

sind, in den Hintergrund – ein informatives Buch zum aktuellen Forschungsstand zur frühen Landwirtschaft im Vorderen Orient und in Europa.

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STEFANIE BERGEMANN, Zauschwitz (Landkreis Leipzig): Siedlung und Gräber eines neolithischen Fundplatzes. Universitätsforschungen zur prähistorischen Archäologie Band 314 = Human Development in Landscapes Band 13. Verlag Dr. Rudolf Habelt, Bonn 2018. € 70.00. ISBN 978-3-7749-4155-7. 436 pages with 251 figures, 36 tables, and 42 plates, appendix on CD.

Zauschwitz has been well-known among archaeologists working on the Neolithic in Central Europe for a very long time. The earliest discoveries of prehistoric finds were made there in the 19th century, and, due to intensive clay mining, the first heritage protection activities started as early as 1912. Eventually the site was excavated, and this continued on for multiple decades. Working on any Linear Pottery culture (“Linearbandkeramische Kultur”, LBK) assemblage, one sooner or later stumbles upon Zauschwitz, learning little about the site as a whole apart from the general impression that it contains examples of almost everything: spondylus, figurines, face vessels, zoomorphic vessels, even mass graves and whatever else you may wish for. Such finds in the times of the German Democratic Republic (GDR) were presented mainly in short articles in quite an unrefined, old-fashioned, culture-historical manner, spiced up with some elements of a cult, cannibalism, or other extraordinary interpretations. Apart from the Baalberge graves, no overview of the Neolithic settlement in Zauschwitz existed. At the 2010 international LBK conference in Leipzig, Stefanie Bergemann presented her Ph. D. project on the Neolithic settlement in Zauschwitz, raising hopes that the high potential of this extraordinary site would finally be exploited. This three-year project was conducted at the University of Kiel; the dissertation was defended in 2015. In 2018, a printed, slightly reworked version was published and is reviewed in this paper.

Bergemann took on the laborious and ambitious task of over-viewing almost a century of research in Zauschwitz. She decided in most of the cases not to repeat information already published unless it was necessary. Unfortunately, unexpected technical obstacles – no access to part of the old documentation and finds either due to delays in their digitalisation and re-inventory or other ongoing research projects – led to a drastic reduction in the data that could, in fact, be analysed.

The revised book consists of nine chapters of differing lengths and an appendix on a CD. In a brief introduction (chapter 1, pp. 21–23), the author presents the above mentioned circumstances influencing the analysis and the results obtained, outlining the main goals of her work: the analysis of selected finds, especially pottery, in order to obtain a detailed internal chronology and to gain information about spatial and economic changes over time.

In chapter 2 (pp. 25–41) the local landscape of Zauschwitz is described. This region is strongly anthropogenically transformed, and so Bergemann drew on the results of recently conducted geoarchaeological research on the MIPRO-pipeline route and outlined the possible development of the landscape in the Neolithic. She also mentioned the geomagnetic prospection that took place to the north and west of the recent excavation area but neither discussed its results more thoroughly at this point nor took advantage of them in any other part of her book.

Chapter 3 (pp. 43–73) presents the site itself. It includes a detailed description of separate stages of the complicated history of research in Zauschwitz. Such long-lasting excavations had, among others, consequences in terms of the different measurement and documentation systems applied.

The rather brief chapter 4 (pp. 75–83) addresses research methods adopted by the author. Her most important source of information was the Neolithic pottery, while much less attention was paid to other data. Bergemann decided to analyse a sample reduced to a selection of pure Neolithic complexes of finds. Single vessels were the basic element of her studies. For most of the Danubian cultures (LBK and Stroke Pottery Culture [“Stichbandkeramik”, SBK], referred to together as *Bandkeramik*), she used the systematics that were traditionally applied to the LBK in the Rhineland but are nowadays much more widely accepted and modified, for example, in Saxony by the Eythra team (Ch. FRIRDICH, Typochronologie der verzierten Keramik. In: H. Stäuble / U. Veit [eds], *Der bandkeramische Siedlungsplatz Eythra in Sachsen. Studien zur Chronologie und Siedlungsentwicklung*. Leipziger Forsch. Ur- u. Frühgesch. Arch. 9 [Leipzig 2016] 61–112). Pottery of younger Neolithic cultures was described according to the “Nordmitteleuropäische Neolithische Keramik” (NoNeK) system created by researchers from the University of Kiel (D. MISCHKA, NoNeK – ein Aufnahmesystem für steinzeitliche Keramik Nordmitteleuropas. Ber. RGK 89, 2008 [2011] 47–57. <https://docplayer.org/131256945-Nonek-ein-aufnahmesystem-fuer-steinzeitliche-keramik-nordmitteleuropas.html> [last access: 27.04.2021]). The main goal of the pottery analysis was to create or specify the relative chronology and then to confront it with the absolute dating. Altogether, 67 ¹⁴C dates from 50 samples were made within this project and a significant part of chapter 4 addresses the issue of sample choice and treatment.

