

Editorial: Think global, act local! The *Archéologie et Gobelets* workshop in Kiel and some future perspectives for research into the 3rd millennium BC

Jos Kleijne

This special volume of the Journal of Neolithic Archaeology is dedicated to a collection of papers presented at the conference held between the 17th and 21st of May 2017 in Kiel, Germany. The topic of this conference was *"Think Global, Act Local! The Transformation of Spatial Interaction and Material Culture in Beaker Contexts of the 3rd Millennium BC in Europe"*. In total, ca. 70 people, specialists from all over Europe, brought together in the loose research network of *Archéologie et Gobelets*, attended this conference. 27 papers were presented focusing either on this specific topic at hand from various angles, or on presenting new Corded Ware or Bell Beaker finds from all across Europe. Of these 27 presentations, nine were found able to contribute to this volume. In this editorial I will highlight the different articles and their relevance to the overarching topic. Next to this overview, a possible way is paved for future studies into the 3rd millennium BC.

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Fig. 1. Poster of the conference.

Archéologie et Gobelets in Kiel +++ 17th – 21st May 2017 +++ www.sfb1266.uni-kiel.de

Think Global, Act Local!

The **Transformation** of Spatial Interaction and Material Culture in Beaker Contexts of the 3rd Millennium BC in Europe

Quentin Favrel
 Julien Ripoché
 Jan Turek
 Olivier Lemerrier
 John Simonsen
 Phillip Stockhammer
 Marie Besse
 Ana Catarina Basílio
 Elena Leghissa
 Jaroslav Bartík
 Jerzy Kopacz
 Antonín Přichystal
 Lubomír Šebela
 Ralph Grossmann
 Michael Bilger
 Erik Drenth
 Ralf Lehmphul
 Harry Fokkens
 Pilar Prieto Martínez
 Jan Kolar
 Elisa Guerra Doce
 Matthieu Labaune
 Janusz Czebreszuk
 Marzena Szmyt
 Madeleine Fröhlich
 Thor McVeigh
 Gabriella Kulcsár
 Jan Piet Brozio
 Asger Meulengracht Olsen
 Enrico Giannitrapani
 Helena Barbosa
 Gabriel García Atiénzar
 Iñigo Olalde
 Ivan Cheben
 Christian Strahm



Patricia Ríos
 Corina Liesau
 Concepción Blasco
 Martin Hinz
 Filippo Ianni
 Walter Dörfler
 Ingo Feeser
 Ken Massy
 Alissa Mittnik
 Lorenzo Galindo
 Miriam Alba Luzón
 Anna Endrődi
 György Káli
 Julia Giblin
 Vajk Szeverényi
 Tamás Hajdu
 Róbert Patay
 Géza Szabó
 Zsolt Kasztovszky
 Zoltán Kis
 Kitti Köhler
 Boglárka Maróti
 Viktória Kiss
 David Reich
 Matthias Becker
 Petr Škrdla
 Antonio Valera
 Corina Knipper
 Fabian Wittenborn
 Stephanie Metz
 Steffen Kraus
 Ernst Pernicka
 Johannes Krause
 Jan de Koning

The workshop is jointly organized by **CRC-1266 'Scales of Transformation'** and **Graduate School 'Human Development in Landscapes'**

Direct link: <http://www.sfb1266.uni-kiel.de/en/events/sessions-workshops/archeologie-et-gobelets>

Organizers: Jos Kleijne, Martin Furholt and Johannes Müller • Place: Kiel University



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Archéologie et gobelets



GRADUATE SCHOOL AT KIEL UNIVERSITY
 human development in landscapes

Fig.2. Poster highlighting the contributors to the conference.

'Think Global, Act Local' in this volume

This collection of nine papers shows the remarkable variety and high quality of current Corded Ware and Bell Beaker research across Europe. The theme of our conference, "Think Global, Act Local", the continuous interaction between local practices and global ideas, is reflected in some way in many contributions.

In the paper by Ryan et al., the well-known idea of the "Bell Beaker as archer" hypothesis is tested in practice by identifying the archer's burials and by studying the skeletal remains and grave goods present. In doing so, they make it possible to study both the action of archery and the ideas behind this particular aspect of the Bell Beaker funerary phenomenon.

