

RESUMÉ

POST-ENEOLITHIC CHIPPED STONE INDUSTRIES
IN MORAVIA

This article presents a broad overview of methods employed in the analysis of chipped stone industries within the chronological framework of late prehistory. Methodological procedures are applied in logical sequence, from the analysis of material sources through technological and distributional relationships and the functional analysis of traces and experiment, to the identification of possible symbolic meanings. The results illustrate the importance of the chipped stone industry for archaeological research into the Early Bronze Age and also shed light on more recent periods in which such material cultures occur sporadically. The objective of the work was to assess the series of finds available, as well as to elucidate some aspects of Bronze Age civilisation in Moravia, taking new information into account. Although the closing “superstructure” chapters could be viewed as speculative, they are rooted in the author’s long-term study of “superstructure” phenomena in archaeological sources, supplemented by matter from other branches of social science.

Morphotypological analysis has resulted in a basic assessment of the series from individual chronological periods. Those from the Early Bronze Age receive particular attention, making the most of the way in which their sheer abundance is so suitable for database processing. Features were assessed with regard to possible differences between the production sites of Únětice and Věteřov. Analyses have revealed that local materials were used almost exclusively, especially from the Krumlovský les area in south and central Moravia, together with silicates from glacial sediments in Silesia, with distribution reaching as far as central Moravia. The collection of debitage and tools in older (Neolithic and Eneolithic) settlements has also been confirmed. Unlike previous periods in which fine-grained and easy-to-work materials were preferred, rougher, more robust materials were favoured in the Early Bronze Age. Flaking prevails in approaches to core exploitation, while the number of blades outside the Krumlovský les area is insignificant. Both cores of voluminated concept and with flat concept were employed. Irregular exploitation of both types is also plentifully represented; this approach came to the fore in the Věteřov period. A specific morphotype of the Early Bronze Age debitage is the bifacial (*Janus*) flake. Supports with cortical and natural sides were also widespread. The concept of a steadily declining segment of material culture is contradicted by a large proportion of retouched instruments (29.8 %) and a relatively small proportion of used and locally-retouched types (10.3 % in total), despite the fact that the analysis involved several large workshop series. The most distinctive groups of retouched instruments were those with a cutting function and one side opposite the working edge (knives, saws, sickles). Further categories such as chisels,

side-scrapers and end-scrapers, notches, denticulates and becs also appear, although in far smaller numbers. Double-becs make up a separate group; their position remains to be explored. Militaria (arrowheads, daggers, spears) comprise a small specific group, the majority of them from graves. Perhaps relevant to symbolic matters involved in sickles is the disclosure of almost exclusive use of the Krumlovský les I type chert for them, with a limited use of chert breccia in the Věteřov period. The basic morphotype of sickles is bifacial retouching of the working edge with the opposite side retouched. Unifacial sickles and sickles with cortical and natural sides occur sporadically. The non-economical nature of invasive bifacial and bilateral retouching is obvious here. This phenomenon is less obvious with saws. The number of end-scrapers declined slightly in the Věteřov period.

In the analysis of chipped stone industry from later periods, a strong decline number of finds from the Middle Bronze Age becomes apparent. A certain revival of chipped stone industry can be observed in the urnfield period, attributable to resumed activities in Krumlovský les and Blučina. A clear assessment of chipped stone industry in the Velatice culture is not feasible, since the contexts of finds for all its major series are uncertain. The character of this industry is very close to that of the Early Bronze Age, and speculation about intrusion cannot be refuted on the basis of data available – although conversely, the intrusion is not confirmed by the data. More distinct morphological differences between the Lužice area chipped stone industry and that of the central Danube may be observed as late as the Early Iron Age. Chipped stone output in the proto-historical period and the early Middle Ages provides no grounds for morphotypological analysis as its function was largely non-utilitarian. In this period, old products from prehistoric settlements were manipulated, translocated or redeposited in symbolic contexts. Its adapted use in flint and steel is recorded sporadically.

Dynamic analysis revealed differences in phases of exploitation between workshop series from the source areas and from a settlement not far from the mining zone. Pairs were compared in which two different raw-materials had been employed. The pair of sites using cores of Krumlovský les chert showed differences in production phases. A more regular and established pattern is observed at sites of mining area, alongside a parallel (but non-blade) core exploitation with the knowledge of crested preparation and a more distinct tendency towards working the core to the level of small remnants or fragments. The manufacture of bifacial debitage is not recorded here. An opposite trend prevails in locations farther from the sources. Evidence of parallel work and edges is scarce; edges are irregular and

semi-cortical. On the other hand, the manufacture of bifacial debitage transferred elsewhere is recorded. Only residues of the technique and flakes with a ventral negative have remained at the location. The comparison with series in which Moravian Jurassic chert were employed, probably from the Švédské vally site, has confirmed a marginal, local and episodic significance for this material in the Early Bronze Age. No production activities associated with the use of local materials are recorded at settlement on raw-material outcrop. Below-surface mining has yet to be verified. A series characterised by simple exploitation schemes, a higher proportion of repairs and no evidence of parallel exploitation of the core comes from a more distant site. The material was obviously brought to this location unprocessed, judging by the high degree of cortical debitage, and finished products were transported elsewhere. Analysis reveals the importance of the Krumlovský les area as a place preserving traditional manufacturing skills. While repairs in this area aimed to remove material defects, those in the exploitation area of Švédské vally / Moravian Jurassic chert removed technological errors. Regular crested blades, debitage with parallel negatives and a certain proportion of elongated supports are recorded from only the Krumlovský les area.