The much longer chapter 5 (pp. 84–160) presents methods of pottery description already indicated in chapter 4. A rather strange division into two units – “basic data” and decoration – was applied. Basic data is basic in the sense that it refers to the whole analysed assemblage and includes such elements as macro- and micromorphology, e. g. vessel form and size (of a whole vessel and its separate parts, respectively), plastic elements (knobs, etc.), technology (temper), and information on preservation and taphonomy. In this “basic” description, Bergemann registered a large quantity of metric data, but she completely ignored the weight and size of sherds and (in the interpretative part) the resulting issue of fragmentation, the importance of which does not have to be explained to a Neolithic specialist.

The description of decoration is limited to the *Bandkeramik*. The division into these two segments of evaluation not only exposes the fact that the suggested integration of both systematics did not take place at all but also reveals Bergemann’s non-holistic understanding of pottery, which prefers ornamentation (especially decoration types) as the most valuable, totally independent, and solitary source of information on past societies.

These five still quite preliminary chapters are followed by the longest (160 pages, which makes up more than 40 % of the whole book), chapter 6 (pp. 161–319), presenting the main Neolithic settlement phases in Zauschwitz. It is divided into nine subchapters discussing each phase in turn.

Settlement traces connected with the *Bandkeramik*, which is the subject of subchapter 6.1 (pp. 162–212), especially the LBK, are most abundant of the Neolithic sequence and were registered within the whole excavated area. LBK pottery was also very numerous; however, a large part of the assemblage was not found in situ. Uncompleted re-inventory of it led to an unintended reduction in the amount of material for analysis. Additionally, Bergemann decided to select the available parts according to strict criteria and took two samples for further research: one comprising homogeneous *Bandkeramik* assemblages without later admixtures, which was intended to establish the internal chronology, and another, further reduced to closed assemblages such as

graves or deposits, which was intended to testify and to clarify the results obtained. Only 32 features including at least two different decoration types fulfilled the strict criteria of the first sampling. S. Bergemann conducted a seriation and correspondence analysis (CA) of them but did not really evaluate or discuss the results obtained in any way. Instead, she applied Dieter Kaufmann's intuitive and descriptive division of the LBK in Middle Germany into five phases (D. KAUFMANN, *Linien- und Stichbandkeramik im Elbe-Saale-Gebiet*. In: T. Wiślański [ed.], *Neolit i początki epoki brązu na ziemi chełmińskiej. Materiały z międzynarodowego sympozjum, Toruń, 11–13 XI 1986*. The Neolithic and Early Bronze Age in the Chełmno Land. The Material from the International Symposium, 11–13 XI 1986, Toruń [Toruń 1987] 275–301), leaving, without comment, some cases of inconsistencies of the CA results with this traditional chronological systematic. What follows instead is an old-fashioned description of selected (based on what criteria?) single vessels.

