Social inequality before farming?

Multidisciplinary approaches to the study of social organization in prehistoric and ethnographic hunter-gatherer-fisher societies

Edited by Luc Moreau
Social inequality before farming?
Social inequality before farming?
Multidisciplinary approaches to the study of social organization in prehistoric and ethnographic hunter-gatherer-fisher societies

Edited by Luc Moreau

with contributions from
Contents

Contributors vii
Figures ix
Tables xi
Preface xi

Introduction Social inequality without farming: what we can learn from how foraging societies shape(d) social inequality? Luc Moreau 1

Part I Social inequality and egalitarianism in extant hunter-gatherer-fisher societies
Chapter 1 Social inequality among New Guinea forager communities Paul Roscoe 21
Chapter 2 Mobility, autonomy and learning: could the transition from egalitarian to non-egalitarian social structures start with children? Rachel Reckin, Sheina Lew-Levy, Noa Lavi & Kate Ellis-Davies 33
Chapter 3 The impact of equality in residential decision making on group composition, cooperation and cultural exchange Mark Dyble 51
Chapter 4 Surplus, storage and the emergence of wealth: pits and pitfalls Christophe Darmangeat 59
Chapter 5 Leadership and inequality among the Inupiat: a case of transegalitarian hunter-gatherers Alberto Buela 71
Chapter 6 Egalitarianism and democratized access to lethal weaponry: a neglected approach Duncan N.E. Stibbard-Hawkes 83
Chapter 7 Adaptation and cumulative processes in human prehistory Robert H. Layton 103

Part II Social inequality in Upper Palaeolithic Europe
Chapter 8 Did secret societies create inequalities in the Upper Palaeolithic? Brian D. Hayden 117
Chapter 9 Responses of Upper Palaeolithic humans to spatio-temporal variations in resources: inequality, storage and mobility William Davies 131
Chapter 10 A comparative perspective on the origins of inequality Matt Grove 167
Chapter 11 Could incipient dogs have enhanced differential access to resources among Upper Palaeolithic hunter-gatherers in Europe? Mietje Germonpré, Martina Lážničková-Galetová, Mikhail V. Sablin & Hervé Bocherens 179
Chapter 12  Social ecology of the Upper Palaeolithic: exploring inequality through the art of Lascaux  
Paul Pettitt  

Chapter 13  Naturalism: a marker of Upper Palaeolithic social inequalities?  
Emmanuel Guy  

Part III  Social inequality in prehistoric Holocene hunter-gatherer-fisher societies  
Chapter 14  Reciprocity and asymmetry in social networks: dependency and hierarchy in a North Pacific comparative perspective  
Ben Fitzhugh  

Chapter 15  Exploring fisher-forager complexity in an African context  
Joe L. Jeffery & Marta Mirazón Lahr  

Chapter 16  Unequal in death and in life? Linking burial rites with individual life histories  
Rick J. Schulting, Rowena Henderson, Andrea Czermak, Gunita Zarina, Ilga Zagorska & Julia Lee-Thorp  

Chapter 17  Did prehistoric people consider themselves as equals or unequals?  
A testimony from the last hunter-gatherers of the Eastern Sahara  
Emmanuelle Honoré  

Chapter 18  Social complexity, inequality and war before farming: congruence of comparative forager and archaeological data  
Douglas P. Fry, Charles A. Keith & Patrik Söderberg  

Appendices to Chapter 9  
321 (online edition only)
CONTRIBUTORS

HERVÉ BOCHERENS
Department of Geosciences and Senckenberg Centre for Human Evolution Palaeoenvironment (HEP), University of Tübingen, Germany
Email: herve.bocherens@uni-tuebingen.de

ALBERTO BUELA
Department of Social and Cultural Anthropology, University of Vienna, Austria
Email: alberto.buela@univie.ac.at

ANDREA CZERMAK
School of Archaeology, University of Oxford, UK
Email: czermak_andrea@web.de

CHRISTOPHE DARMANGEAT
Department of Economy, UFR GHES, University of Paris, Paris, France
Email: cdarmangeat@gmail.com

WILLIAM DAVIES
Department of Archaeology, University of Southampton, UK
Email: S.W.G.Davies@soton.ac.uk

MARK DYBLE
Department of Anthropology, University College London, UK
Email: m.dyble@ucl.ac.uk

KATE ELLIS-DAVIES
Department of Psychology, Nottingham Trent University, UK
Email: kge22@cam.ac.uk

BEN FITZHUGH
Quaternary Research Center, University of Washington, Seattle, USA
Email: fitzhugh@uw.edu

DOUGLAS P. FRY
Department of Peace and Conflict Studies, University of North Carolina at Greensboro, USA
Email: dpfry@uncg.edu

MIETJE GERMONPRE
Operational Direction ‘Earth and History of Life’, Royal Belgian Institute of Natural Sciences, Brussels, Belgium
Email: mietje.germonpre@naturalsciences.be

MATT GROVE
Department of Archaeology, Classics and Egyptology, University of Liverpool, UK
Email: Matt.Grove@liverpool.ac.uk

EMMANUEL GUY
Independent researcher, Paris, France
Email: manuguy@free.fr

BRIAN D. HAYDEN
Department of Anthropology, University of British Columbia, Canada
Email: brian_hayden@sfu.ca

ROWENA HENDERSON
School of Archaeology, University of Oxford, UK
Email: rchenderson@rsk.co.uk

EMMANUELLE HONORÉ
Centre d’Anthropologie Culturelle, Université Libre de Bruxelles, Belgium
Email: emmanuelle.honore@ulb.be

JOE L. JEFFERY
Leverhulme Centre for Human Evolutionary Studies, Department of Archaeology, University of Cambridge, UK
Email: jl.jeffery@outlook.com

