# MATERIALS, PRODUCTIONS, EXCHANGE NETWORK AND THEIR IMPACT ON THE SOCIETIES OF NEOLITHIC EUROPE

PROCEEDINGS OF THE XVII UISPP WORLD CONGRESS (1–7 SEPTEMBER 2014, BURGOS, SPAIN)

Volume 13/Session A25a

**Edited by** 

**Marie Besse and Jean Guilaine** 

# ARCHAEOPRESS PUBLISHING LTD Gordon House 276 Banbury Road Oxford OX2 7ED

www.archaeopress.com

ISBN 978 1 78491 524 7 ISBN 978 1 78491 525 4 (e-Pdf)

© Archaeopress, UISPP and authors 2017

VOLUME EDITORS: Marie Besse and Jean Guilaine

SERIES EDITOR: The board of UISPP

CO-EDITORS – Laboratory of Prehistoric Archaeology and Anthropology, Department F.-A. Forel for Environmental and Aquatic Sciences, University of Geneva

SERIES PROPERTY: UISPP – International Union of Prehistoric and Protohistoric Sciences

Proceedings of the XVII World UISPP Congress, Burgos (Spain) September 1st - 7th 2014

KEY-WORDS IN THIS VOLUME: Neolithic, Europe, Materials, Productions, Exchange Networks

UISPP PROCEEDINGS SERIES is a printed on demand and an open access publication, edited by UISPP through Archaeopress

BOARD OF UISPP: Jean Bourgeois (President), Luiz Oosterbeek (Secretary-General), François Djindjian (Treasurer), Ya-Mei Hou (Vice President), Marta Arzarello (Deputy Secretary-General). The Executive Committee of UISPP also includes the Presidents of all the international scientific commissions (www.uispp.org)

BOARD OF THE XVII WORLD CONGRESS OF UISPP: Eudald Carbonell (Secretary-General), Robert Sala I Ramos, Jose Maria Rodriguez Ponga (Deputy Secretary-Generals)

All rights reserved. No part of this book may be reproduced, or transmitted, in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of the copyright owners.

This book is available direct from Archaeopress or from our website www.archaeopress.com

# **Contents**

List of Figures and Tables	ii
Foreword to the XVII UISPP Congress Proceedings Series Edition Luiz Oosterbeek	iv
Foreword	V
White-painted Pottery in the Early Neolithic Balkans Darko Stojanovski	1
Settlements – Head and Settlements – Tail in the Neolithic Obsidian Exchange Network in the Western Mediterranean	13
Original and Skeuomorph: On the materiality of the Chalcolithic package of prestige in South Eastern Europe	17
Exchange and interaction: the Iberian Mediterranean between the VI and III millennia cal BC Teresa Orozco Köhler and Joan Bernabeu Aubán	27
The Western network revisited: the transition into agro-pastoralism in the Alto Ribatejo, Portugal	39
Mobility in late Prehistory in Galicia: a preliminary interpretation from pottery M Pilar Prieto Martínez and Óscar Lantes Suárez	51
Types and gesture. The jewellery of the Copper age in the Alps in a techno-typological study	69

