

Vesa P. J. Arponen, Kiel University, Germany

On the Concept of Inequality

This paper adopts a more theoretical stance towards the concept of inequality. What is inequality? Why does inequality matter? We are seeing a growing swell of archaeological work questioning older hierarchy, wealth distribution, and social evolution based conceptions of inequality. A new direction has been sought in the idea variously termed as social agency, capabilities, quality of life, or agency. In the words of the economist Amartya Sen, a contrast can be drawn between income distribution and “havings” based approaches on the

one hand, and capability or “doings and beings” based approaches on the other. An attempt will be made to entangle some conceptual as well as “middle-range” theoretical issues pertaining to archaeological interpretation involved in contrasting the approaches.

Penny Bickle, University of York, UK

Diversity vs. Inequality?

This paper will examine the relationship between models of social diversity and the narratives of inequality constructed for the European Neolithic. I will argue that the different identities that made up prehistoric societies, and how they operated, are often taken for granted in building larger models of social change. For example, assumptions about inequality in the early Neolithic (e.g. big men models), rely on under-explored conceptions of gender, that often unthinkingly reproduce modern binary gender hierarchies. Therefore, I argue, a key first step in researching social inequality is to determine the forms and extent of diverse lifeways present within a society, asking what were varied

possibilities? I define this concept of “social diversity” as the myriad differences, which set people apart from each other, and often arise in identity formation practices and the creation of social relatedness (e.g. kinship, political hierarchies, etc.).

Drawing on the emerging results from the Counter Culture Project diversity (Arts and Humanities Research Council UK, grant number: AH/R002622/1), I will explore how we can quantify diversity and use this to build models of social inequality for the early and middle Neolithic in central Europe.

Marta Cintas Peña, Seville University, Spain

Gender inequality in the transition from Neolithic to the Copper Age

Recent research in archaeological record from Iberia suggests that was during Neolithic (c. 6000 – 4000 BC) when gender inequality started to arise. The application of a multi-proxy methodology has revealed that men were statistically associated with violence more frequently than women were. Specifically, males were linked to traumas, weapons and depictions in scenes of fighting and conflict in more occasions than females. Nevertheless, this possible pattern does not display a clear

continuity in the Copper Age of Iberia (c. 3000 BC). The application of the same multi-proxy methodology to Chalcolithic remains allow us to argue more consistently the existence of a sex-gender system than before, but the results are difficult to interpret in terms of power. This makes this period a time of great interest for analyzing the relationship between men and women, as well as revealing the error in approaching social processes from a unilineal perspective.

Adrian Chase, Arizona State University, USA

***Intra-site inequality within Caracol, Belize:
A district-level analysis of residences inside a garden city.***

Lidar data has revolutionized Maya archaeological by fully revealing the anthropogenic landscapes of ancient urban centers. In conjunction with decades of field survey, the lidar dataset for Caracol, Belize has facilitated the identification of archaeological surface features such as residential plazuela groups, nodes of monumental architecture, and a dendritic causeway transit system linking the city together. Using residential plazuelas and districts centered on nodes of monumental architecture presents a means of investigating intra-site inequality that would not have been possible without lidar. Plazuelas provided the fundamental residential unit at Caracol. These raised housemound groups often contain four or five structures centered around a central plaza and incorporated an

extended family group. Area and volume obtained from digitized plazuelas and the lidar derived DEM provide information on inequality at the city-level with plazuela household Gini indices of 0.34 (for area) and 0.60 (for volume). Moving forward, these data can also shed light on intra-site inequality by using Caracol's reconstructed districts - top-down administrative features designed to provide urban services to the populace at large. District reconstruction utilizes least cost area allocation centered on their respective nodes of monumental architecture per urban service facility feature such as formal plazas, ballcourts, monumental reservoirs, and e-groups. The sample of plazuela groups within each district provides a means to investigation of intra-site inequality within the city of Caracol.

Timothy J. Dennehy, Arizona State University, USA

Proxies and Precursors of Social Inequality: the Adoption of Sedentism during the Archaic-Period in the Maya Lowlands

by Timothy J. Dennehy & Keith M. Prufer

What conditions of human life foster the development of social inequality? Around the world, many past societies develop greater inequality through time, despite sharing relatively egalitarian origins. For instance, Mesoamerica witnessed the independent formation of well-known stratified, agricultural societies - such as the ancient Zapotec of Oaxaca or the Maya of tropical Mesoamerica - during its Preclassic period (3500 - 2300 BP). However, during the much earlier Paleoindian period (18,000 - 10,000 BP), sparse but consistent evidence points to the region's colonization by highly mobile, likely egalitarian hunter-gatherers. Data from the intervening millennia, known as the Archaic period (10,000 - 3500 BP) is sparser still. Yet this period by necessity witnessed the adoption of two prerequisites for inequality: the domestication of cultivars, and a turn towards greater and greater degrees of residential sedentism. Of these two inter-related processes, domestication can be directly observed

in the paleobotanical record, but changes in mobility cannot; therefore, scholars have developed and assessed proxies for sedentism using other means. In this presentation, I discuss preliminary results from my analysis of lithics - formal stone tools, informal utilized flakes, and tool-making debris known as debitage - from three rockshelter sites in southern Belize, Central America. Together, these three sites preserve stratified deposits dating from the end of the Paleoindian period to the end of the Archaic. Using methods developed by lithicists to assess proxies of mobility from multiple traits of lithic assemblages, I shed light on the way in which highly mobile egalitarian foragers adopted one important precursor of social inequality: sedentism.