CHARLES A. KEITH
Department of Anthropology, University of Alabama at Birmingham, USA
Email: ckeith96@uab.edu

NOA LAVI
Department of Anthropology, University of Haifa, Israel
Email: noalaviw@gmail.com

ROBERT H. LAYTON
Department of Anthropology, University of Durham, UK
Email: r.h.layton@durham.ac.uk

MARTINA LÁZNIČKOVÁ-GATELOVÁ
Moravian Museum Anthropos Institute, Brno, Czech Republic
Email: laznicko@yahoo.fr
Figures

1.1. Nearest neighbour travel time against population density. 25
2.1. BaYaka playgroups tend to consist of a broad range of ages and genders. 38
2.2. Flowchart of potential relationships in egalitarian or non-egalitarian social structures. 41
2.3. Flowchart of potential relationships in egalitarian or non-egalitarian social structures. 43
3.1. Illustrative example of the possible effect of mixed-sibling co-residence on the relatedness of groups. 54
3.2. Number of camps in which the average household is permitted to live. 55
5.1. Composition and kinship relationships of five hunting crews in Wales. 77
6.1. A Hadza man whittling a bow. 88
6.2. A map of the distribution of hand spears and spearthrowers throughout Australia. 89
6.3. A map of the recent historic distribution of blowdart use throughout the Old World. 90
6.4. A map of the recent historic distribution of blowdart use throughout the Americas. 91
7.1. Delayed return as a composite category. 106
8.1. A sketch of an Elk secret society dancer among the Ogalala Sioux on the American Plains. 120
8.2. Bone flutes used to represent the voices of spirits in Californian secret society rituals. 121
8.3. The interior of an Egbo ritual house of the Ekoi tribe in Nigeria. 122
8.4. The interior of an Egbo ritual house at Akangba, Nigeria. 122
8.5. The ‘Sorcerer’ from Les Trois Frères Cave in France. 124
8.6. Small dolmen containing the skull of a high-ranking member of a secret society on Vanuatu. 126
8.7. One of the skull cups recovered from the Solutrean deposits in Le Placard. 126
9.1. Net Primary Productivity and Effective Temperature conditions for extant fisher-hunter-gatherers. 138–9
9.2. Spatio-temporal distributions of NPP and ET in Upper Palaeolithic Europe. 140–1
9.3. Number of days per year with (growing) temperatures above 0°C, 5°C and 10°C. 142–3
9.4. Reconstructed population densities. 147
9.5. The influence of resource predictability and abundance. 148
10.1. Four species share a common ancestor at A. 168
11.1. Lateral view of the Pleistocene wolf skull from ‘Trou des Nutons’ cave, Belgium. 181
11.2. Palaeolithic dog skull from the Gravettian site Predmosti, Czech Republic. 181
12.1. The Abbé Glory’s drawing of the engraved horses in the Axial Passage, Lascaux. 214
12.2. The Abbé Glory’s drawing of the painted Frieze of Ibex in the Nave, Lascaux. 215
12.3. Drawing of the engravings of the left side of the Nave’s Panel of the Black Cow, Lascaux. 215
12.4. Drawing of the engraved horses and ibex of the east wall of the Axial Passage, Lascaux. 216
13.1. Drawing of a bison, Salon noir, Cave of Niaux. 224
13.2. Interior of a chief’s house, Chilkat, Alaska. 227
13.3. Same stylistic conventions shared in Western Europe around the twentieth millennium. 228
13.4. Parpalló cave: apprentice exercises? 228
14.1. Map of North Pacific. 235
14.2. Map of part of the Kodiak Archipelago depicting redundant ecological zones. 240
14.3. Archaeological house area comparisons from Kachemak and Koniag period. 242
14.4. Plan view of surface features on a representative ‘Developed Koniag’ village site. 244
14.5. Map of the Kuril Archipelago, depicting different ecological characteristics. 247
14.6. House size variation from Late Jōmon, Epi-Jōmon, Okhotsk and Ainu structures. 248
15.1. A comparison of forager representation across six continents by number of populations per landmass area and in three cross-cultural forager datasets. 257
15.2. Fisher-foragers from Binford’s (2001) dataset. 258
15.3. Harpoon-bearing sites of northern Africa, divided by region. 267
15.4. Plot of complexity scores for Aqualithic sites over time. 270
15.5. Plot of complexity scores for Aqualithic sites by latitude. 271
15.6. Plot of complexity scores for Aqualithic sites by longitude. 272
16.1. Zvejnieki site plan. 282
16.2. Zvejnieki burial 170, Mesolithic adult male; Zvejnieki burial 226, Middle Neolithic child aged 2–4. 283
16.3. Summed probability distributions of radiocarbon dates. 285
16.4. Human bone collagen $\delta^{15}$N values for graves at Zvejnieki. 285
16.5. Human bone collagen and post-weaning M1 dentine $\delta^{15}N$ values for graves at Zvejnieki.