# **List of Figures and Tables**

D. Stojanovski: White-painted Pottery in the Early Neolithic Balkans	
FIGURE 1. WHITE-PAINTED POTTERY (WPP) GROUPS IN THE BALKAN PENINSULA	3
FIGURE 2. CALIBRATION PLOT FOR NEA NIKOMEDEIA (GROUP I)	2
FIGURE 3. CALIBRATION PLOT FOR GROUP II	
FIGURE 4. CALIBRATION PLOT FOR GROUP III	5
FIGURE 5. CALIBRATION PLOT FOR GROUP IV	£
FIGURE 6. CALIBRATION PLOT FOR GROUP V	7
FIGURE 7. CALIBRATION PLOT FOR KARANOVO II (GROUP VI)	8
T. Quero: Settlements – Head and Settlements – Tail in the Neolithic Obsidian	
Exchange Network in the Western Mediterranean	
Figure 1. Sites position: S. Martino Spadafora and Granarolo dell'Emilia	14
Figure 2. S. Martino Spadafora site: technological distribution of	
THE OBSIDIAN KNAPPING PRODUCTS	14
Figure 3. S. Martino Spadafora site: obsidian cores and products. Tools are scrapers,	
DENTICULATES AND PERFORATORS	14
Figure 4. Granarolo site: raw materials distribution and the knapping products.	
THE BLADELETS ARE UNRETOUCHED	15
D. Gheorghiu: Original and Skeuomorph: On the materiality of	
the Chalcolithic package of prestige in South Eastern Europe	
Figure 1. Grave 4 (cenotaph), Varna cemetery (Varna Museum)	
Figure 2. Grave 43 (Varna Museum)	
Figure 3. Grave 43, detail. (Varna Museum)	
Figure 4. A replica of the Sultana package (Oltenița Museum)	
Figure 6. The Horodnica II package (Natural History Museum, Vienna)	
FIGURE 5. THE BRAD PACKAGE (ROMAN MUSEUM OF HISTORY)	22
T. Orozco Köhler and J. Bernabeu Aubán: Exchange and interaction:	
the Iberian Mediterranean between the VI and III millennia cal BC	
FIGURE 1. SOME OF THE RAW MATERIAL SOURCES RECENTLY DISCOVERED IN IBERIA:	
PICO CENTENO (VARISCITE), CASA MONTERO (FLINT)	20
Figure 2. Area of schist braceletes distribution in the mediterranean Iberia	
ALONG THE EARLY NEOLITHIC	30
FIGURE 3. PIECES SHOWING — THE MANUFACTURING PROCESS OF THE SCHIST BRACELETS AND	
THE REUSE OF THESE OBJECTS AS PENDANTS	31
FIGURE 4. THE DISTRIBUTION OF AMPHIBOLITE STONE AXES FROM THE SOURCE AREA IN	
THE SOUTHEAST ARRIVES TO THE CENTRAL MEDITERRANEAN	32
FIGURE 5. SOME TECHNOLOGICAL FEATURES ALLOW TO DELIMIT CLEARLY REGIONAL DIFFERENCES IN IBERIA	
FIGURE 6. HORNFELS AXES AND ADZES HAVE THEIR SOURCE AREA IN THE NORTHEAST MEDITERRANEAN	33
FIGURE 7. THE EYE-MOTIF IS ADOPTED AND ADAPTED TO A VARIETY OF SUPPORTS OVER	
A WIDE GEOGRAPHICAL FRAMEWORK, WITH REGIONAL DIFFERENCES	34
N. J. Almeida: The Western network revisited: the transition into	
agro-pastoralism in the Alto Ribatejo, Portugal	
FIGURE 1. DIGITAL ELEVATION MODEL OF THE ALTO RIBATEJO WITH LOCATION OF THE SITES	
TABLE 1. DATINGS FOR THE MAIN CONTEXTS REFERRED IN THE TEXT	4]
TABLE 2. GENERAL ABUNDANCE OF THE MAIN TAXA IDENTIFIED IN THE ALTO RIBATEJO PALYNOLOGICAL(^)	A -
AND ANTHRACOLOGICAL RECORDS	43
RECORDS BASED ON NISP VALUES	11
NECONDS DASED ON INISE VALUES	, <del>4</del> 4

# M. P. Prieto Martínez and Ó. Lantes Suárez: Mobility in late Prehistory in Galicia: a preliminary interpretation from pottery