The study by Bartík et al. presents the newest results from excavation campaigns targeted at Bell Beaker evidence for chert extraction in the Moravian foothills of the Carpathian Basin. The practice of chert extraction itself remains unknown, but evidence for the local knapping of chert during the later part of the 3rd millennium BC is described in detail. Future research addresses the question whether this particular type of chert is part of the larger exchange networks existing in Central Europe during the later part of the 3rd millennium BC.

Two papers deal with Bell Beaker presence from the Iberian Peninsula (Sanches/Barbosa and Alba Luzón/García Atiénzar). The paper by Alba Luzón and García Atiénzar focuses on the pottery at Peñón de la Zorra, a Bell Beaker settlement in Alicante, Spain. Here, analysis of pottery reveals how local communities place themselves within the larger global network, sharing similarities with other areas of the Iberian Peninsula.

The work of Sanches and Barbosa studies the Bell Beaker phenomenon in the Douro Basin of Northern Portugal. By comparing the Bell Beaker chronology and pottery evidence from four complexes in the region, the authors illustrate that differences in pottery styles are less chronologically relevant as they are more related to local practices such as identity formation and functional differences between the sites. Again here the interaction between the global ideas of the Bell Beaker phenomenon interact with local actions and practices, revealing significant differences.

In the papers by De Koning and Drenth, Simonsen and Lehmphul we see the theme of this conference played out along the lines of a particular type of evidence, the Bell Beaker settlement in Northwest Europe. De Koning and Drenth present a case for a late Bell Beaker house plan from the coastal areas of the Netherlands fitting well within the tradition of North-West European Late Neolithic house-building: two-aisled irregular structures, with clear occupation evidence such as hearths (see also Kleijne/Drenth in press). The intricacies of this settlement reside mainly in the absence of material remains and the questions it poses to the nature of activities carried out here.

Simonsen's paper focuses on the settlement evidence in the whole of North Jutland. He critically examines the various house plans and sunken floors and the practices that emerge from both the material and structural evidence. As these local practices greatly vary between settlements, ranging from flint artefact production to weaving and textile production, the notion of craft specialisation is interesting and certainly deems further research. Lehmphul's perspective puts the local actions at the Altgaul settlement in a larger perspective, by presenting settlement, its material culture evidence, and Common Ware pottery in particular. He shows that local changes in pottery production illustrate transformations on a larger scale; Shared pot-

ting practices develop within the Bell Beaker phenomenon beyond the well-known Bell Beaker vessel.

A more large-scale outlook is found in the contribution by Lemerrier. In his treatment of the Bell Beaker phenomenon from a Southern French perspective, he combines various recent natural scientific studies with a traditional historical approach. He highlights thirteen different points for future research aimed at combining our historical understanding and these natural sciences. In his perspective, these large scale historical processes and mechanisms that are at play are essential for our understanding of how the Bell Beaker phenomenon acts on the local and regional level of Southern France.

Finally, Bilger, during his studies at Kiel University, asked himself a very basic question: “How many Bell Beaker pottery vessels are there actually in Europe?” For a detailed answer, including finds distributions, spatial analyses and some remarkable outcomes, one can read his full Bachelor thesis, which is added here as a special article (without any further changes).

A future for Bell Beaker studies?

Many of the studies presented here concentrate more on local and regional developments (“Act Local”), than focusing on the larger perspectives surrounding the Bell Beaker phenomenon (“Think Global”). Understanding and following through with this research focus is important as local and regional patterns can inform us about the many diverse manifestations and possible wider significance of particular areas of Europe in relation to the larger questions surrounding the Bell Beaker phenomenon (as also highlighted by Lemerrier). More research can and should be done, focusing in particular on the relationship between ‘global’ and ‘local’, taking alternative approaches and perspectives.