17.1. Location and setting of the rock art site of Wadi Sūra II.

17.2. Main panel of rock art depictions on the left of Wadi Sūra II walls.

17.3. A scene on Wadi Sūra II walls showing a composite beast.

17.4. Graphs of the average number of individuals per scene.

17.5. View of rock art depictions on the right of Wadi Sūra II walls.

Tables

1.1. Classification of forager communities mentioned in the text.

2.1. Studies included in a meta-ethnography on learning subsistence and learning social skills.


7.1. Are there secret societies in Aboriginal Australia?

7.2. Chronology of the transition to inequality on the Northwest Coast and Kodiak Island.

9.1. Defining key terms of reference.

9.2. Characteristics of ‘Generalized’ (egalitarian) and ‘Complex’ (transegalitarian) hunter-gatherers.

9.3. Information transmission types compared to demographic and spatial attributes from forager societies.

11.1. Comparison of dog roles based on the ethnographic and archaeozoological (Upper Palaeolithic) record.

12.1. Social inequalities among hunter-gatherer groups of the present and recent past.

15.1. Variables from Binford’s dataset that are discussed in-text and used in statistical analyses.

15.2. Hierarchical linear regression models using percentage aquatic resource-dependence.

15.3. Hierarchical binary logistic regression models using percentage aquatic resource-dependence.

15.4. Indications of complexity identified at Aqualithic sites.

15.5. Proxies for the importance of aquatic resources at Aqualithic sites by region and date period.

15.6. Mean complexity scores at Aqualithic sites by region and date period.

16.1. Summary of bone/bulk tooth dentine and sequential collagen results from Zvejnieki.

18.1. The forager societies represented in the Standard Cross-Cultural Sample, excluding equestrian hunters.

18.2. Means and standard variations for the whole sample and sub-samples defined by settlement and class.

18.3. Correlations among demographic and social features.

18.4. Correlations of demographic, settlement, social variables with types of lethal aggression.

18.5. The origin of war on Kodiak Island in the North Pacific.

18.6. The origins of war in eastern North America.

18.7. The origin of war in the Valley of Oaxaca, Mexico.

I write this preface from the state of Wyoming in the US, a state where COVID-19 has not (yet) struck as hard as it has struck other parts of the world, but where we nonetheless have been under stay-at-home orders. Those orders have given me plenty of time to think about where we went wrong, which in the case of the US is a long list. Coincidentally, I also recently re-read Machiavelli’s sixteenth-century book, *The Prince*, a manual of how to ruthlessly crush opponents while administering (apparent) generosity to acquire the ‘love’ of the masses.

It was in this context that I read the papers in this volume. In doing so, I was struck by two facts. First, inequality’s origin, development and operation are difficult to understand and yet the actions that lead to inequality are easy to implement. This shouldn’t surprise us: no American baseball player mathematically calculates the arc of a fly ball, but he’s still able to position himself in the right place to catch it. You can be utterly uneducated and still know how to manipulate a system to maintain exert, and abuse power. Many world leaders today are proof.

Second, I think that the papers in this volume could be some of the most valuable published in anthropology in many years. Philosophers and social thinkers have tried to understand inequality for a century; indeed, efforts to understand it precede Machiavelli. We bemoan its existence, and yet we have felt unable to grapples it, and, unable to grasp it, unable to do something about it. We muddled through the useless ramblings of nineteenth- and early twentieth-century evolutionists, who, reflecting their colonial environment, often thought that inequality was a good thing, and, if not good, an inevitable thing. Marx tried to shake them out of that complacency, but his brilliance was largely wasted during his ‘second coming’ in the second half of the twentieth century with so much hand-wringing about how a theory intended to explain early capitalism should also apply to hunter-gatherers (because, it must... right?), and so much politically correct posturing that led to no action – and all but disappeared when the Berlin Wall (thankfully) came down and the Soviet Union collapsed. ‘Intensification’ and ‘complexity’, words that should be stricken from anthropology’s vocabulary for their uselessness (and that are thankfully rare in this volume), masked what was really going on: exploitation, oppression, slavery... inequality in all its manifestations. Finally, I think, we have reached the point, through analyses of archaeological and ethnological data, that we might actually understand inequality.

We’ve passed a Rubicon. And this really matters.

The calamity that is COVID-19 has pulled back the curtain on modern society, exposing the weaknesses of its structure, laying bare the inequality between and within countries that Machiavellian leaders exploit and exacerbate for personal gain. Doing something about inequality is the challenge that will remain after COVID-19 dissipates.

These papers help by seeking the origin of inequality in a kind of society, that of nomadic hunter-gatherers, that we once considered ‘the original affluent society’, a classless society, or ‘primitive communists’. Some argue that inequality must be there (as Marxist analysts argued in the 1980s) since it is present in our closest primate relatives, and therefore is in humanity’s genetic foundation. Some see evidence of social and/or political inequality among Palaeolithic hunters, in the evidence for secret societies and in the violence of cave art. I am not convinced by this ‘grimdark’ vision of Palaeolithic society, and see an enormous gap between difference and inequality, between a situation where one person has more than another who nonetheless has enough and one in which society gives a person permission to enslave another.

Nonetheless, these chapters remind us that hunter-gatherers are not angels, and the same self-interest that guides an Inupiaq man to become a *umialik*, or that gave privilege to those men allowed to gather in the torch-lit gallery of Lascaux, guides Machiavelli’s anonymous prince. People have different skills, and for some, those skills are political. Under the right conditions, those individuals can consolidate power, convince others to go to battle, and make their personal aggrandizement seem reasonable to the people paying its price. Palaeolithic society had its Hitlers and Stalins, its Caesars and Trumps.

But it didn’t have imperialism, or empires, or palaces, or wealth hidden in tax havens. So other chapters here look for the conditions under which those ‘selfish’ individuals can gain power. High population density (pressure), localized and hence controllable resources,
the ability to build a coalition, which requires a sufficient concentration of population and social institutions that are conducive to creating coalitions, lack of trust in institutions, including sharing networks, to provide in times of stress – these are the conditions that permit those with political skills to pursue self-interest through the manipulation of others.

These conditions are as relevant to understanding the world of today as they are to an understanding of the Palaeolithic world. Today, however, conditions can be manipulated, for example ‘localized’ in off-shore bank accounts. Population pressure is high and will become worse as the world approaches the projected population of 11 billion by 2100. And competition is worsened by a capitalist economy that encourages ever-increasing amounts of consumption and conversion of needed resources, such as food, into higher profit margin items such as crisps and alcoholic beverages. Information is a resource, and technology makes information more available but less trustworthy. Unbelievably expensive displays of potential force – multi-billion-dollar aircraft carriers, atomic weapons, a Space Force – signal a lack of trust in non-violent institutions to resolve the inevitable disputes that arise when people, or countries, pursue their self-interests with little regard for others. Building trust in institutions – in the UN, in voting, in the media, in government itself! – is an integral part of stopping and even reversing the arms race before it drives the world to the poor house.