FIGURE 1. POTTERY ANALYSED FROM THE EARLY NEOLITHIC. 1. MAP SHOWING THE DISTRIBUTION OF	
THE EARLY NEOLITHIC SITES IN GALICIA, 2. FRAGMENTS OF THE SAME VESSEL FROM THE SITE OF	
AS MAMELAS WITH BOQUIQUE DECORATION, ANALYSED IN THIS STUDY. 3. DISTRIBUTION OF AREAS	
WITH BOQUIQUE DECORATION FROM THE NEOLITHIC PERIOD IN THE IBERIAN PENINSULA	53
FIGURE 2. POTTERY ANALYSED FROM THE MID-NEOLITHIC. 1. MAP SHOWING THE DISTRIBUTION	
OF MID-NEOLITHIC SITES IN GALICIA. 2. FRAGMENTS OF THE VESSELS ANALYSED	55
FIGURE 3. POTTERY ANALYSED FROM THE LATE NEOLITHIC. 1. MAP SHOWING THE DISTRIBUTION OF	
LATE NEOLITHIC SITES IN GALICIA. 2. MAP SHOWING THE DISTRIBUTION OF THE 3 POTTERY AREAS	
OF THE IBERIAN PENINSULA. 3. SELECTION OF SOME OF THE VESSELS ANALYSED	57
FIGURE 4. POTTERY ANALYSED FROM THE EARLY BRONZE AGE. 1. DISTRIBUTION OF REGIONAL BELL BEAKER	
STYLES IN THE IBERIAN PENINSULA. 2. MAP SHOWING THE DISTRIBUTION OF EARLY BRONZE AGE SITES	
IN GALICIA. 3. SELECTION OF SOME OF THE VESSELS ANALYSED. 4. INTERPRETATION OF	
THE POSSIBLE LONG AND SHORT DISTANCE RELATIONSHIPS AT THIS TIME	59
FIGURE 5. POTTERY ANALYSED FROM THE LATE BRONZE AGE. 1. MAP SHOWING THE DISTRIBUTION OF	
LATE BRONZE AGE SITES. 2. SELECTION OF SOME OF THE VESSELS THAT WERE ANALYSED.	
3. DISTRIBUTION OF SITES WITH WHR POTTERY IN THE NW IBERIAN PENINSULA AND INTERPRETATION	
OF THE POSSIBLE RELATIONSHIPS WITH OTHER PARTS OF EUROPE THROUGH THE STAMPED DECORATION	
ON THE WHR POTTERY	63
TABLE 1A. MINEROLOGY OF THE POTTERY ANALYSED FROM THE EARLY NEOLITHIC	54
TABLE 1B. MINIMUM DISTANCES FROM THE SITE TO THE MOST LIKELY SOURCES OF RAW MATERIAL FOR	
THE POTTERY FROM THE EARLY NEOLITHIC	54
TABLE 2A. MINERALOGY OF THE POTTERY ANALYSED FROM THE MID-NEOLITHIC	56
TABLE 2B. MINIMUM DISTANCES FROM THE SITE TO THE MOST LIKELY SOURCES OF RAW MATERIAL FOR	
THE POTTERY FROM THE MID-NEOLITHIC	56
TABLE 3A. MINERALOGY OF THE POTTERY ANALYSED FROM THE LATE NEOLITHIC	58
TABLE 3B. MINIMUM DISTANCES FROM THE SITE TO THE MOST LIKELY SOURCES OF RAW MATERIAL FOR	
THE POTTERY FROM THE LATE NEOLITHIC	58
TABLE 4A. MINERALOGY OF THE POTTERY ANALYSED FROM THE EARLY BRONZE AGE	60
TABLE 4B. MINIMUM DISTANCES FROM THE SITE TO MOST LIKELY SOURCES OF RAW MATERIAL FOR	
THE POTTERY FROM THE EARLY BRONZE AGE	60
TABLE 5A. MINERALOGY OF THE POTTERY ANALYSED FROM THE LATE BRONZE AGE	62
TABLE 5B. MINIMUM DISTANCES FROM THE SITE TO MOST LIKELY SOURCES OF RAW MATERIAL FOR	
THE POTTERY FROM THE LATE BRONZE AGE	62
S. Viola et al.: Types and gesture. The jewellery of the Copper age	
in the Alps in a techno-typological study	
FIGURE 1. LOCALIZATION OF THE SITES STUDIED AND HOLE MAKING TOLLS BEFORE AND AFTER USE	72
FIGURE 2. MANUFACTURE SEQUENCE OF COPPER AGE, DISC AND CYLINDRICAL BEADS-MEDIUM SIZE	
FIGURE 3. MANUFACTURE SEQUENCE OF COPPER AGE, DISC AND CYLINDRICAL BEADS-SMALL SIZE	
FIGURE 4. MANUFACTURE SEQUENCE OF COPPER AGE, LONG BEADS	
FIGURE 5. MANUFACTURE SEQUENCE OF BELL BEAKER CULTURE, BICONICAL AND GLOBULAR BEADS	
FIGURE 6. MANUFACTURE SEQUENCE OF EARLY BRONZE AGE, DISCOIDS, CYLINDRICAL BEADS-MEDIUM SIZE	
TABLE 1. THE LIST OF SITES	
TABLE 2. THE EXPERIMENTAL TESTS: ASPECTS, VARIABLES AND DESCRIPTIONS	
Table 3. The perforation tests	

# Foreword to the XVII UISPP Congress Proceedings Series Edition

## Luiz Oosterbeek Secretary-General

UISPP has a long history, starting with the old International Association of Anthropology and Archaeology, back in 1865, until the foundation of UISPP itself in Bern, in 1931, and its growing relevance after WWII, from the 1950's. We also became members of the International Council of Philosophy and Human Sciences, associate of UNESCO, in 1955.

