

HABILITATION THESIS REVIEWER'S REPORT

Masaryk University

Applicant

Mgr. Klára Šabatová, Ph.D.

Habilitation thesis

Počátek střední doby bronzové ve střední Evropě na základě modelů radiokarbonových dat

Reviewer

Prof. Dr. Martin Bartelheim

Reviewer's home unit, institution

Eberhard-Karls-University Tübingen

In her habilitation thesis, Dr. Šabatová deals with a topic that has been controversially discussed for a long time in Bronze Age research in Central Europe. After the Early Bronze Age, which is abundantly documented with flat grave fields, partly on a large scale, as we encounter it in large parts of southern Central Europe, an abrupt change can be observed in many regions. During that moment archaeological evidence of further cultural development seems to be lacking until the apparently fully developed Middle Bronze Age with its tumulus necropolises appears. The transition from one period to the other is therefore unclear in most landscapes of Central Europe. In Moravia and its neighbouring regions in the Middle Danube Region, however, this is different. Here, with the Věteřov Group in Moravia, the Maďarovce Group in south-western Slovakia and the Böhheimkirchen Group in Lower Austria, we have a conglomerate of cultural groups that seem to indicate a transition from one period to the other in their find material.

So far, there has been no lack of attempts to describe this transition, but usually with a rather regional focus, in which the conditions in neighbouring regions have received little attention, or with large-scale approaches that tend towards general assessments and thus lose sight of detailed and regional developments. Moreover, there is no precise recording of the development with the help of scientific dating from closed contexts with chronologically significant finds. This was the starting point for Klára Šabatová to address the question outlined above and, on the basis of the Moravian find material from the transitional period from the Early Bronze Age Únětice culture to the Middle Bronze Age tumulus culture, to look at the topic from a wider perspective in the Middle Danube region. For this purpose, she also had about 280 C14 dates from the period from the Aeneolithic to the Middle Bronze Age at her disposal, 25 of which she selected from closed find complexes at the transition from the Early to the Middle Bronze Age and used them as examples for her research goals.

After clearly characterising the aim of her work and presenting the initial situation, she describes her methodological approach, which primarily consists of a critical evaluation of previous typological approaches to the recording and chronological ranking of the relevant find material. This is supplemented by a modelling of C14 data in order to use them as a more precise basis for describing the development of the find material and, ultimately, the historical processes. It is to be welcomed that Klára Šabatová clearly defines central terms of her work, such as Early/Middle Bronze Age, archaeological culture, stage, complex, group, ceramic style and others. This makes it easier to follow the later discussions in which such terms recur.

In her treatment of the history of research on the topic of the demarcation of the Early from the Middle Bronze Age in the Carpathian Basin and southern Central Europe, especially in Moravia, Klára Šabatová proves to be very well read. She reproduces with great detail the

views of a larger number of specialist colleagues on the dating of various object forms and the interrelationships of object groups. Overall, the treatment of dating issues of the find material in the history of research in various parts of the work takes up about a third of its volume, which could be significantly reduced, as only some of the remarks have any real relevance to the work. The passage through the history of research clearly shows that no uniform opinion prevails with regard to the delimitation. However, with a few exceptions, a broad consensus reveals that the development is a continuum. The difficult question, however, is whether a point can actually be defined that marks the transition, and if so, when, or whether there are temporal overlaps. It becomes clear that with regional differences, a part of the categories of features graves, settlements and hoards - for whatever reason - stops before the threshold of the Middle Bronze Age and cannot describe the transition. In some cases, such as in southern Moravia and Lower Austria, all categories of finds, especially the settlements, continue.

Finally, in an overview presentation, she summarises the different views of three research traditions she has identified to illustrate the transition. The older, purely typological studies were able to describe the socialisations of the various form horizons, but had no way of describing the temporal length of such horizons. At this point, the reader is curious to see to what extent K. Šabatová, by using absolute dating (C14) here, is able to capture the dynamics of these processes at the end of the Early Bronze Age more precisely. Building on previous research opinion, she decides to define four pin types as indicators for one type horizon each, due to their strong sensitivity to change, and thus to create a chronological axis. She then connects these pins with C14 data from grave finds where the pins occurred with datable human bone material. The result is a sequence of overlapping dates, each indicating slowly detaching pin forms. She therefore rejects the existence of a separate late stage at the transition from the Early to the Middle Bronze Age and sees this rather as part of a larger continuum. She then establishes the actual transition from the Early Bronze Age to the Middle Bronze Age with the beginning of the appearance of the Wetzleinsdorf type pins and the corresponding Middle Bronze Age pottery. This is in line with most previous opinions in Central European Bronze Age research, since the model of pin horizons essentially reflects the traditional subdivision of different development horizons, for which pins stand as representatives. An independent further development of this periodisation and a possible identification of further chronologically sensitive objects, which could be matched with the pins, is omitted in this work. The relatively wide calibration ranges of the C14 data cause, on the one hand, the clear overlaps of the durations of the pin types used as chronological indicators and, on the other hand, a certain fuzziness in the precise recording of historical processes. This also means that the beginning of the Middle Bronze Age can only be narrowed down to a relatively broad period within the 16th/beginning of the 15th century BC with the instruments of the C14 data. This corresponds to previous ideas and contradicts some attempts in recent years to establish the beginning of the Middle Bronze Age in southern Central Europe much earlier.