It is namely the relationship between ‘local’ and ‘global’ scales that some of the future debates in Bell Beaker (and simultaneously Corded Ware) studies lies. Following the recent publications, and anticipating inevitable future publications concerning aDNA population genetics (e.g. Olalde et al. 2018; Szécsényi-Nagy et al. 2018; Reich 2018), particularly the 3rd millennium BC has seen some controversial models on this ‘global’ perspective. Whether authors discuss a complete genetic turnover, or simply a large scale migration event, archaeological analyses and interpretations have to be taken into consideration (see also Kristiansen et al. 2017; Heyd 2017; Furholt 2018; Guilaine 2018).¹

New models are needed focusing on mechanisms that bring these local and global perspectives together. Based on solid archaeological datasets, and backed up by carefully constructed theories and methodologies, such models are especially needed to understand the spread and development of the Bell Beaker phenomenon in the second half of the 3rd millennium BC.

A useful concept to aid us in this multiscale and multidisciplinary approach towards the Bell Beaker phenomenon is the network. Already a long time ago, the ‘Bell Beaker network’ concept was defined by Clarke (1976) as a production and exchange network for Bell Beaker pottery between different areas with varying quality in raw materials. Other authors since the 1980s have used the concept of a Bell Beaker network, when discussing the exchange of ideas and materials between elites or communities across Europe (e.g. Shennan 1986; Fokkens 2005). Quantitative networks, models for the communication and exchange of ideas based on structured datasets, were constructed for Late Neolithic Baden and Corded Ware phenomena by

¹ Next to this practical challenge, commentators also highlight the more basic theoretical and methodological challenges that are faced with (ancient) DNA studies in general and concepts such as ancestry and kinship; see also Sahlins 2013, Marks 2017.

Furholt (2011, 2014). Recently, a Bell Beaker network model, specifically focusing on settlement evidence, was created by Kleijne (2018, in press). Interpreting the adoption of the Bell Beaker phenomenon based on the communication networks was done by comparing the strength of the links between settlements and the importance of the settlement within the network. The strength of ties within any network is correlated to the ease of adopting new ideas. A correlation exists between communication networks, particular object categories and the timing and pace of innovation processes. This helps in understanding why some communities reject or are relatively fast or slow adopters of the Bell Beaker phenomenon. Also, this model makes it possible to understand the variability between settlements and the regional adoption process from both a geographical and temporal perspective.

Future directions in the particular research strand of Late Neolithic networks include three particular strategies. Firstly, for many areas of Europe it is necessary to attain a better regional resolution and a clearer insight into transformation processes. Especially at well-preserved Late Neolithic settlements the use of microscopic and biochemical methods, combined with radiocarbon modelling, can elucidate the regional transformation processes taking place. This will also allow us to move beyond too simplistic (and actually unanswerable²) questions such as “Where is the earliest Bell Beaker found?”.

Secondly, it is necessary to make a contextual differentiation between interpreting networks of settlement and funerary data, as both practices and temporalities vary (see also Bourgeois/Kroon 2017). By asking the question how fast particular developments take place in certain contextual spheres, using for instance mathematical methods such as Hinz/Müller (2015) and Müller et al. (2015) describe, it is possible to construct narratives that shed more light on Beaker typochronology, and describe the relativity and exceptionality that is preserved in the funerary record as well.

Thirdly, while studies focusing on the sourcing of raw materials and the provenance of objects are continuously being published, it is still exceptional to find studies taking this to larger perspectives (e.g. Salanova et al. 2016), and putting these results into models that include exchange mechanisms and mobility. Especially for small movable objects such as the Palmela points, the finely worked flint daggers and knives and small personal adornments such as (for example amber, bone or metal) pendants and beads, much more research can be done from this perspective.

With specific regard to Late Neolithic funerary practices, another future research strand should be mentioned. Many past researches focused on the grave goods, their particular meaning and relevance for constructing elite exchange networks and social hierarchies (e.g. Heyd 2007; Needham 2005). In contrast, the particular lives of the people who were buried with this “Beaker package” have until now for a large part remained a mystery, as physical anthropological work has rarely been instrumental in understanding larger research questions concerning the Bell Beaker phenomenon. The work of Ryan et al. (this volume) is already testing some hypotheses in this respect. Isotopic and epigenetic methods have made it possible to distinguish between local and non-local individuals and in some cases assess their origin (e.g. Parker Pearson et al. 2016; Desideri 2011). Through the use of other methods, isotopic and genetic, also diet can be reconstructed (Knipper et al. 2015). But more importantly, this data can be compared against the botanical and zoological evidence generally found on settlements. By creating ‘isotopic food webs’ and using mixing models it is possible to provide a context in