Analysis of the production chain of Moravian Jurassic Bronze Age chipped stone products has shown predominantly below-surface mining of the material in the Krumlovský les area and only a marginal importance for other sources and surface collecting. The material was decorticated at the outcrop site and crested preparation was performed in some cases. Heat treatment has not been confirmed; it may have been tested on a small scale but was soon abandoned as it is not suitable for chert materials that are not completely homogeneous. The majority of cores were exploited at the source site or in close proximity to it. The rest of cores and finished products (non-cortical debitage and debitage with a proportion of cortex) were distributed further from the sources. The production of bifacial debitage took place in the several settlements, although the products did not remain there but were distributed further. Bifacial debitage and flakes with ventral negatives coincide only slightly (with one piece in the total of five settlements). The major part of the technological approach in common settlements is pragmatic: a utilitarian and practical focus on producing the most ergonomic product with the expenditure of the least possible energy and time. This is associated with selection of supports according to function (natural and cortical sides for tools, natural sides of cleaners and chisels, biconvex bifacial debitage, diagonally or horizontally undulating debitage or debitage with prominent concavities or finger supports). Fixing into a haft is not possible to confirm, with the exception of militaria (projectiles, daggers, spears). A number of deliberate modifications and preferred properties for supports speak against the insertion of tools into hafts. Cutting instruments without an opposite side appear rarely, but attachment should be presumed in some cases, especially with sickles without a side which have acquired a shine because of their intensive and prolonged usage. Only six instruments featured modifications in the shape of depressions or notches that can be viewed as spaces for a haft. Their typological spectrum is, however, completely random and hafted tools form no specific group. Identification of reutilisations and

remodifications is difficult; it is only positively confirmed with sickles that, because of their function, could not combine several working edges in parallel and thus cannot be categorized as double or combined tools. The use of other edges must have been secondary. Fragmentation is also more distinct with sickles than with other types of tool. Speculation that the higher degree of breakage is associated with the elongated shape of supports has proved unfounded. It can be thus said that with sickles one finds evidence of deliberate destruction. Symbolic deposition of chipped stone products can be identified, apart from those in graves, in association with parts of skeletons, grinding slabs and grain accumulations. The first hoard of stone sickles in a symbolic context (Šumice) dates from the end of the Early Bronze Age at the latest. A sickle-knife hoard from Zelená Hora (younger phase of the Únětice culture) was not acquired for analysis; the author does not comment upon its alleged blade-type nature and typological classification. No information on symbolic aspects of the deposition is given.

Use-wear (traseological) analysis performed by RNDr. Duškova Šajnerová is in accord with the previous functional classification of the artefacts on the basis of morphotypology. The function of a new morphotype of the Early Bronze Age, a knife with a non-retouched working edge, has been confirmed. The saws analysed were, quite surprisingly, identified as instruments for cutting (tough) leather. Analysis of a sickle back provided no information on a possible insertion into a haft, since the residue layer lies beyond the attachment zone.

Attempts at practical “prehistoric” crop harvesting have demonstrated that a non-retouched blade is the most effective, and that a sickle with minimum adjustments is best suited to the harvest activity. Further, the time required for a sickle to acquire a shine was measured; it can be said that chert is slow to show this kind of wear. The material is resistant, and a continuous shine on the working edge of sickles may be only achieved after dozens of hours of work. Sickles needed neither haft nor (non-tool) hand protection; use without attachment has been demonstrated as possible, although the hands (especially the one used for gathering) probably had to be protected. The most effective reaping movement with all types of blades consisted of several single-direction cuts towards the body. Diagonal movement did not prove effective; this cutting mode was only supplementary and preceded the main reaping.

Spatial studies of an intrasite model in Blučina-Cezavy succeeded, despite the sloping nature of the terrain, in the identifying certain activity zones, including a possible superposition of zones of both the Únětice and Věteřov periods. A Věteřov zone of intentional destruction of artefacts (chiefly sickles) coinciding with an older (Únětice) zone of everyday settlement activities (processing of wood, bones and skin) has been disclosed. An accumulation of tools around a post-supported construction was identified somewhat lower down.

