Places of art, traces of fire. A contextual approach to anthropomorphic figurines in the Pavlovian

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5 The Pavlovian 'ceramics'

5.1 Introduction

Before [Dolní Věstonice], the caption of this chapter would have been dismissed by all prehistorians as nonsense, as a gross mistake. For 'ceramics' was taken for an impossibility in the diluvial, an anachronism. The moulding of clay was considered an attainment, or rather a cultural element of the Neolithic; long before however, the mammoth hunters had discovered 'ceramics' for the expression of their artistic sense. That is the great event with which Věstonice has enriched us.

With this sentence Absolon (1938b, 81) opened his chapter on 'diluvial ceramics'. The modification of clayey and loamy sediment is known from Palaeolithic sites across Eurasia. Examples are the engraving of deposits on cave walls (for example Grotte Chauvet, Gargas) and modelling of bas-reliefs and statues (for example Tuc d'Audoubert and Bedeilhac in the French Pyrenees). Objects of *fire-hardened* earth are mentioned from the Pyrenees and the Yenisei basin in Siberia, but the largest collections are known from the Central European Pavlovian (Vandiver et al. 1990).
The term 'ceramics' is derived from *Kerameikos*, the potters' quarter in antique Athens. Here, the term does of course *not* refer to pottery, but to objects resulting from a technology of hardening earth by means of fire. In this chapter I shall provide an overview of the typology, distribution, provenance and technology of Pavlovian 'ceramics'.

5.2 Sites

Palaeolithic 'ceramics' are known from nine sites in Central Europe (table 5.1; figure 5.1). Most of these sites are located in the Pavlov Hills in South Moravia and the largest collections come from Pavlov I and Dolní Věstonice I (see figure 2.3 for their location in the Pavlov Hills). A smaller amount is known from Dolní Věstonice II (the site will be discussed in chapter 9). Klíma (1995) mentions six modelled fragments from the vicinity of the triple burial discovered at this site. Svoboda (1991a) describes seven 'ceramic' fragments from what is designated as the first 'settlement unit' on the western slope of Dolní Věstonice II. The fragments were found in two depressions in the vicinity of a large hearth and a male burial (figure 5.2). The small-scale excavations of Dolní Věstonice III uncovered a small fragment of probably fire-hardened silt loam (Škrdla et al. 1996). The rescue excavations of Pavlov II provided a small amount of 'ceramics' as well (Klíma 1976). The few

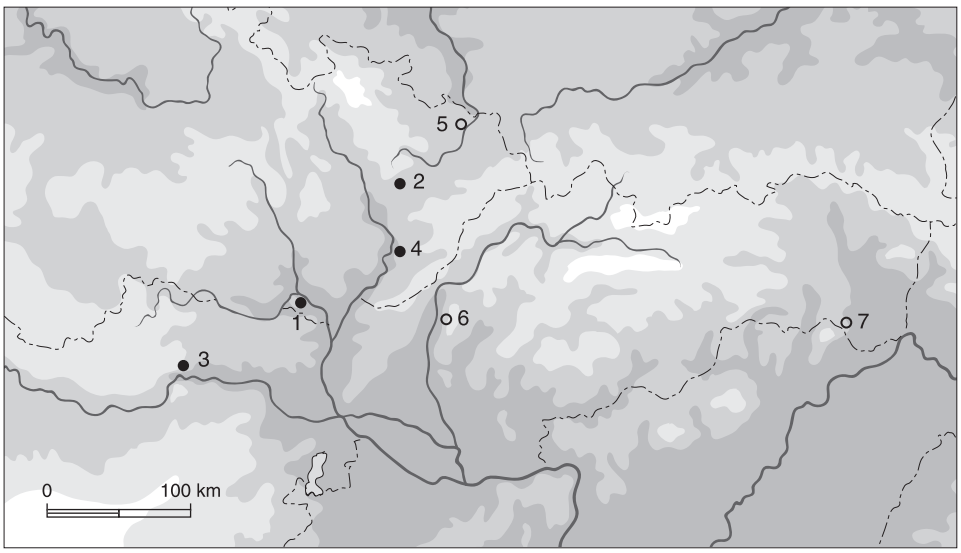

Fig. 5.1 Distribution map of 'ceramics'.
Pavlovian: 1. Dolní Věstonice-Pavlov; 2. Předmostí; 3. Krems-Wachtberg; 4. Jarošov II
Other periods: 5. Petřkovice-Landek; 6. Moravany-Lopata; 7. Kašov-Cejkov.