The following part is dedicated to features, but in fact the author reduced her analysis to graves and houses only. The presentation of burials is highly laconic – Bergemann writes solely that they were not registered within houses but gives no information whether they were found in any other relation to houses, for example, in associating borrowing pits. The author distinguished seven longhouses based on specific layouts of postholes. Less evident arrangements of such features were termed as “posthole groups”. However, the criteria of such a division have not been precisely defined and some assignments may cast doubt: for example, why No. 15 was described as a posthole group and the much less evident No. 13 was interpreted as a house. Moreover, Bergemann reconstructed six further houses without preserved postholes, where their position is indicated by a characteristic layout of associating borrowing pits. However, she admits vaguely on page 210 that not all such features were interpreted in this way. This settlement structure with at least 13 LBK households was not analysed chronologically, although chronology is the subject of the following part of the chapter. The issue of temporal settlement development was reduced to the very general mapping of selected decoration elements distinctive to five LBK phases according to Kaufmann and analogous analysis of ¹⁴C dates, divided into two basic units: before and after 5210 calBC. Bergemann notices some shifting in occupation within the LBK, but she takes up neither the issue of the dating of single houses nor its number in separate phases. The settlement of the SBK is concentrated mainly in the southern part of the site. The hallmark of the youngest assemblages are some elements of the Rössen culture registered only in the SBK context, and these foreign elements are the subject of a separate subchapter (6.2, pp. 212–217).

Traces of Gatersleben occupation, presented in subchapter 6.3 (pp. 217–224), are limited to one settlement pit and two graves which cause some classification problems due to a discrepancy between their relative and absolute dating.

The following subchapter 6.4 (pp. 224–305) is much more extensive. It addresses the Baalberge occupational phase, represented in Zauschwitz by two possible settlement pits registered during the oldest phase of excavations and a well-known burial ground. Bergemann took the opportunity to re-interpret it using radiocarbon datings and a renewed analysis of finds and features. Altogether 25 graves could be dated to Baalberge. Against existing interpretations, Bergemann classified them into three different burial types: flat graves, barrows, and graves within trapezoidal constructions. A large part of this subchapter presents an elaborate metrical analysis of the pottery, the aim of which was to verify the typology and chronology by Jan LICHARDUS (*Rössen – Gatersleben – Baalberge: Ein Beitrag zur Chronologie des mitteldeutschen Neolithikums und zur Entstehung der Trichterbecher-Kulturen*. Saarbrücker Beitr. Altde. 17,1–2 [Bonn 1976]). Through the combination of her results with ¹⁴C datings, the author was able to distinguish three chronologically different assemblage types. Furthermore, diversity related to sex and age could be determined as well. This temporal and social variability is not reflected in the construction of graves. Anthropological

analysis, which revealed a high frequency of persons with diastema among the buried group in Zauschwitz, indicates that it may represent a closely related community.

The analysis of Salzmünde pottery, which is addressed in subchapter 6.5 (pp. 305–313), was difficult due to its similarity to the Bronze Age material. However, a dozen settlement features, among them some pottery ovens as well as graves, both single and multiple, could be assigned to this culture. Interestingly, the burial and settlement area don't seem to overlap. The following, very brief subchapter 6.6 (p. 313) "Finds and features of the TRB time" discusses the issue of the classification of pottery with arcade rims, which can be connected both to Baalberge and Salzmünde. For this special site, Bergemann assigned it to the latter. Subchapter 6.7 (pp. 313–317) is an overview of already published Globular Amphorae occupation traces: human and animal burials and three settlement pits. The final subchapters 6.8 (pp. 317–319) and 6.9 (p. 319) present Late Neolithic features: Corded Ware graves and loose finds dated to the Bell Beaker culture as well as a brief overview of the post-Neolithic occupation.

Chapter 7 (pp. 321–336) addresses flint objects which were not included in the chronological analysis of the Neolithic settlement. Their evaluation was restricted to selected issues, especially their spatial distribution, without determining the raw material. The density of flint artefacts was compared with the distribution of settlement in separate Neolithic phases; however, the results were not confronted with the dating of at least some assemblages that could have been determined due to their association with other finds. It is not very surprising that most of the flints seem to be connected with the LBK.

The title of chapter 8 (pp. 337–365) is "Diachronic studies" and it addresses the issues of diet and the technology of pottery in separate settlement phases of the Neolithic occupation in Zauschwitz. The first study was based on $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ isotope measurements conducted for 42 samples for radiocarbon dating: 33 human and five cattle bones. Significant chronological differences, especially concerning the role of meat and fish in the diet, could be observed, while, as is the case with Baalberge, slight variations could also possibly be sex- and age-dependent.

The research on the technology of pottery was performed with two different methods. For 348 finds, X-ray fluorescence analysis of major and trace elements was conducted; additionally, for eight samples representing various cultures and pottery types thin sections were made. Neither of these approaches provided any spectacular or easy to interpret results, and they were left almost without comment.