Inequality is an old story, and one that we understand much better due to the efforts of anthropologists and archaeologists. It hasn’t been easy to arrive at this point. But the really hard work – implementing our knowledge – still lies ahead for us. This volume, and our prehistoric hunting and gathering ancestors tell us what needs to be done. And it is the most important work anyone could be doing in the world today.

Robert L. Kelly
University of Wyoming
Chapter 17

Did prehistoric people consider themselves as equals or unequals? A testimony from the last hunter-gatherers of the Eastern Sahara

Emmanuelle Honoré

The aim of this edited volume is to present the views of archaeologists and anthropologists on the existence of inequalities before farming. In this regard, this chapter differs slightly, trying to explore inequalities not as we ourselves perceive them, but as we understand prehistoric people’s own perceptions and expression of difference through rock art. Even though it is tempting to see the direct transcription of scenes of everyday life in the ‘domestic’ representations that abound in Saharan rock art, rock art is not a collection of snapshot pictures of past societies. Any reality is the result of an individual and collective perception of the world (Schrödinger 1967: 93; Watzlawick 1976). In attempting to present a ‘phenomenology of the perception of inequalities’ in this paper, the founding principle is that rock art is not to be considered as the exact depiction of past reality, but rather as the depiction of a reality as it has been conceived in the mind of the painters. There is nothing new in saying that our worldviews, in the sense of ‘human decryptions of reality’, have been deeply modified since the onset of farming (Dilthey 1883: 216, 460; Ingold 1994: 11; Descola 2005: 10; Barker 2006: 57–60). This chapter therefore addresses the difficulty of studying social inequality through the archaeological lens and tentatively explores new ways of studying social differentiation through a case study which applies a sociological approach to group depictions. A corpus of 70 painting units with human representations has been studied, all made by hunter-gatherer groups around 6000 BC on the same rock surface. This site, the Wadi Sūra II shelter in southwestern Egypt (Fig. 17.1), is one of – if not the – most important rock art sites in Africa, due to the number of superimposed paintings: 8000 counted by the Cologne project (Leisen et al. 2013: 45). In interpretations of these paintings of human groupings, emphasis has sometimes been placed on equality, with figures depicted in a strictly similar way, and sometimes on differentiation, with what can be called ‘individualizing’ markers. Such markers, their absence or presence, context and association with other elements in rock art are explored here, not with the aim of determining whether the painters themselves were living in egalitarian or inequalitarian systems, but instead to understand, (1) how they conceived of equality or inequality in their social lives, (2) to what extent they represented themselves with signs of same-ness or difference, and (3) how we can understand the emphasis placed on either equality or inequality in group depictions.

Studying social inequality through the archaeological lens

In their introduction to the volume Pathways to Power, Douglas Price and Gary Feinman have emphasized the particular contribution that archaeology can bring to the study of the emergence of social inequality because of ‘the time depth available’ (Price & Feinman 2010: 1). At the same time, we are forced to acknowledge that archaeology is, by and large, a myopic discipline: the further we go back in time, the less clear our view is. In Palaeolithic archaeology, there is a still an irreconcilable coexistence of the relatively good insight that can be reached at the level of a site, and the fragmentary nature of our understanding of prehistoric societies and cultures. Perishable materials are often lacking in the archaeological record and we have to reconstruct practices and activities from only a small portion of what we call ‘material culture’. More challenging still is that the majority of human activities do not create positive evidence. Yet, having been built as an evidence-based discipline, archaeology still puts forward the idea that archaeological cultures can be defined as material cultures (for a discussion on the relevance of the concept of ‘archaeological cultures’, see Roberts & Vander Linden 2011).
Chapter 17

A more-or-less explicit consensus in the anthropological and archaeological research community that every hunter-gatherer society would have existed primarily in a state of equality and that social inequality would have emerged progressively. As a matter of fact, the debate focuses more on ‘when and where’ inequalities emerged, with each scholar seeing the signs of decisive steps towards inequality in their own period of interest (Jeunesse 1996; Van de Velde 1990). In the Palaeolithic record, grave goods and personal ornaments in funerary contexts have been seen as evidence of inherited social ranking, from Sunghir (White 1999; Flannery & Marcus 2014: 13) to La Madeleine (Vanhaeren & d’Errico 2001) and Saint-Germain-la-Rivière (Vanhaeren & d’Errico 2003). The detection of social inequality through material differences is based on a positivist tendency, assuming that social life can be described by ‘laws’ based on hard scientific evidence (Inglis & Thorpe 2012: 29). Such interpretation of the Palaeolithic record relies on the double premise that: (1) wealth inequalities translate proportionally to social inequalities (and, a fortiori, social stratification), which anthropologists have demonstrated as being not a rule in every society; and that (2) inequalities in death equate to inequalities in life. The degree to which inequalities are materialized does not necessarily nor directly reflect the degree of inequalities in a given society: there is often simplification or distortion, and wealth differences may not have a solely social meaning. More widely, in the reconstruction of prehistoric

Archaeology aims for a holistic understanding of past human societies and cultures lato sensu based on their material remnants, and scientific integrity forces us to state that a large portion of these material remains are non-existent. Social organizations are by definition complex bundles – even when they are described as simple – involving sets of relationships and entanglement. Exploring them with archaeology is a difficult undertaking, for which we have to accept many inherent limitations. As underlined by Boris Valentin and François Bon, ‘it is still a serious challenge to pretend that we can reconstruct social organizations in more than just very general terms’ (Valentin & Bon 2012: 176). It is not surprising that all classification systems of societies formulated by anthropologists are based on their observations of a set of criteria in the social life within current and well-documented groups. In archaeology, we never have direct access to what have been called social ‘systems’ by structuralists and their followers (Lévi-Strauss 1958): we only access partial – and often distorted – residual evidence of it. Any attempt at classifying past societies implies the use of metonymical reasoning: one element from the material evidence has to represent the whole system.