Table 5.1 Pavlovian sites with 'ceramic' assemblages (number of pieces is indicated).

Site	Anthropomorphic	Figurative	'Ceramics'	References
Dolní Věstonice I	12 (note 1)	> 721	> 5,760	Vandiver et al. 1990
Dolní Věstonice II – north	–	⩾ 2 (10?)	431	Klíma 1995
Dolní Věstonice II – west	–	1	7	Svoboda 1991
Dolní Věstonice III	–	–	1?	Škrdla et al. 1996
Pavlov I	8 (note 1)	> 100	~ 10,000	Soffer and Vandiver 1994, 1997
Pavlov II	–	?	~ 135	Klíma 1976
Předmostí I	–	⩾2	> 2	Klíma 1974
Jarošov II	–	–	1?	Škrdla and Musil 1999
Krems-Wachtberg (note 2)	–	3	3	Einwögerer 2000

Note 1: As described in this study.
Note 2: A cursory look with T. Einwögerer through the finds from Krems–Hundsteig, adjacent to Krems-Wachtberg and collected in the course of quarrying activities in the early 1900s, yielded several fragments that looked very similar to the Pavlovian 'ceramics' from the Wachtberg; one even looked like an animal head.

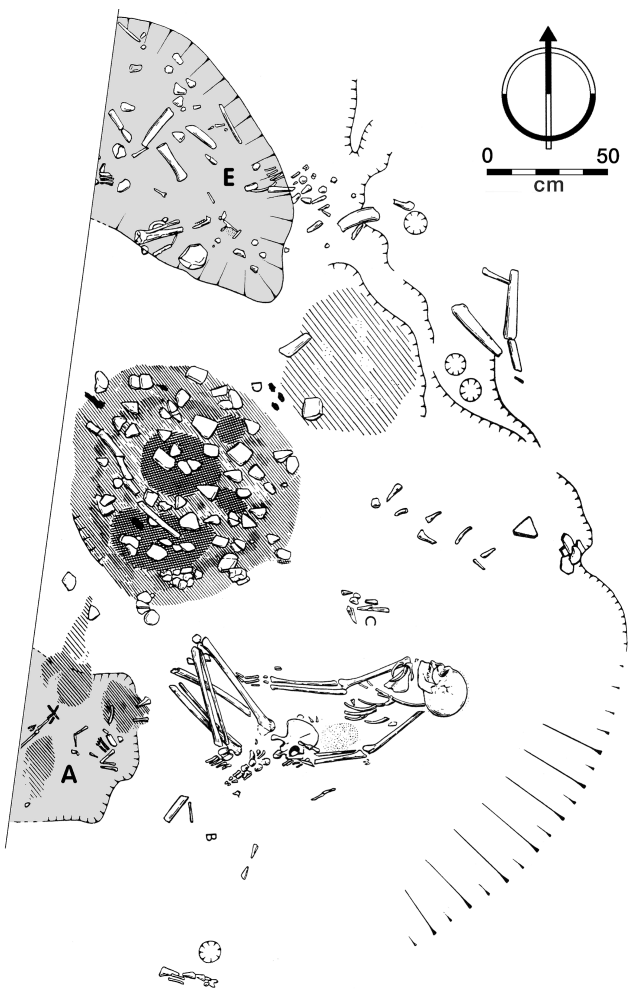

Fig. 5.2 Plan of Dolní Věstonice II – western slope, first settlement unit (after Svoboda 1991a).
The depressions A and E are indicated in grey.