2 See Beckerman 2012 for a critical review of several models and their dating resolution.

which the specific individual's lives are assessed and the contributions of particular food sources to their diets (e.g. Fernandes et al. 2014; Meadows et al. 2018). Evidence for fishing, gathering and fowling is found in wetland settlements dating to the Late Neolithic, including the Bell Beaker phenomenon (e.g. Fokkens et al. 2016) and pose interesting questions regarding proportions, quantities and variability in diets (cf. Bownes et al. 2017) and the relationship between diet and ancestry (cf. Bollongino et al. 2013). Additionally, the use of specific skeletal elements as sample material (particular molars and bone develop differently) allows for obtaining all this data chronologically throughout someone's life (e.g. Kootker 2017). Recent genetic work also reveals new viral diseases (*Yersinia pestis* and Hepatitis B) spreading throughout Europe during the 4th and 3rd millennium BC (Spyrou et al. 2018; Krause-Kyora et al. 2018). Concluding, combining new and old methods in studying Bell Beaker skeletons allows for a reconstruction of diet, health and life history of past individuals. This can better understand the special role these particular chosen individuals played during life before their specific burial with associated Corded Ware or Bell Beaker grave goods. Selecting this individual for burial during the Late Neolithic is often seen as reflecting this individual's particularly high status during life. However this assumption can be questioned.

Some authors suggest that the particular choices made by Late Neolithic communities, in associating typical Corded Ware and Bell Beaker artefacts with burials (the so-called "Beaker package", cf. Burgess/Shennan 1976), signify an 'internationality' (Fontijn 2002) and are a conscious creation of 'idealised ancestors' (Fokkens 2005, 2012). Additionally, the choice in selecting particular individuals for this treatment during the Late Neolithic should be problematised. Here I suggest that this culturally chosen internationality within the funerary context can be extended towards the individual buried. Not only objects were signifying international 'ideal ancestors', but also subjects, the individuals who were buried with those objects (see also Kleijne 2018, 145). Comparing the life history, diet and health of these individuals, their grave goods and their genetic ancestry can reveal such patterns and test this hypothesis.

A final theme that has received little attention so far is the relationship between the Bell Beaker cultural phenomenon and environmental change and the effects these changes have on subsistence economies and demographic developments. This is remarkable since recent studies indicate that the effects of climatic changes such as the "4.2k BP event", caused by a decrease in solar activity (Bond et al. 2001), were potentially severe in ecologically marginal parts of the Mediterranean and Near East with changes in temperature and humidity affecting vegetation and soil fertility and ultimately habitability (e.g. Weiss 2015; Weinelt et al. 2015). Additionally, the Hekla-4 eruption on Iceland, dated between 2395 and 2279 cal BC (Dörfler 2008; Van den Bogaard/Schmincke 2002, 16; Pilcher et al. 1996; Dugmore et al. 1995), covered parts of Northern Europe in volcanic ash (Watson et al. 2016). Changes in the frequency distribution of ¹⁴C dates suggest that regional demographic fluctuations are taking place during the 2nd half of the 3rd millennium BC (Timpson et al. 2014) and large scale macrobotanical studies point to changes in subsistence practices during the later 3rd millennium BC in Britain, with a possible replacement of cereal agriculture by pastoralism (Stevens/Fuller 2015). All these regional developments are taking place at the same time as the Bell Beaker phenomenon but are hardly ever understood in relation to each other. While environmental determinism is often argued against, it is impossible to neglect environmental factors completely in relation to crop harvests and

habitability of landscapes. One can argue about causes and effects, resilience and regional variability, but not without studying possible correlations and the possible ways in which the natural world could affect subsistence, demography and ultimately culture during the second half of the 3rd millennium BC: our beloved Bell Beaker phenomenon.