Katharina Fuchs, Kiel University, Germany

***Inequality in the North Caucasian Bronze Age 2200-1650 BCE?
Interdisciplinary insights from the cemetery 'Kudachurt 14'***

Surrounded by a highly diverse natural environment, the inhabitants of the North Caucasian regions underwent substantial socio-economic processes during the Bronze Age (c. 4000 and 1000 BCE). In this regard, the transition from the Middle to the Late Bronze Age mark a significant period, characterised by heterogeneous cultural groups and deviating preferences in subsistence, habitats and social orders. This is expressed by the shift from pastoral lifeways in the steppe to sedentary settlements in the high mountains and the change from hierarchical to egalitarian societies. Although recent research strives to connect traditional mortuary archaeology with bioarchaeological approaches, there is only little primary information available from the humans that lived and died between c. 2500 and 1400 BCE.

This paper sheds light on a hitherto missing link between the steppe and the high mountain areas to that time. Interdisciplinary analysis of the archaeological and the human remains found at the burial site 'Kudachurt 14' provided results on

social inequality, oral health and diet of the people inhabiting the central foothill region. By combining burial, palaeopathological and stable isotope information from 130 graves, this paper discusses biological and ritual evidences for often-stated gender concepts, deviating expression of social status and living conditions, as well as first indications for early agricultural ways of life between 2200-1650 cal BCE in the Northern Caucasus.

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Ralph Großmann, Kiel University, Germany

Social Inequalities - New Proxies, new Methods

In prehistory, there is a huge challenge to researching inequality due to the lack of written sources. Thus, the calculation of social inequality has to be focused on material resources. Methods such as the Gini index, which provide a single summary measure of inequality and is frequently applied in economics, have gained an increasing relevance. Furthermore, the determined diet and health status of buried individuals has also increasingly served as a proxy in the reconstruction of social inequality. However, the question arises to what

extent empiric gained data reflect social realities and what new ways there are to approximate realities. The lecture will take an example to show how the synthesis of different data, in particular the inclusion of spatial data from burial grounds, could yield promising results.

Julian Laabs, University of Bern, Switzerland

Two sides to every story: Examples of in-/equality from Middle Bronze Age funerary communities (Carpathian Basin) and Neolithic lakeshore settlements (Northern Circum-Alpine Foreland)

There are plenty methods to access (social) in-/equality of past communities and there are plenty ways to explain the picture they create, but at least two extremes: Equality and inequality. I would like to present two examples from the research I conducted and explore them in regard of tracing in-/equality in the archaeological record.

The wealth consumption of the Middle Bronze Age urn cemetery of Dunaújváros-Duna-dűlő will be approached in a rather classical way: A wealth index is created on the basis of grave goods for each grave and the index values will be interpreted as means of representing economic – perhaps social – inequality. In comparing the distribution of the index on different social scales (grave groups and funerary communities) and considering the

temporal development of wealth consumption, changing patterns and perceptions of in-/equality emerge. The discussion of Northern Circum-Alpine Neolithic lakeshore settlements will include architectural features, short- and long-term settlement dynamics, as well as intra-site patterns of consumption to encounter the realm of social in-/equality. Both case studies will be examined in favor of the two stories we like to tell about the past and try to take different perspectives as well as the in cooperation of as much evidence as possible into account in order to develop possible models of social organization and in-/equality.

Nils Müller-Scheeßel, Kiel University, Germany

Preston for Archaeologists: The relationship between life expectancy and gross domestic product and its application to archaeological case-studies

by Nils Müller-Scheeßel, Kiel & Francesca Fulminante, Bristol University and University Roma Tre

In 1975, S. H. Preston published what has since become known as „Preston-curve“, indicating that there is a positive relationship between life-expectancy and economic prosperity (expressed in gross domestic product [GDP]). As a rule wealthier nations enjoy on average a higher life-expectancy than less wealthy nations. It can be shown that this rule also holds true for historical periods insofar sufficient records exist (c. from 1820 onwards).

For archaeological cases, information on life expectancy can be gleaned from so-called life tables, derived from osteological data. Such data has the advantage that it provides a body of data less

prone to active manipulation by the burying community as burial goods are, which are usually used to infer „wealth“ of archaeological populations.

We propose to use life-expectancy as indicator of well-being and therefore of economic prosperity in past population. Which life expectancy as a measure of wealth, it is possible to compare differences in wealth between communities, but also between social groups within communities. We test this novel approach on case studies of Early Iron Age communities north and south of the Alps.

Arne Windler, Deutsches Bergbau-Museum Bochum, Germany

Measuring Inequality in the Chalcolithic cemetery of Durankulak: opportunities and difficulties

The occurrence of social inequality and the development of Late Neolithic and Eneolithic societies in Southeastern Europe during the 5th millennium BC are highly debated topics. Wealth inequality can be detected in the extraordinary graveyards of Durankulak and Varna in Eastern Bulgaria. E.g. the male individual buried in grave No. 43 in Varna shows how individuals were involved into large scale exchange networks and were able to accumulate exotic goods like shells from the Aegean Sea, copper or jewelry made of gold. In combination with the settlement mounds, Varna and Durankulak indicate the complexity of societal developments.

The Late Neolithic and Chalcolithic cemetery of Durankulak (ca. 5200 – 4100 cal BC) is used to quantify inequality between different burials. Several tools of measuring inequality will be compared and their application to prehistoric communities will be discussed in the talk. The results show rising inequality in time and they will be connected to the

general social development in the prehistory of Southeastern Europe. In respect to the “Reflective Turn”, which is part of the “Cluster of Excellence ROOTS”, we have to think about the consequences of conducting research about prehistoric inequalities to our own society and especially to our archaeological practices.

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