fragments and the wolverine, discovered in Předmostí I, have been mentioned already in chapter 3. Two other localities have not been mentioned before. First, Jarošov II (Moravia), a recently discovered site in the Lower Morava valley, where a small fragment of probably fire-hardened silt loam was excavated in 1996 (Škrdla and Musil 1999). The stone tools, including denticulated backed microblades, are typologically consistent with the Pavlovian. This attribution is confirmed by two C14 dates: 25,780 ± 250 yrs BP on bone (GrA-9604) and 25,110 ± 240 yrs BP on charcoal (GrA-9613). The second is Krems-Wachtberg (Lower Austria), a site excavated in 1930 by J. Bayer. The artefacts were lost for decades, but turned up again with the renovation of the museum in Krems. The collection, from an area of approximately 10 m^2, contained three 'ceramic' fragments. C14 dates place the collection in the Pavlovian: 27,400 ± 300 yrs BP (GrN-3011), 27,700 ± 200 yrs BP (VERA-669) and 27,100 ± 170 yrs BP (VERA-671). The typology and technology of the stone industry are also in accordance with the Pavlovian (Einwögerer 2000).
There are four other sites for which 'ceramic' fragments are claimed. Klíma (1963a, 190) mentions some unworked fragments from Petřkovice-Landek. During his excavations in Moravany-Lopata[1], Zotz (1942) discovered a small fragment which he later attributed to a female figurine (Klíma 1963a, 189). Banesz (1996a) described fragments from two 'Epigravettian' sites in Eastern Slovakia, dating around 19,000 yrs BP. Two rounded objects of low-fired sediment were found in Kašov and interpreted as bear heads[2]. One piece, interpreted as an animal head, was excavated in Cejkov. In my opinion, these objects cannot be counted as 'ceramics'. They seem to be rounded lumps of reddish loess resulting from the burning of a fire. These few finds have not been studied in the same detail, are in no proportion to the Pavlovian collection and are therefore not considered here.

5.3 A typology of 'ceramics'

The analysis of the anthropomorphic figurines in chapter 4 demonstrated that most of them are made of fire-hardened silt loam. Other types of 'ceramics' have been mentioned in the contextual descriptions. The typology of the Pavlovian 'ceramics' follows the studies by Vandiver et al. (1990) and Soffer and Vandiver (1994, 1997). They make a distinction between worked and unworked fire-hardened pieces, i.e. between pieces with and without traces of modelling on the surface.

The worked pieces predominate in the collections. Soffer and Vandiver (1994, 1997) calculated amounts of 60 to 85% for parts of Pavlov I. They distinguish between figurative and non-figurative pieces. The figurative pieces form a small minority — only 3% or less in Pavlov I. They consist of fragments of anthropomorphic figurines, biconical and other 'heads', animal heads, legs and trunk fragments. The non-figurative pieces amount to more than 90% in Pavlov I. Soffer and Vandiver (1994, 1997) differentiate between flat fragments, spalls, rods and cones, and spherical balls. Many of these are probably unidentifiable fragments of figurines. In addition, pellets of an irregular shape are found. According to Soffer and Vandiver (1997, 389), the surface characteristics of these pellets are probably the result of wet-sieving on an iron screen.

A last group is formed by slab-like fragments with parallel striations and fragments built from conjoined flat strips. These are preliminarily identified as 'structural ceramics' and may indicate the use of silt loam for the support of other constructions (Soffer and Vandiver 1997, 390-391). Some of these slablike pieces contain imprints of cordage, knots and woven plant fibres (Adovasio et al. 1996, 1997, 1999). The unworked pieces of fire-hardened silt loam may have resulted from accidental burning, e.g. the burning of a dwelling. They are provisionally connected with the 'structural ceramics' (Soffer and Vandiver 1997, 390).

5.4 Context – the hearth?

Summarizing the contextual information provided by the descriptions of sites with anthropomorphic figurines (Pavlov I and Dolní Věstonice I), a correlation can be developed between hearths (with surrounding ash-and-charcoal patches) and 'ceramic' fragments. Klíma (1958a, 9) remarked that '[t]hey are found throughout the occupational stratum, but most frequently in the layers of ash surrounding the hearths, and sometimes in the hearths themselves'. This association was confirmed by later excavations as well as the reinterpretation of earlier investigations.

Absolon (1938b) described how the 'Venus' of Dolní Věstonice was found in the large concentration of ashes, charcoal and burnt bone in the upper part of Dolní Věstonice I. Klíma (1963a, 1972, 1973a, 1983) excavated two hearths with large concentrations of 'ceramics' in the uppermost part of the site and found other fragments associated with smaller hearths. On the basis of Absolon's field documentation, the vicinity of the large accumulation of 'ceramic' anthropomorphic figurines in the middle part of Dolní Věstonice I consisted of a large patch of ashes, charcoal and burnt bone fragments (Klíma 1981). The concentration of 'ceramics' in the north-west of Pavlov I is associated with several hearths (Jarošová 1997, Soffer and Vandiver 1997). A similar situation was noted in the middle and south-eastern part of the site.