An essential question lies at the heart of the study of social inequality through archaeology: what are the archaeological traces of social equality or inequality? How can material evidence demonstrate social inequality? Are differences in wealth the best proxy indicator? Behind the evolutionist paradigm, there is
Did prehistoric people consider themselves as equals or unequals?

social systems, we generally assume that material evidence reflects social functioning, even though the material culture left by a society should not be viewed simply as the direct and exact transcription of social structures – the conclusions of this chapter partially explain why.

Classifying past societies as egalitarian or inegalitarian

Perhaps as a consequence of the necessary shortcuts mentioned above, most archaeological literature implicitly seeks to identify a single point on an artificial line that ranges from complete egalitarianism to the highest degree of inequality, presupposing that societies can be classified according to a defined complexity level. Is this opposition between egalitarian and inegalitarian societies always valid in archaeology? Of course in general, we can debate whether social models elaborated from ethnographic data can be directly applied to archaeological cases. The question has been posed more specifically during the last twenty years and some authors have given different answers. Brian Hayden has proposed an adaptation of this rather dualist model with the addition of another category, a kind of trans-category, the ‘transegalitarian society’ that could be placed between the egalitarian society and the inegalitarian society, exhibiting traits of each (Hayden 2013). Other authors such as Gary Feinman, with Kent Lightfoot and Steadman Upham, contributed strongly to this question in demonstrating that hierarchy and equality have the potential to coexist simultaneously in many human societies (Feinman et al. 2000). For example, in prehistoric Pueblo political organization of the American Southwest, the entanglement of so many forms of hierarchy creates a kind of equilibrium in the respective power of the different social groups, with the result that no single group dominates the others. Equality versus inequality thus seems to be neither a systematic nor a universally valid dichotomy. The rock art of the last hunter-gatherers brings an additional contribution to this question, displaying the apparent coexistence of expressions of equality and inequality.

Case study: rock paintings of the Eastern Sahara

The material for this archaeological case study is the rock art of the Eastern Sahara, in the Egyptian part of the Libyan Desert, now one of the hottest and most arid points of the globe. The Gilf el-Kebir plateau is a rocky massif overlooking large flat sandy plains. Like other Saharan massifs, this place has been attractive for prehistoric people during the last climatic optimum, from about 9000–8500 BC to 3500 BC. During this interval, favourable ecosystems flourished at the edge of the plateau in the micro-valleys called wadis, their geomorphological setting naturally retaining water. Archaeological evidence testifies to the re-peopling of the region during this limited period of the Holocene. During this period there was a major transition: from purely hunting and gathering economies to mixed pastoralist and hunting and gathering ways of life. Partly due to the intense wind erosion, archaeological research in the area has not yet found any funerary evidence. However, the prehistoric groups who evolved in the region have left a large amount of rock art: 402 sites with engravings and 456 sites with paintings have been recorded so far in the Gilf el-Kebir and Jebel el-'Uweinat region (Zboray 2013: 18).

There is a remarkably high density of these sites in a specific part of the northern plateau of the Gilf el-Kebir, which contains the two major sites of Wadi Sūra I and Wadi Sūra II. It is no exaggeration to say that Wadi Sūra II is one of the most – if not the most – important rock art site of Africa, with nearly 8000 paintings. The site is at the top of a dune overlooking a playa, a dried up former temporary lake (Fig. 17.1). It is a naturally curved rock wall of 20 m long. Although it was called the ‘cave of beasts’ by the University of Cologne team who excavated the site and completed the photographic record and publication of the rock art (Kuper 2013), it is a proper rock shelter (Figs. 17.1 & 17.2). Regarding chronology, since direct dates are lacking, a number of lines of evidence mean this shelter can be considered as having been painted by hunter-gatherers around 6000 BC. This is not the case for most sites in the region which can be assigned with no doubt to the pastoral period. In actual fact, the age of the Wadi Sūra II paintings is better viewed as a chronological range than a precise moment, as the rock surface is a palimpsest of many superimposed layers of paintings (Watrin et al. 2008). This paper is based on direct observation of the rock art of Wadi Sūra II, personal records and published records.

The variety of motifs at Wadi Sūra II is extensive and one specific feature of this rock art is the very high number of human representations, strikingly different from the repertoire of the European Palaeolithic cave art (Fig. 17.2). So far, this potential has remained untapped as the majority of studies focus instead on the mythological content of paintings such as the ‘beasts’ or the so-called swimmers (Le Quellec 2008, inter alia). In contrast to previous work, this chapter aims to study social differentiation and interaction by applying a sociological approach to group depictions. The large number of scenes depicting human figures in group interactions tells us something about how the
painters perceived social interactions between people. For this case study, 70 painting units depicting at least one individual have been identified on the main central panel of the shelter, among which 66 painting units have at least two individuals and can therefore be called ‘group scenes’. The coexistence of such a quantity of group scenes on one rock art panel is extremely rare, if not unique, at a global scale. Not all depictions are of the same style and were probably been done at different moments, but they all can likely be attributed to the last hunter-gatherers of the Eastern Sahara.