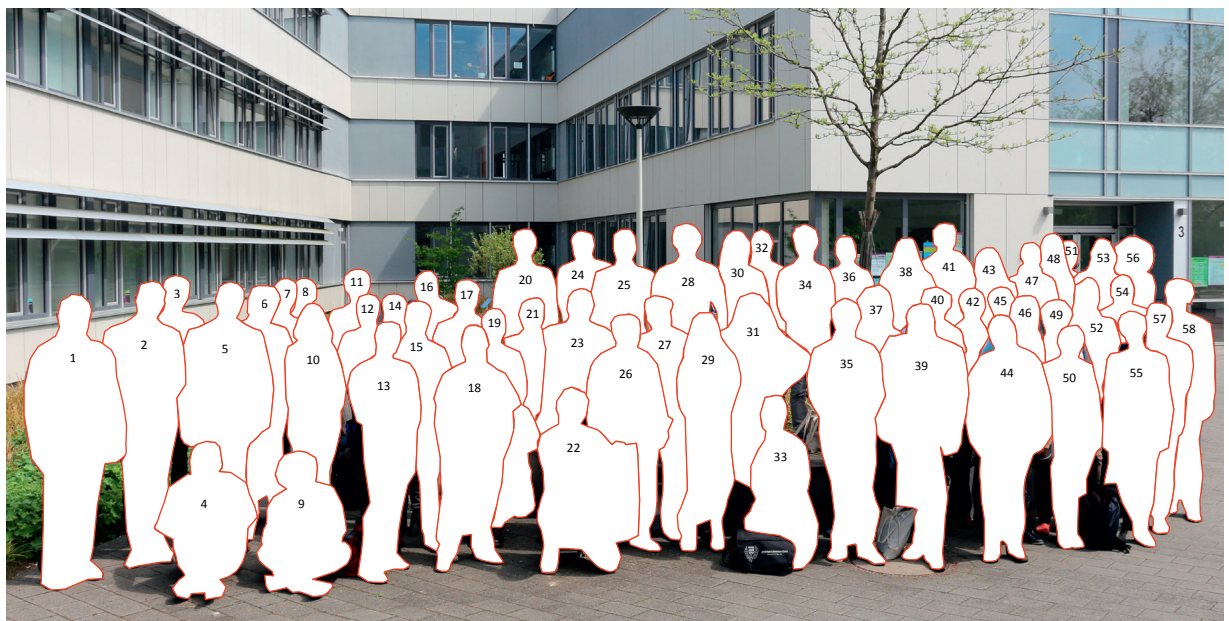


Fig. 3. All attendants of the conference (photo: Jirka Menke; attendants: 1: Lubomír Šebela, 2: Philipp Stockhammer, 3: Lucas Anchieri, 4: Alex Gibson, 5: Francesco Ianni, 6: Enrico Giannitrappani, 7: Marc Heise, 8: Iñigo Olalde, 9: Maria de Jesus Sanches, 10: Ana Catarina Basilio, 11: Asger Meulengracht Olsen, 12: Elena Leghissa, 13: Jessica Ryan, 14: Helena Barbosa, 15: Ralf Lehmphul, 16: Erik Drenth, 17: András Czene, 18: Thor McVeigh, 19: Daniela Kern, 20: Martin Hinz, 21: Janusz Czebreszuk, 22: Jos Kleijne, 23: Olivier Lemerrier, 24: John Simonsen, 25: Ties Heuer, 26: Christian Strahm, 27: Robin Furestier, 28: Jan-Piet Brozio, 29: Jocelyne Desideri, 30: André Spazier, 31: Jan Vanmoerkerke, 32: Walter Dörfler, 33: Martine Piguët, 34: Ken Massey, 35: Mathieu Labaune, 36: Johanna Brinkmann, 37: Michael Bilger, 38: Stefanie Di Maida-Schäfer, 39: Jan Turek, 40: Ralph Grossmann, 41: Hendrik Raese, 42: Maxence Bailly, 43: Patricia Rios-Mendoza, 44: Barbara Fritsch, 45: Quentin Favrel, 46: Corina Liesau-Von Lettow Vorbeck, 47: Eve Derenne, 48: Déborah Rosselet-Christ, 49: Gabriela Kulscar, 50: Concepción Blasco, 51: Audrey Bridy, 52: Julien Ripoché, 53: Marianne Talma, 54: Johannes Müller, 55: Elisa Guerra-Doce, 56: Gabrielle Binovec, 57: Harry Fokkens, 58: Martin Furholt).

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