In its XIVth world congress in 2001, in Liège, UISPP started a reorganization process that was deepened in the congresses of Lisbon (2006) and Florianópolis (2011), leading to its current structure, solidly anchored in more than twenty-five international scientific commissions, each coordinating a major cluster of research within six major chapters: Historiography, methods and theories; Culture, economy and environments; Archaeology of specific environments; Art and culture; Technology and economy; Archaeology and societies.

The XVIIth world congress of 2014, in Burgos, with the strong support of Fundación Atapuerca and other institutions, involved over 1700 papers from almost 60 countries of all continents. The proceedings, edited in this series but also as special issues of specialized scientific journals, will remain as the most important outcome of the congress.

Research faces growing threats all over the planet, due to lack of funding, repressive behavior and other constraints. UISPP moves ahead in this context with a strictly scientific programme, focused on the origins and evolution of humans, without conceding any room to short term agendas that are not root in the interest of knowledge.

In the long run, which is the terrain of knowledge and science, not much will remain from the contextual political constraints, as severe or dramatic as they may be, but the new advances into understanding the human past and its cultural diversity will last, this being a relevant contribution for contemporary and future societies.

This is what UISPP is for, and this is also why we are currently engaged in contributing for the relaunching of Human Sciences in their relations with social and natural sciences, namely collaborating with the International Year of Global Understanding, in 2016, and with the World Conference of the Humanities, in 2017.

The next congress of UISPP, in Paris (2018), will confirm this route.

### **Foreword**

# Jean Guilaine Collège de France

### Marie Besse

Université de Genève, Department F.-A. Forel for Environmental and Aquatic Sciences, Laboratory of Prehistoric Archaeology and Anthropology

Scholars who will study the historiography of the European Neolithic, more particularly with regards to the second half of the 20th century and the beginning of the 21st century, will observe a progressive change in the core understanding of this period. For several decades the concept of 'culture' has been privileged and the adopted approach aimed to highlight the most significant markers likely to emphasise the character of a given culture and to stress its specificities, the foundations of its identity. In short, earlier research aimed primarily to highlight the differences between cultures by stressing the most distinctive features of each of them. The tendency was to differentiate, single out, and identify cultural boundaries. However, over the last few years this perspective has been universally challenged. Although regional originality and particularisms are still a focus of study, the research community is now interested in widely diffused markers, in medium-scale or large-scale circulation, and in interactions that make it possible to go beyond the traditional notion of 'archaeological culture'. The networks related to raw materials or finished products are currently leading us to re-think the history of Neolithic populations on a more general and more global scale. The aim is no longer to stress differences, but on the contrary to identify what links cultures together, what reaches beyond regionalism in order to try to uncover the underlying transcultural phenomena. From culturalism, we have moved on to its deconstruction. This is indeed a complete change in perspective. This new approach certainly owes a great deal to all kinds of methods, petrographic, metal, chemical and other analyses, combined with effective tools such as the GIS systems that provide a more accurate picture of the sources, exchanges or relays used by these groups. It is also true that behind the facts observed there are social organisations involving prospectors, extractors, craftsmen, distributors, sponsors, users, and recyclers. We therefore found it appropriate to organise a session on the theme 'Materials, productions, exchange networks and their impact on the societies of Neolithic Europe'.

How is it possible to identify the circulation of materials or of finished objects in Neolithic Europe, as well as the social networks involved? Several approaches exist for the researcher, and the present volume provides some examples.

Let us take the case of the white painted ware in the Early Neolithic of the Balkan Peninsula.