Chapter 9 (pp. 367–386) summarises the whole book in an overview of the Neolithic settlement in Zauschwitz. It begins with a mapping of the site on quite old maps of separate Neolithic cultures in the Middle Elbe-Saale region, which leads to the conclusion that all expected chronological units are indeed represented in this place. In the following subchapter, all ^{14}C dates made within this project are listed and the absolute dating of every Neolithic settlement phase is presented. The next part takes up the question of continuation and change within the Neolithic in Zauschwitz. This is discussed on the basis of three issues: diet, technology, and landscape.

At the end, the importance of Zauschwitz for the research on the Neolithic in the Middle Elbe-Saale region is highlighted, although this discussion ends quite abruptly without a clear conclusion.

Additional information is available on a CD in the appendix. It is sorted into five main folders, though quite chaotic and inconsistently ordered. These are mainly extracts from databases given without any further explanation. For example, if a reader would like to know in which feature a vessel presented in the 'basic data' catalogue (folder 1 'Abschnitt 1 Keramik') was found, he / she must struggle through thousands of pages where these vessels are individually described to obtain

the find complex number and then proceed to folder 3 'Finds and features' in search of the file in a table including feature numbers and find complex numbers. It is in fact neither possible to reconstruct the inventory of separate features nor to gain precise information on which find complexes or features were included in the analysed samples and which were not. One will not find a plan of the whole site – in the whole book only undecipherable sketches of 10 × 15 cm are presented.

In general, the book is not coherently structured; while not all chapters must necessarily be of comparable length, the assignment of some issues (e. g. foreign elements in the SBK – chapter 6.2) to some chapters can raise eyebrows. There are some inconsistencies in the narrative, for example, why the chapter on Baalberge is preceded by an introduction about the history of research, while chapters on other cultures are not. Essentially, one can gain the impression that Baalberge is Bergemann's favourite subject which she treated with much more care and interest than other stages. This part was in fact worth the effort as it is the best section of the whole book. It is not only the way the data was analysed but also an open-mindedness in its interpretation by going further with vital social questions. It is a huge disappointment how different it is from the subchapter on the LBK. The lack of a coherent spatial and chronological analysis is caused, to a large extent, by limited data, and it would be unfair to blame Bergemann. But there are other research questions that remain unanswered, concerning, for example, the special finds: are they more numerous than on other sites in Saxony? How are they distributed within the settlement: are they concentrated in a special part and period, or do they occur totally randomly? These questions not only remain unanswered – they were not even asked; rather, already-published opinions are repeated. Similar criticism applies to the treatment of numerous finds from upper layers, excavated manually, which Bergemann introduced in chapter 1 as a unique challenge to analyse post-depositional processes. In the following sections she did not take this chance (apart from a rather weak flint chapter), limiting her research instead to homogeneous assemblages only.

This criticism should not dismiss the whole of the reviewed book. It is very uneven, with some quite good parts (Baalberge, chapter 8 on diet), which were, however, not brought together into a coherent overview. Thus, Bergemann's work must be regarded as an important first but definitely not the last step in analysing and evaluating the data on the Neolithic from Zauschwitz.

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PHILIPP W. STOCKHAMMER / JOSEPH MARAN (eds), *Appropriating Innovations. Entangled Knowledge in Eurasia 5000–1500 BCE*. Oxbow Books, Oxford, Philadelphia 2017. £ 48.00. ISBN 978-1-78570-724-7. £ 24.99. ISBN 978-1-78570-725-4 (E-book). iv + 268 pages with numerous tables and figures.

While innovation and entanglement studies are not new, this book contributes in various ways to a richer understanding of this field. In chapter 1 (pp. 1–3), Joseph Maran and Philipp W. Stockhammer state: the aim of the book is not “to develop a non-linear perspective for the large number of technological innovations that have shaped human existence since Childe's ‘Neolithic Revolution’” (p. 1). According to the editors, Vere Gordon Childe's later criticised diffusionist ideas still have great value. The papers here focus on this value: coupling societal change with interaction and technological change. Two groups of innovations are central: the “Secondary Product Revolution” (SPR, crucial work by A. SHERRATT, Plough and pastoralism. Aspects of the secondary product