It appears that the painters have depicted human groups sometimes with signs of equality (or absence of signs of inequality) and sometimes with signs of difference (or absence of signs of equality). In some scenes, all individuals are depicted in a strictly similar way, with the same size, colour, body shape, etc., whereas in other scenes, markers of individuality can be detected. No blind correspondence is to be established with the degree of equality or inequality of the painter’s group. All factors potentially explaining the emphasis on equality in some scenes and inequality in others have to be explored. For this study, a catalogue of the 70 scenes involving at least one human figure has been made detailing for each: the number of individuals, the presence or absence of means of individualization, the nature of the means of individualization (size, colour, physical attributes, body ornaments, equipment), the difference or similarity of the postures of individuals in each scene, and the activity performed by the group. Both statistics and qualitative research methods are employed to detect potential patterns. The objective is to explore this corpus of collective scenes as a sociologist would do for a panel of human groups.

**Conception and depiction of equality and inequality among the last hunter-gatherer groups**

The activities performed are very diverse, some of them not being precisely identifiable. They can be classified into nine types: hunting, fighting, running, standing with no possibility of determining the activity more specifically, standing side by side, domestic activities, dancing and music-playing, ritual performance and scenes involving the fantastic figure of the composite beast (Fig. 17.3). The number of group scenes is very high: on 70 painting units with at least one human figure, only four display a single individual. It could therefore be said that more than 94 per cent of the painting units involving at least one human figure show group scenes. This echoes the fact that human figures represent a high proportion in the overall range of motifs on the Wadi Sūra II wall (Fig. 17.5).

The average number of individuals per group is between eight and nine. Scenes in which human figures are individualized show an average of seven figures, whereas scenes in which figures are not individualized display an average of more than nine figures. We could expect that the greater the number of human figures is in a scene, the less individualized they are, as if individuality would dissolve in the crowd or as if painting individuality would be done with greater care when a scene takes less time to be represented.
Did prehistoric people consider themselves as equals or unequals?

...individualization of figures by physical means. Thus, it seems that the emphasis on individuality is not completely incidental. On the base of this correlation, it can be hypothesized that there are some scenes where individuality does not matter much since everyone has a similar role in the performance, but there are other scenes where specific roles are given to specific individuals in the performance. As differing postures are often found with differing bodies (different size, colour, physical attributes, body ornaments, equipment), there is an expressed intention, in the depiction of such scenes, to specify what each specific person is doing.

This correlation can be visually observed on the graph showing the score of scenes involving individualization markers and the score of scenes involving differing body postures, both weighted according to the number of people involved in each scene (Fig. 17.4B). Patterns can be observed in the expression of individuality, which varies according to the activity performed by the group. Individualization markers are least often expressed in scenes depicting dance and music performance, rituals and in ‘mythological’ scenes involving the figure of the composite beast. In the life of prehistoric groups, these activities could be the moment when cohesion is expressed the most. The

A further statistical test allows us to demonstrate a correlation between the presence or absence of individual markers and the presence or absence of differences in the posture of the human figures composing each scene. Based on the corpus of 66 group scenes, a Pearson’s chi-square test between these two series allows us to reject the null hypothesis. With an error-margin of one per cent, it can be concluded that differences in individual postures are linked with the individualization of figures by physical means. Thus, it seems that the emphasis on individuality is not completely incidental. On the base of this correlation, it can be hypothesized that there are some scenes where individuality does not matter much since everyone has a similar role in the performance, but there are other scenes where specific roles are given to specific individuals in the performance. As differing postures are often found with differing bodies (different size, colour, physical attributes, body ornaments, equipment), there is an expressed intention, in the depiction of such scenes, to specify what each specific person is doing.

This correlation can be visually observed on the graph showing the score of scenes involving individualization markers and the score of scenes involving differing body postures, both weighted according to the number of people involved in each scene (Fig. 17.4B). Patterns can be observed in the expression of individuality, which varies according to the activity performed by the group. Individualization markers are least often expressed in scenes depicting dance and music performance, rituals and in ‘mythological’ scenes involving the figure of the composite beast. In the life of prehistoric groups, these activities could be the moment when cohesion is expressed the most. The

![Figure 17.3. A scene on Wadi Sūra II walls showing a composite beast in the centre superimposed on a crowd of simplified human figures. The two grey tones correspond to two red ochres. Oblique lines show areas where later motifs obliterate the composition.](image)

297
II found so far. The rock art surveys conducted in the Gilf el-Kebir show that pastoralist groups did paint a larger number of sites that are more widely dispersed, but all of them are, by contrast, very small. What can be said about this apparent contrast between a very small number of big sites for hunter-gatherers and a very big number of small sites for pastoralists? How do we interpret this apparent change in the way paintings were done? A direct interpretation in terms of social organization could be that pastoralists were more numerous, but lived in smaller and more scattered groups. It could also be that, for the pastoralists, the act of painting would have been practiced by family units in the context of everyday life whereas for hunter-gatherers the practice would have been more ‘codified’ and done only in specific contexts at defined sites. In other words, not every surface could be considered as

importance of group membership in such activities would explain why individuals are being depicted as ‘all equals’ in these specific performances. Dancing and playing music diverge from the general correlation between individualization markers and body postures, showing a striking difference between the two. In dance, individuals are all similar and yet, by contrast, all in different positions, which is easily justified by the very nature of dancing.