D. Stojanovski shows how several cultural groups exhibited this particular pottery decoration. However, according to D. Stojanovski, it is not very likely that such a technique would have been transmitted by migrants who carried with them the 'Neolithic package'. In this particular case we are instead dealing with a borrowing process adopted (or not) in various ways according to distinct factors: the attractiveness of its visual effect, traditions, needs, environmental context.

It is a known fact that obsidian is a perfect marker of exchange relationships across the Mediterranean basin throughout the Neolithic. T. Quero however points to differences with regards to these transfers, based on two examples in Italy. The first site, in Northern Sicily, near the lava flow of Lipari, is a place of obsidian redistribution throughout the Neolithic. This material is abundantly used, although the characteristics of production change over time: over-exploited nuclei generating mainly a flake industry during the Stentinello, rise of blade production by pressure during the Diana stage. At the

second site, in Northern Italy, far away from the sources of supply, the imported material is rare and has only exotic value.

D. Gheorghiu develops an original example stemming from the Chalcolithic period in South-East Europe. Here the elites display wealth by using valorised objects of allochthonous origin. The wealthy dead of the Varna cemetery, for example, are distinguished by an authentic 'package' of objects revealing a real ideology of prestige. This model, conveying both concepts of ideas and technical transfers, will be exported again towards peripheral cultures such as the Tripolje culture. When groups that settled at the margins were not able to acquire pieces from the source, they replace these original pieces with similar creations (skeuomorphs) that make it possible, through its productions, to maintain a hierarchic social model.

T. Orozco Köhler and L. Bernabeu Aubán provide some examples of circulation networks during the Neolithic on the Iberian Peninsula. They first emphasise the progress achieved with regard to the identification of sources of supply: flint mines of de Casa Montero (Madrid), open-air exploitations of Andalusian obsidian at Pico Centero (Huelva). Several axes of circulation are mentioned: shale bracelets in the south, amphibolite axes around Valencia, Sardinian obsidian brought to Catalonia. The authors highlight the variations affecting these networks in space and time. They also emphasise their possible superimposition. They demonstrate that these circulations were not restricted to the dissemination of objects but involved displacements of individuals within a context governed by social motivations (alliances, relationships between individuals).

The establishment of an agro-pastoral economy in the Alto Ribatejo, in the Centro region of Portugal, was studied by N. J. Almeida, C. Ferreira, S. Garcês, A. Cruz, P. Rosina, and L. Oosterbeek. The archaeological data demonstrates a great variety of situations in the distribution of the sites, depending on space and time. It is thought that this research can be improved by applying new methods likely to better reflect the reality of settlements throughout the Neolithic. After reviewing the evolution of the environmental setting under the effect of human pressure (opening of the landscape, fauna), the authors point to the impact of coastal arrivals, vehicles of the neolithisation dynamic, but also, in parallel, to the role of more continental areas which have their own specificity in the emergence of cultural productions.

M. P. Prieto Martinez and O. Lantes Suárez look at the example of pottery as an element which makes it possible to assess the existence of circulation networks in Galicia from the Neolithic to the Bronze Age. Based on the typology and on archaeometric analyses, these authors attempt to estimate the distance that separates sites of discovery from the elaboration space of the ceramics. This method proposes an alternative for the simple local/non-local alternative. The authors propose five models for this grid (ranging between 0 and more than 200 km), with the district scale (between 7 and 50 km) being the most frequent. This approach also provides a more appropriate picture of the true mobility of the groups (for example possible settlement instability during the Middle Neolithic).

An alternative way of analysing mobility is based on the technical analysis of the ornaments. The example cited by S. Viola, M. A. Bernabò Brea, D. Delcaro, F. Gonzato, C. Longhi, G. Gaj, R. Macellari, L. Salzani, A. Serges, I. Tirabassi, and M. Besse, refers to the stone ornaments of the Alpine Chalcolithic. The operational sequence of manufacturing, distinct technical details, and even use wear are all specific markers of an object during its displacements. These remains are also identifiers of the definition of territories and of cultural groups.

By giving preference to various aspects of raw material or finished product analyses, it is obvious how current research makes it possible to draw a more accurate and a more complex picture of the Neolithic circulation networks, as well as simultaneously producing a more balanced one of the distances covered at the time. The examples cited in this volume confirm that the first agricultural communities, through the establishment of networks of varying and sometimes contrasting scales, were authentic 'exchange-based societies'.