Distribution models of the spread of Early Bronze Age locations in Moravia have supplied evidence of the geographical limitation of certain elements, both technical (blade and elongated supports, bifacial debitage) and typological (sickles, side-scrapers and end-scrapers, militaria). Signs of more

advanced approaches (core edges, elongated supports, blade negatives on cores) are concentrated in the Krumlovský les area. Archaic morphotypes (side-scrapers and end-scrapers) are restricted to the southern Moravian part of the oikumena. Not even sickles were distributed throughout the zone of oikumena extension in the Věteřov period. The distribution of sickles conveys the marked symbolic and cultural significance of the Blučina hill-fort, especially when all the results relating to this morphotype (non-utilitarian aesthetic approach, exclusive origin of the material in the Krumlovský les area, intentional destruction, symbolic deposition) are put together.

All the information acquired has enabled a reconstruction of the phases of the transformation of the Neolithic into an Early Bronze Age society. Evidence supplied by the study of chipped stone products enables the observation of the phases of the decline of the cultural symbolism of the (E)neolithic tradition and the arrival of “modern” phenomena. Analysis of sources relevant to cultural traditions shows that the impact of the Corded-ware culture was insignificant (in contrast to its significant genetic impact), while the situation is reversed with the Bell-beaker culture. The cultural influence of the latter was absorbed by the autochthonous Neolithic substrate, the cultural and symbolic structure of which was thereby distinctly modified, although its most characteristic traits remained unchanged (agriculture absorbed the cultural structure of prestigious stone artefacts and their role in cyclic resurgence and applied it to sickle instruments).

Reflections on the possibilities of deeper insight into the character of Early Bronze Age society in Moravia at the end of the study are based on methodologies that have yet to be widely employed in the Czech Republic and may thus attract criticism on the part of specialists in the Early Bronze Age. However, the author has no intention of coming up with a revolutionary solution but, rather, to offer her results and deliberations for further use in a specialized research of Early Bronze Age society. The conclusions are not postulated from the perspective of a scholar in the sphere of the Early Bronze Age but from the perspective of a scholar with a long-term interest in superstructure phenomena in prehistory. Constructive comments helping to refine the specification of the interpretations submitted are welcome, since any theory of superstructure phenomena should always follow from a wider specialist discussion.

The observation of chipped industry phenomena in the Early Bronze Age from the perspective of ethno-archaeology helps to identify the cultural and symbolic meanings involved in the production of these artefacts, preserved despite any effectiveness or lack of it in practical application. The preservation of traditional knowledge and skills in the Krumlovský les area, together with a de facto monopoly on the part of local producers for the whole of southern Moravia, indicate the existence of a specialised community of craftsmen consisting of a specific social group. As this degree of monopoly and specialised production presumes the existence of some form of apprenticeship and initiation, the extreme quantity of chipped chert in the Krumlovský les area, from whence target products were not distributed farther, may possibly be attributed to long-term apprentice practice. This practice was intended to provide more than mastery of technical principles; it also involved familiarization

with the mechanisms of physical experience, of estimating capacity, routine handling of low-quality material and the ability to showcase these prestigious skills. Demonstration of the production of prestigious artefacts in public is inseparable from the practice of specialised, technologically-advanced production (i.e. metallurgy). The connection between prestigious artefacts and traditional religious structures on the one hand explains the existence of this kind of production community, and on the other supports the secular use of their common output. At the same time, the institution of a “present past”, i.e. preservation of traditions strictly defined by a religious canon, enhances the exclusivity and prestige of the community.

This analysis of religious structures in the Bronze Age is only loosely based on the chipped stone industry, employed principally as a source of cultural tradition, clearly profiled on the basis of the testimonies of progressive modification and obsolescence. Rather, it is based on the identification of the basic religious structures of all three components that made up the cultural image of the Bronze Age in Moravia, i.e. the Neolithic substrate, the Bell-beaker culture horizon stretching into the Early Bronze Age and Indo-European cultural components of the advanced Bronze Age observed in Indo-European myth.

The result of the analysis is a chronological definition of the beginning of the penetration of more modern patterns of Indo-European language group. In the transformations of the Neolithic structure of Demeter – Kore – Hades, the first depositions of sickles (in the Věteřov culture period) already signal a certain change, while the shift of the fragmentation of a Kore substitute object (idol, ear of corn, live corps offering) towards the fragmentation of a Hades substitute object (sickles) may be attributed to the influence of the Bell-beaker culture and is not connected with Indo-European impact. The change in the warrior archetype occurs in the course of the Middle Bronze Age when evidence of the drinking of an esoteric substance of the “soma” type (drinks sets) emerges and evidence of the belief in resurrection through contact with chthonic powers (mining, cave activities, stone elements of grave constructions and equipment, etc.) disappears. The parallel abandonment of Blučina and Krumlovský les at the outset of the Middle Bronze Age and the revival of activity on both sites in the Late Bronze Age bears witness to a violent interruption of archaic traditions. The (politically motivated) takeover of new religious structures by social elites may also be associated with this moment. Religious structures used by the common people may subsequently have faded and became simplified in the course of the Early Iron Age (stone artefacts in graves, imports of sickles to the already alien Lužice cultural environment).

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