**Understanding social and symbolic life:**

**transitions from hunter-gatherers to pastoralist groups**

The rock art of the last hunter-gatherers differs unequivocally from pastoralist rock art in the region. There is no pastoralist equivalent to Wadi Sūra I or Wadi Sūra II. The rock art surveys conducted in the Gilf el-Kebir show that pastoralist groups did paint a larger number of sites that are more widely dispersed, but all of them are, by contrast, very small. What can be said about this apparent contrast between a very small number of big sites for hunter-gatherers and a very big number of small sites for pastoralists? How do we interpret this apparent change in the way paintings were done? A direct interpretation in terms of social organization could be that pastoralists were more numerous, but lived in smaller and more scattered groups. It could also be that, for the pastoralists, the act of painting would have been practiced by family units in the context of everyday life whereas for hunter-gatherers the practice would have been more ‘codified’ and done only in specific contexts at defined sites. In other words, not every surface could be considered as

**Figure 17.4.** *Graphs of the average number of individuals per scene (A) and of the score of individualization (B) according to the activity depicted.*

a) a) b) b) a)

- Composite beast
- Domestic activities
- Standing side by side
- Standing
- Running
- Fighting
- Hunting
- Dancing and music
- Ritual
- Composite beast

- Differing body postures
- Markers of individualization

- Hunting
- Domestic activities
- Standing
- Standing side by side
- Running
- Fighting
- Hunting
- Dancing and music
- Ritual
- Composite beast

- Differing body postures
- Markers of individualization
suitable for rock art expressions by the hunter-gatherer groups, explaining why there is such a high number of superimpositions. This idea would be in line with the notion of the transmission of technical gestures formulated for European Palaeolithic art by André Leroi Gourhan (1964, 1965), according to which painting required skills transmitted only to a few people, a hypothesis further developed by Emmanuel Guy who argues for the existence of a ‘noblesse Paléolithique’ (Guy this volume; 2017: 115–41, 292).

Yet, the significance of the above-mentioned contrasts might be even more complex as these are not the only differences that can be observed in rock art expressions. The average number of human figures per painting unit (containing at least one) is smaller at pastoralist sites. Additionally, the variety of activities depicted is also much less important. At pastoralist sites, most scenes show herd-keeping. The importance of the human figure seems to decrease while animal depictions (especially of cattle) increase. When fighting is shown, the purpose of fight is obviously the herd. Most – if not all – social and symbolic life seems to revolve around cattle, whereas hunter-gatherer social and symbolic life is very different. Symbolic content might be expressed in the paintings of potentially headless cattle (Honoré 2012). The archaeology of the Holocene Sahara provides a picture which is consistent with these observations, with many examples of the development of a cattle cult with the onset of pastoralism (di Lernia 2006) and more widely of ‘cattle-centred behaviour’ (Sauvet et al. 2009: 327–9).

Human figures occupy an important role in the Wadi Sūra II shelter, a fortiori if we consider that the earlier layers of stencil hands (about 900 stencil hands according to Honoré et al. 2016) do represent a human presence, according to the aforementioned metonymical reasoning. Human interactions are extremely complex and varied in Wadi Sūra II paintings. The number of people involved in each scene varies significantly with the activity depicted. It is interesting to see that activities involving a small number of people (hunting, standing, standing side by side, domestic context, fighting) are more-or-less related to the everyday life, whereas activities involving a large number of people (dancing and music, running, ritual, composite beasts) seem to be typically connected with feasts and what we might term, from our point of view, the ‘supernatural’ (Fig. 17.4A). Evidence of beliefs like the ones expressed in the complex scenes involving a composite beast at Wadi Sūra I and Wadi Sūra II are not found in pastoralist rock art. In the latter, the symbolic role is instead devoted to cattle. Did a domestic cult replace the large gatherings that are depicted in hunter-gatherer rock art? Changes in the representations related to the ‘supernatural’ could indicate a radical difference not only in beliefs and ‘cultural’ practices, but also in the symbolic world in general.

Conclusion

The hunter-gatherer groups who made the Wadi Sūra II rock paintings adopted a differential expression of equality or inequality between individuals in group scenes. The correlation between the type of activity and the degree of individualization seems to show that the expression of equality depends on the social agenda more directly than on the size of the group. Individuality is expressed more often in daily activities and in those related to subsistence, where specific roles are given to specific persons. Activities like dancing, playing music, running and cultural/mythological scenes are depicted with the least degree of individual

Figure 17.5. View of rock art depictions on the right of Wadi Sūra II walls showing the dominance of human figures in the repertoire. Colour balance has been modified for the purpose of visibility.
differentiation. In contrast to the former set of scenes, the sameness of individuals involved stands out in the latter. The social function of such activities might have been to contribute to cohesion and to the feeling of group membership. Thus, it can be said that the hunter-gatherer groups of Wadi Sūra II did depict the existence of inequalities and that they showed their social dimension through the differential expression of inequalities according to different social contexts. However, the existence and depiction of hierarchy cannot be deduced from this. Anthropologists have demonstrated that social inequality does not equate hierarchy, and *vice versa*.

Another striking pattern lies in the difference between the small number of large sites attributed to hunter-gatherers and the large number of small sites attributed to pastoralist groups in the Gilf el-Kebir. Does this reflect a demographic change, a change in the social organization of groups, or a change in the practice of rock painting? Were ‘artistic’ skills more widely shared at the time of pastoralism? Were figurative representations done in other contexts and/or for other purposes? The repertoire of the rock art also radically changes. Large human groupings of the hunter-gatherer repertoire tend to disappear, as well as ‘ritual’ and mythological scenes, while cattle is the new motif dominating most of the scenes depicted. In this regard, rock art might express a decisive change in the concept of social life by the late prehistoric groups, a change which is clearly concomitant with the adoption of pastoralism. So far, it is not possible to determine whether this change is explained by the colonization of the region by new groups with completely different social organization, or by the new organization of tasks and different worldviews that accompany farming, but these explanations are not mutually exclusive.