A possible exception to this pattern is formed by the seven 'ceramic' fragments found in the first settlement unit of Dolní Věstonice II – western slope (Svoboda 1991a) (figure 5.2). These fragments were found in two depressions adjacent to a hearth: six (including the fragment of an unidentifiable figurine) in depression E and one in depression A. Only depression A contained some charcoal. There are, however, two cautionary remarks to be made with respect to the character of the association of 'ceramics' and hearths:

1. Spatial information about the 'ceramics' is extremely limited. Only a few (less than 10%) of the fragments can be situated in the excavations with appreciable accuracy. For some sites there is no spatial information at all. The find circumstances of the Předmostí wolverine are not known. The site of Krems-Wachtberg contained massive amounts of charcoal, but the provenance of the 'ceramic' fragments was not documented (Einwögerer 2000).
2. It is often not clear whether the relation between 'ceramics' and hearths with their ash and charcoal screes is primary or secondary. There is a considerable degree of disturbance of hearths by postdepositional processes. In addition to activities such as the cleaning of hearths, these processes resulted in a large spread of ash and charcoal layers. It is therefore difficult to establish whether fragments are spread with the cleaning of hearths and by post-depositional processes or whether they were later incorporated in layers resulting from such processes and activities while 'originally' lying outside a hearth.

Though these cautionary remarks cannot be disregarded, it must also be noted that hardly any 'ceramic' fragment is *not* associated with the remains of hearths (unless there is no information available at all). Therefore it is, in my opinion, at least no more parsimonious to argue that the 'ceramics' have been hardened in a fire and then deposited somewhere else. Further arguments in favour of a correlation of 'ceramics' with hearths can be derived from the technological characteristics.

5.5 Technological characteristics

In the last ten years, a number of studies have illuminated the technology of the 'ceramics'. The investigated

collections are Dolní Věstonice I (Vandiver et al. 1990, Soffer et al. 1993), the 1952-53 and 1957 excavations in Pavlov I (Soffer and Vandiver 1994, 1997) and the Krems-Wachtberg 'ceramics' (Einwögerer 2000). I shall summarize the results of these studies below, following four aspects of the production sequence: the raw material, the moulding, the firing and finally the breakage.

5.5.1 RAW MATERIAL

Silt loams of local origin provide the raw material for the 'ceramics'. Vandiver et al. (1990) offer four arguments in favour of this identification. They compared 'ceramic' fragments from Dolní Věstonice I with 'loess' samples from the same locality. Their analyses demonstrated a large degree of similarity in 1. bulk chemical composition (a.o. $Si0^2$ and Al^20^3), 2. microstructures, 3. minerals present (a.o. quartz, muscovite mica and illitic clay) and 4. grain size distribution. These results were confirmed by the analysis of the Pavlov I 'ceramics' (Soffer and Vandiver 1997). The local origin of the raw material could also be demonstrated for the Krems-Wachtberg objects. Diatoms of a local, Badenian age, marine sediment could be determined in a general 'loess' body (Einwögerer 2000). On the basis of the lowered porosity of the 'ceramics' compared with the silt loams, Vandiver et al. (1990, 41) argue that the local silt loams were mixed with water[3].

5.5.2 MOULDING

The mixture of silt loam and water was shaped by kneading the material into a particular shape. Klíma (1963a) even identified some fragments with fingerprints. Sometimes material was added and rolled and pressed together (Soffer and Vandiver 1997, 388). The figurines were not sculpted from a larger block of raw material, but 'built' by joining parts together. The figurines are all modelled as three-dimensional forms for which an additive process was followed. There is little evidence of smoothing the surface. In a few instances, decorations and other incisions were observed. Only the most telling details, in particular on the animal heads, are indicated. In general however there is only minimal detailing. There is no evidence for post-firing modification of the surface by the application of pigments or burnishing.

5.5.3 THE FIRING PROCESS

The 'ceramics' range in colours from tan to grey and black or, less frequently, to orange and red. Judging from the grey and black colours, the majority of the 'ceramics' were fired in a reducing environment. A minority was fired in an oxidizing environment. Vandiver et al. (1990, 54) also suggest that 'most Dolní Věstonice ceramics were cooled in a reducing environment, for instance in ash, rather than oxidized in a flow of incoming air'. The presence of siliceous ash on the outside of the figurines indicates that 'either they were set in the fuel which then burned to ash or that they were surrounded in a protective ash layer during the firing' (Vandiver et al. 1990, 62). Some objects were so wet while fired that they gave way and lost their shape (Vandiver et al. 1990, 69), for example two anthropomorphic figurines from the middle part of Dolní Věstonice I (numbers 5 and 7).

