social development (broadly conceived), leading some to argue that complexity and inequality are functionally linked. However, more detailed studies have identified significant variability within this general trajectory, including cases where inequality is low despite high levels of material wealth, population and/or population density, and periods where inequality has decreased.

In this session we seek to deepen understanding of relationships between inequality, scale, living standards, and institutions. All of these are contested concepts, and data relating to them are not straightforward to extract from the archaeological record. As a result, we also focus on methodological innovation. We seek papers which address one or more of the following questions:

- What are the strengths and weaknesses of quantitative approaches to inequality, such as Gini coefficients or cumulative distributions based on specific measures?
- What are good proxies for measuring living standards within and between societies?
- What social mechanisms have been responsible for increasing or reducing inequality in past societies?
- Are there general relationships between societal scale, social development, and levels of inequality? How strong are these relationships?
- What are the long-term consequences of social inequality for human societies?

### ABSTRACTS

#### 1 THE FARMING-INEQUALITY NEXUS, REVISITED: NEW INSIGHTS FROM THE GINI PROJECT

**Abstract author(s):** Bogaard, Amy (School of Archaeology, University of Oxford; Santa Fe Institute) - Cruz, Pablo (UE CISOR, CONICET-UNJu)

**Abstract format:** Oral

In this talk we revisit the hypothesis that farming systems where production is limited by heritable material wealth (such as land) are associated with higher persistent levels of wealth inequality than systems where production is limited by (free) human labour. In previous work on western Eurasia, expansive 'land-limited' farming systems facilitated by animal traction were found to be associated with higher sustained levels of household inequality than smaller scale farming systems reliant on human labour ('labour-limited'). New results from the ongoing GINI project (The Global Dynamics of INequality) expand the dataset on past household inequality in western Eurasia and in other world regions with very different agroecologies. We focus on case studies where archaeobotanical and/or preserved landscape

features offer unusually clear insights into the nature of farming practice. These include remarkably intact agricultural landscapes in the southern Andes. In this cold and arid high-altitude setting, pre-Inka societies developed a form of labour-limited agriculture. This regime changed abruptly with Inka colonization in the 15th century to a form of land-limited agriculture through forced labour. This agricultural trajectory continued under Spanish colonial rule, introducing use of animal traction along with new crops and domestic animals.

## 2 SOCIAL PRACTICES AND INEQUALITY MEASUREMENT IN PRE-HISPANIC POLITIES: DIACHRONIC NOTES FROM SOUTHERN ANDES

**Abstract author(s):** López Lillo, Jordi A. (INCIPIT-CSIC; Universitat d'Alacant) - Franco Salvi, Valeria L. (IDH-CONICET; Universidad Nacional de Córdoba) - Salazar, Julián (IEH-CONICET; Universidad Nacional de Córdoba) - Cruz, Pablo José (UE CISO-CONICET; Universidad Nacional de Jujuy)

**Abstract format:** Oral

This communication seeks to explore political organization and dynamics from a comparative perspective over time, relying on three case studies which cover the so-called Formative (500 BC-AD 600), Regional Development (AD 1200-1450) and Late or Inca Periods (AD 1450-1550) in Northwest Argentina and South Bolivia. In each case, samples of several hundreds of residential units were used to calculate Gini coefficients; disaggregating them, additionally, by the different types of roofed and open surfaces within households. These analyses were then densified and put in perspective taking into account further archaeological records, as their crop fields, burials and other material indicators sensible to social inequality, in order to get a better understanding of each political configuration. As a result, it seems not only that, unlike those in Central Andes, the social processes that took place in this southern part led to the formation of agropastoral societies with low levels of centralization and wealth inequality during the Second Millennium BC, but also that the egalitarian polities of the First Millennium were far more complex and perhaps even internally competitive than assumed.

## 3 SITES, SYSTEMS AND STATES: EXPLORING LONG TERM TRENDS IN WEALTH INEQUALITY AND SOCIAL COMPLEXITY IN ANCIENT SOUTHWEST ASIA

**Abstract author(s):** Lawrence, Dan (Durham University) - Tumolo, Valentina (Università degli Studi della Tuscia, Viterbo; University of California, Berkely; Durham University) - Basri, Pertev - Chelazzi, Francesca (Durham University)

**Abstract format:** Oral

In this paper we seek to understand the relationship between wealth inequality and social complexity over the long-term in Southwest Asia. We apply Gini coefficients to house size and storage volume data to investigate trends in wealth inequality at a variety of temporal and spatial scales. We then compare these trends with those for a range of proxies commonly related to social complexity, including overall population, levels of settlement hierarchy and evidence for political centralisation and landscape modification. Our results show that inequality increased from the Neolithic to the Iron Age, with distinct regional trajectories. We see a step change in levels of inequality around the time of the emergence of urban sites in each region, but initially urban and rural sites were similarly unequal, suggesting that, outside the elite, the inhabitants of each enjoyed a similar range of wealth. The situation changes during the Iron Age, when inequality in urban environments increases and rural sites become both poorer in absolute terms and more equal. This coincides with a new level of landscape coordination and management, including an unprecedented phase of settlement dispersal and the construction of large-scale irrigation schemes. We therefore argue that the shift from inequality operating at a site scale to a settlement system scale may be related to the operational and integrative capacities of ancient polities.

## 4 MONEY, MASS AND MEASUREMENT: OR, HOW CAN AN ARCHAEOLOGY OF QUANTIFICATION CLARIFY THE LONG-TERM DYNAMICS OF INEQUALITY?

**Abstract author(s):** Green, Adam (University of York) - Wilkinson, Toby (University of Cambridge) - Wilkinson, Darryl (Dartmouth College)

**Abstract format:** Oral

Inequality is, fundamentally, control over other peoples' labour. It is much easier to control someone else's labour if you can monopolise the means of measuring it. This is why, in 1972's *Stone Age Economics*, the anthropologist Marshall Sahlins argued that it was the "instrumentalisation" of exchange that separated economies based on reciprocity from those based on trade. Or, in the neo-evolutionary typologies, quantification of exchange separated egalitarian economies from inequalitarian ones. It is ironic that at the same time as Sahlins argued that quantification created inequalities, "monetarist" economists argued that their governments should only use money to quantify an economy's supply. Their proposal was a dramatic break from Keynes' suggestion that sufficient money should be produced to