It is to Klára Šabatová's credit that in her habilitation thesis she has clearly presented and critically commented on the network of cultural-historical relationships at the transition from the Early to the Middle Bronze Age in the central Danube region and the parameters for a chronological classification of the find material. Helpful is their approach to bring a temporal depth into the recognisable developments by means of C14-dates, even if a clear sequence is obscured by the partly larger temporal overlaps of the calibration spans. In this context, it would have been useful to take a more critical look at the informative value of the data and the statistical procedures used to handle them. The work could have been a good methodological contribution to testing the suitability of C14 dating for fine chronologies, at least in the Bronze Age. If in some graves the BP dating of three bones of a single person alone can differ by up to 115 years (e.g. Borotice M2H2 or Branišovice H 801), which can even be multiplied by the calibration (a calibration range of up to 340 years in both cases), then on the one hand this calls into question the usability of these specific dates, and on the other hand the wide overlaps of the 2-sigma calibration ranges (caused in good part by broad

wiggles in the calibration curve) cast doubt on the general usefulness of the method for this purpose. Instead of explicitly addressing this, reference is essentially made only to the analogy with the work of Brunner et al. and Stockhammer/Massy as well as Müller/Lohrke.

For a more precise recording of the structure of the processes during the transitional horizon from the Early to the Middle Bronze Age, a broader inclusion of the remaining finds and their processing, e.g. in the form of seriations, would have been desirable. Ceramics and settlement materials, which are abundantly available in this period, have the potential to sharpen the picture, but have only been marginally included in this work. In general, ceramics come up rather short in the chronological discussion due to the focus on pins. Even if little of it is directly dated by C14, the pottery could be usefully employed to describe the development of materials and culture through associations with bronzes. In particular, the relationship between the period of use of hilltop settlements and the development of graves, which is repeatedly discussed in the work, could have been approached in this way in a methodologically broader way. In the study, this is only tackled on the basis of C14 data, whose calibration ranges hardly allow any further statements. Therefore, the question remains open why no approach is chosen to methodically rework the time horizon from the end of the Únětice culture, during the Věteřov period and until the beginning of the Middle Bronze Age. For this purpose, it would have made sense, for example, to conduct a seriation of closed grave finds and a series of closed settlement finds independently of each other. Both could then be compared, and finally, using the C14 data as a third methodological basis, it could be checked whether a congruent picture emerges. As has been shown in the work, none of the methods on its own is able to give a satisfactory description of the development. In this way, it would have been possible to become independent of previous research approaches and make a completely new contribution to the topic and test the old classification systems. Moravia, in connection with Lower Austria and south-western Slovakia, is particularly well suited as a research area for this purpose, as the best evidence exists there. On the one hand, the abundant find material available for such questions could provide an opportunity to describe the transition from the Early to the Middle Bronze Age (break or slow continuity?) as well as the chance to give a new definition of what marks or constitutes the beginning of the Middle Bronze Age.

All in all, this is a well-researched work, based on a broad knowledge of the material and the research literature in the field, and also adequate in formal and technical terms for such a qualification thesis. With the systematic, critical presentation of the cultural chronological conditions around the middle of the second millennium B.C. in southern Central Europe, Klára Sabatová has made an important contribution to a better understanding of the genesis of the Middle Bronze Age in this large geographical area and also to making the special position of the Moravian Bronze Age in it appear clearly. I would therefore like to recommend to the Faculty of Philosophy at Masaryk University in Brno that the work be accepted as a habilitation thesis.

Reviewer's questions for the habilitation thesis defence (number of questions up to the reviewer)

- 1) How representative is the development of pin forms for the overall chronological development of the find material from the Early Bronze Age to the Middle Bronze Age in Central Europe?
- 2) What is the relationship between the development of burials and settlements at the transition from the Early Bronze Age to the Middle Bronze Age in Moravia and the Middle Danube Region?

- 3) How well is the C14 method suited to address fine chronological dating issues in the Bronze Age?

Conclusion

The habilitation thesis entitled "Počátek střední doby bronzové ve střední Evropě na základě modelů radiokarbonových dat" by Mgr. Klára Šabatová, Ph.D. **fulfils** requirements expected of a habilitation thesis in the field of Primeval and Medieval Archaeology.

Date:

Signature:

31.08.2022