The range of temperatures at which the 'ceramics' were fired varied between 500 and 800°C[4]. However, Vandiver et al. (1990, 54) add that 'samples fired to 400°C or below would not have survived the 26,000 years of freeze-thaw cycles'. Most fragments were probably fired in the higher temperature range of 700-800°C. It must be added that the higher the temperature, the harder the 'ceramics' and therefore the better their chances of 'survival'. The firing time is estimated at no more than a few hours (Vandiver et al. 1990, 54).

5.5.4 BREAKAGE

The fragmentation of the 'ceramic' anthropomorphic figurines was already noted above. In view of the total collection of 'ceramics' it is even more striking. I estimate that 99% of all 'ceramics' consists of fragments. Breaks occur most frequently where two parts were joined. There are only very few more or less complete figurines: the 'Venus' and some animal figurines from Dolní Věstonice I and the wolverine of Předmostí.

Vandiver et al. (1990, 64) differentiate between smooth, non-branching fractures and rough, branching and stepped fractures. The fracture types are not equally present in all concentrations of 'ceramics'. The smooth, non-branching fractures dominate for example in the middle part of Dolní Věstonice I, i.e. concentration I of anthropomorphic and zoomorphic figurines (see figure 3.22). This kind of fracturing is attributed to mechanical forces for example due to trampling or the landslide processes in this area. The other fractures make up more than half of the fractures in Klíma's 'second settlement object' in the uppermost part of the site. These fractures are attributed to thermal shock, i.e. high energy fracturing due to firing while the object is still wet. Soffer and Vandiver (1994, 1997) also mention this kind of fracturing for several Pavlov I objects (e.g. the seated female figurine). Other factors in the frequent breakage of the 'ceramics' are the insufficient joining of parts, the heterogeneity in the particle composition of loess (Vandiver et al. 1990, 44), variability in the water content and scaly fracturing due to intensive freeze-thaw-cycles.

5.5.5 SUMMARY

A mixture of local silt loam and water was used to mould figurines by an additive process. The figurines were fired in

a wide range of temperatures with a maximum of 800°C. The minimum of about 500°C is a consequence of the preservation conditions: objects fired at lower temperatures would not have survived. Vandiver et al. (1990, 72) comment that 'most figurines could have been fired higher and in a more narrow range of temperature — yet they were not'. A reducing environment for both firing and cooling is most common. Breakage is common at the joints and partly due to thermal shock.

5.6 Evaluation

What do we actually look at? What do these remaining fragments actually represent? There are several options.

1. The remaining fragments are only the 'kiln waste'. In that case, we would expect a larger collection of more or less complete objects, also on other sites and away from hearths.
2. The fragments were only accidentally burned in the course of drying near the fire. What we have are in fact mistakes. Most objects would be dried, but due to the freeze-thaw-cycles these dried objects have not been preserved.
   The large amounts of fired fragments would demonstrate that these mistakes happened very often. In this case, we would expect a larger proportion of low firing temperatures close to 500 °C and a dominance of oxidizing conditions with most pieces falling in the periphery of the fire.
3. The fragments are due to intentional destruction by thermal shock thereby producing a loud noise (Soffer et al. 1993). In this scenario the expectation would be to find many fragments as well as a strong association with the hearth. Some objects were selected for this procedure, supposedly for some socio-ritual purpose.
   However, other objects, as mentioned above, have not been subject to thermal shock.
4. The objects were discarded in the fire after their use-life. What we see are the remains of discard behaviour. After the objects served their purpose they were discarded. Some objects were destroyed by thermal shock, others broke mechanically by falling or trampling. We might however expect objects on other sites and away from hearths due to loss or other forms of discard.