Beyond the understanding of some of the social dynamics in the Holocene northeastern Sahara, this case study highlights the current need to profoundly reconsider the dualistic model of egalitarian societies versus inequitable societies, since the set of ideas conveyed by it eludes a great part of the actual complexity of many forms of social organization. This binary opposition still in place in classification systems used in archaeology is not only an overly simple analytical framework, but it also implies that societies are monolithic systems and does not take into account the fact that social organizations also evolve according to the social agenda of the group. This has been described by E. Evans-Pritchard as the ‘relativity of the structure’, meaning that ‘[the] position [of an individual] in a system is relative to the functioning of the system in changing situations’ (Evans-Pritchard 1940: 266). The malleable nature of social organizations explains the apparent contradictions within a unique group: according to the activities performed or the moment of life of a group, the relations between individuals and the relation to these relations vary. Rather than characterizing pre-farming societies as inequitable as soon as signs of inequality can be detected, we should investigate the different expressions of inequality, their context and their significance, as this paper has attempted to do, bearing in mind that different kinds of archaeological evidence can also be in contradiction.

**Acknowledgements**

The author is grateful for the support of the McDonald Institute for Archaeological Research at Cambridge and to Luc Moreau, John Robb, Sylvie Amblard-Pison, Luc Watrin, Robert Layton and Joaquim Soler for their support, advice and careful reading of the manuscript. This research has been funded by the European Commission under the Marie Skłodowska-Curie Individual Fellowship Programme (EC Grant Agreement Number: 700778-CRESO-H2020-MSCA-IF-2015). The author is pursuing research in the framework of the IF@ULB program H2020-MSCA-COFUND-IF@ULB-2019-NARA.PalSoc, funded by ULB and the European Community (Marie Skłodowska Curie Actions) under the grant agreement number 801505 and is grateful to her supervisor Olivier Gosselain and co-supervisor A. Livingstone-Smith. The content of this publication reflects only the author’s views.

**Notes**

1. Roland Keller has mentioned the finding of a grave in the Gilf el-Kebir, but the information previously published on his personal website is inaccessible at the date of this publication and consequently unverified by the author of the present paper.
2. There is no depiction of pastoral activities on the Wadi Sūra II walls. One ‘village scene’ seems to show a mammal within the village and in close proximity to people. One could view the significance of this scene in relation to research in other regions which has shown that experimentation with ‘cultural control’ over wild mammals was done before ‘proper domestication’ (di Lernia 1998). More strikingly, the style of Wadi Sūra II rock art firmly differs from the styles of the well-identified pastoralist sites in the region. Unfortunately, as long as no direct dating is available, we rely on these types of arguments.
3. The score of individualization is calculated as the sum of presence (+1) or absence (-1) of differing body postures or individualization markers weighted by the number of individuals per scene.
4. In the literature, a surviving belief in such a composite beast has been hypothesized, with the goddess Ammut...
being a sudden and much later resurgence in the Nile Valley during the New Kingdom (Le Quellec et al. 2005: 72), in spite of the lack of any evidence linking the two.

References


Social inequality before farming?

Archaeological investigations over the past 50 years have challenged the importance of domestication and food production in the emergence of institutionalized social inequality. Social inequality in the prehistoric human past developed through multiple historical processes that operate on a number of different scales of variability (e.g. social, economic, demographic, and environmental). However, in the theoretical and linguistic landscape of social inequality, there is no clear definition of what social inequality is. The lifeways of hunter-gatherer-fisher societies open a crucial intellectual space and challenge to find meaningful ways of using archaeological and ethnographic data to understand what social inequality exactly is with regard to variously negotiated or enforced cultural norms or ethoses of individual autonomy. This interdisciplinary edited volume gathers together researchers working in the fields of prehistoric archaeology and cultural and evolutionary anthropology. Spanning terminal Pleistocene to Holocene archaeological and ethnographic contexts from across the globe, the nineteen chapters in this volume cover a variety of topics organized around three major themes, which structure the book: 1) social inequality and egalitarianism in extant hunter-gatherer societies; 2) social inequality in Upper Palaeolithic Europe (c. 45,000–11,500 years ago); 3) social inequality in prehistoric Holocene hunter-gatherer-fisher societies globally. Most chapters in this volume provide empirical content with considerations of subsistence ecology, demography, mobility, social networks, technology, children’s enculturation, ritual practice, rock art, dogs, warfare, lethal weaponry, and mortuary behaviour. In addition to providing new data from multiple contexts through space and time, and exploring social diversity and evolution from novel perspectives, the collection of essays in this volume will have a considerable impact on how archaeologists define and theorize pathways both towards and away from inequality within diverse social contexts.

Editor:

Luc Moreau is a research affiliate and immediate-past Marie Skłodowska-Curie Fellow of the McDonald Institute for Archaeological Research at the University of Cambridge, United Kingdom. His research focuses on the study of Upper Palaeolithic behavioural variability and adaptations towards the Last Glacial Maximum. His publications deal with various aspects including stone tool technology and human mobility based on sites from Northwestern, Central and Eastern Europe. He is an affiliate member of the French Unité Mixte de Recherches (UMR) 7041 ‘Archéologies et Sciences de l’Antiquité’ based in Paris/Nanterre, and Secretary of the International Society for Hunter Gatherer Research (ISHGR).

Published by the McDonald Institute for Archaeological Research, University of Cambridge, Downing Street, Cambridge, CB2 3ER, UK.

The McDonald Institute for Archaeological Research exists to further research by Cambridge archaeologists and their collaborators into all aspects of the human past, across time and space. It supports archaeological fieldwork, archaeological science, material culture studies, and archaeological theory in an interdisciplinary framework. The Institute is committed to supporting new perspectives and ground-breaking research in archaeology and publishes peer-reviewed books of the highest quality across a range of subjects in the form of fieldwork monographs and thematic edited volumes.

Cover design by Dora Kemp and Ben Plumridge.

ISBN: 978-1-913344-00-9