I propose a combination of options in which the main features of the 'ceramics' can be accounted for. Thermal shock fractures and objects that gave way while saturated with water indicate that the figurines were placed in the fire while still wet[5]. They were probably fired immediately after moulding. Some had dried probably more than others and some were placed in hotter parts of the fire than others. Consequently the fragments demonstrate a wide array of breakages, colours and hardness. It explains the fragmentation, the absence of figurines away from the hearths, the range of colours and hardness, the thermal shock fractures and other breakages. In short, the figurines were modelled and put away in the fire in a sequence of short duration.
Two crucial aspects are implied by the evaluation of the technology of the 'ceramics'.
First, the evidence indicates that the 'ceramic' objects never left the place where they were made and fired. The crucial evidence is the use of local raw materials, the association of the 'ceramics' with hearths and the indications for firing immediately after moulding.
Second, there was no intention of retrieving the 'ceramics' from the fire (Vandiver et al. 1990, Soffer et al. 1993). It is consistent with the absence of *any* indication for post-firing surface modifications or handling of the objects. The objects have never been removed from the hearth in the Palaeolithic and they have never been presented to Palaeolithic spectators in the way the images are presented to the reader of this book. These objects were not viewed by anyone at any time (*contra* Gamble 1982, 98). In other words, the firing process did not lead to a durable product to be removed from the fire, in the way that a pot is fired in order to obtain a usable and durable product.

5.7 *Excursus*: comparison with ivory figurines

In addition to the 'ceramic' anthropomorphs, several figurines are made of ivory. Before I conclude this chapter, a concise overview of their manufacturing process is offered. Pavlovian ivory figurines are quite rare. There is a rather voluminous mammoth from Předmostí. Three anthropomorphic figurines are known from Dolní Věstonice, including two human faces. An anthropomorphic figure, a lioness and a mammoth were excavated in Pavlov I.
Ivory working proceeds by carving a shape from a large piece. It is a reductive or subtractive process. In addition to the carving of ivory figures, the engraving of ivory formed another important technique. As raw material, either the core or a lamella of a mammoth tusk is utilized. The origin of this ivory cannot be determined, but it is locally available in abundance. The assemblages of the Pavlov Hills as well as Předmostí provide ample evidence for the local working of ivory, though the immediate relation with the figurines is not clear. At the moment there are in my opinion neither arguments in favour of the transport of ivory nor in favour of local manufacture and discard. There are no indications for intentional destruction or deposition.
Unlike the three-dimensional 'ceramic' figures, Klíma (1963b) described most ivory figurines aptly as *Reliëfplastik*. They are not sculpted in the round, but are more or less silhouettes. Long, approximately one centimetre thick

splinters of ivory are cut in shape and a low relief due to the curvature of the lamella gives some volume to the figures. These figurines include not only the animals, but also the anthropomorphic figurines. In contrast, a three-dimensional shape is more characteristic of the ivory human heads[6]. The difference in shape supports the distinction between ivory human heads and anthropomorphic figurines without human facial features. It is striking that such figurines without human facial features are three-dimensionally shaped in the 'ceramics' and more two-dimensional in ivory.

5.8 Conclusion

The Pavlovian 'ceramics' do 'not quite fit the traditional model for firing earthenware ceramics' (Vandiver et al. 1990, 54). The raw material, a mixture of local loess and water, is gritty, barely plastic and easily cracked. It has a low clay content (max. 20 vol%), in other words more temper than clay. This mixture is moulded and subsequently fired at relatively low temperatures, usually in a reducing athmosphere. The thesis here is that the objects were never retrieved after firing, but were just left there.
The Pavlovian 'ceramics' have been described as 'short-term art' (Svoboda, Ložek, Vlček 1996, 165). They have no life history, no biography, they never circulated in alliance networks nor served in information exchange. They are not even intentionally destroyed or deposited.
Of crucial importance is the implication that the firing process was never intended to produce *durable forms* (Vandiver et al. 1990, Soffer et al. 1993). Hence the term 'ceramics' actually gives a rather distorted first impression. In fact, the firing is not a production process at all. The firing provided the happy circumstances of preservation. I think no palaeolithic inhabitant saw the objects in the same way as they are now preserved in several collections.

notes

1 Zotz' excavations are designated as Moravany-Lopata I by Kozlowski and Hromada (1998).

2 A third object from Kašov is illustrated in Banesz (1996b).

3 The admixture of bone or ivory, fat and ash, as claimed by Absolon (1938b, 90) on the basis of a chemical analysis by Kalauner, is not confirmed by these analyses.

4 Firing temperatures determined for open fires and the presumed 'kiln' are not different (Vandiver et al. 1990).

5 According to Vandiver et al. (1990, 69), fractures produced by re-wetting low-fired objects were not observed among the Dolní Věstonice I materials.

6 It is striking that the 'schematic' face from the upper part of Dolní Věstonice I (number 13) is not a silhouette, not *en profile*, but *en face*, using the curvature of the lamella to provide some volume.