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

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## 9 Camps, boundaries and art

### 9.1 Introduction

All classifications of palaeolithic art differentiate between parietal art and mobiliary art. The palaeolithic art of Central Europe is usually classified as mobiliary art. However, I have argued in chapter 5 that the ‘ceramics’ never left the hearth that preserved them. These objects were probably not ‘mobile’, they did not circulate. The probably local provenance of the loess sediment used for moulding the figurines confirms this. With respect to the ivory objects, the local production and discard was impossible to prove. However, the durability of the material does not automatically mean that the ivory objects were indeed carried around and the burden of proof rests as much on their ‘mobiliary art’-interpretation.

The interpretation of the ‘ceramics’ as a local phenomenon implies that there must have been a significant relation between these objects and the places where they are left behind. The issue central to this chapter is the nature of these sites and the relation with Pavlovian art.

In the introductory chapters, one aspect was already singled out as significant for the Pavlovian: a degree of site-differentiation different from both the preceding and the following periods. The difference consists mainly

in the existence of extremely large site clusters. The occurrence of Pavlovian ‘ceramics’ is correlated with these site clusters, i.e. the northern slope of the Pavlov Hills and the limestone outcrops of Předmostí. It is possible that Krems-Wachtberg, the other main occurrence of Pavlovian ‘ceramics’, represents a very small portion of another site cluster on the southern slopes behind the town of Krems. The documentation of the loess exploitation at Krems-Hundsteig, just across the road of the Krems-Wachtberg-location, suggests that ‘cultural layers’ of Aurignacian and Gravettian age extend over a considerable area (Neugebauer-Maresch 1995, 1999). Future research in Krems will contribute to a better understanding of the situation (Einwögerer and Neugebauer-Maresch 1999 pers. comm.). In this chapter I shall take the Pavlov Hills and in particular the site of Pavlov I as a case-study to exemplify and investigate the question of the nature of settlement in the Pavlovian.

### 9.2 The Pavlov Hills

The Pavlovian sites are concentrated on the northern slope of the Pavlov Hills between the villages of Pavlov in the east and Dolní Věstonice in the west (figure 9.1). They are found

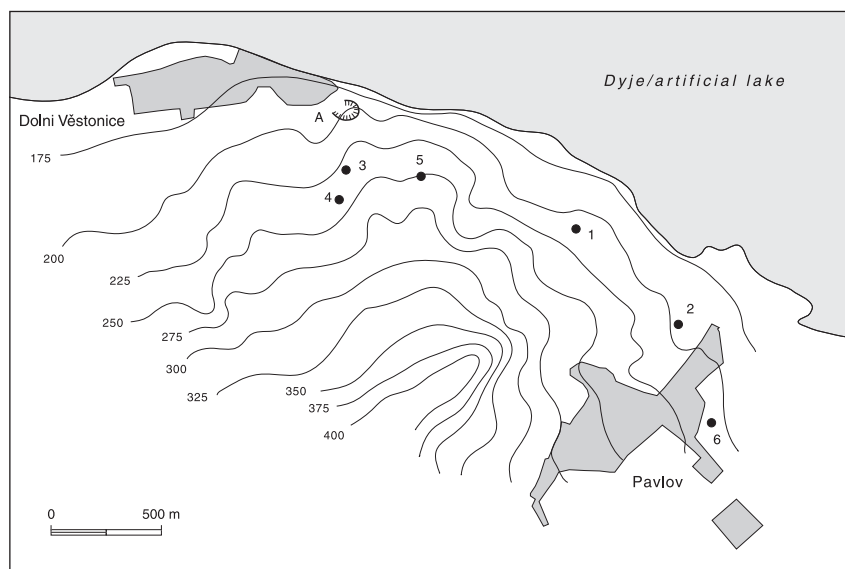


Fig. 9.1 Location of sites between Dolní Věstonice and Pavlov  
1. Dolní Věstonice I; 2. Pavlov I; 3. Dolní Věstonice II; 4. Dolní Věstonice II-A; 5. Dolní Věstonice III; 6. Pavlov II  
A. Dolní Věstonice brickyard.

in a stretch of roughly three kilometres. The loess-derived slope sediments intercalated with limestone debris are intersected by several erosive gullies (see figure 2.3). Hollow roads used to cross the area and provided sections in which ‘cultural layers’ were exposed (e.g. Absolon 1938a). The formation of terraces for vineyards, in particular after the Second World War, exposed long sections, provided opportunities for research, but also disturbed large areas (e.g. Klíma 1981). Other sections are and were exposed during several episodes of loess exploitation in the old brickyard of Dolní Věstonice and the quarry of Pavlov. In 1985 and subsequent years, the loess cover above the old brickyard of Dolní Věstonice was quarried to provide material for the dams and dykes of three reservoirs in the Dyje river, leading to the drowning of the former marshy forest. These activities necessitated intensive archaeological research including the excavation of the Pavlovian site of Dolní Věstonice II (Svoboda 1991a, Klíma 1995). The almost continuous archaeological explorations since the 1920s, in relation to interventions in the landscape, contributed substantially to the archaeological visibility of Pavlovian settlement in the Pavlov Hills.

The sites of Pavlov I and Dolní Věstonice I with their different parts and features have been described in some detail in chapter 3. These are the two sites with anthropomorphic figurines. Before describing several aspects of Pavlov I in more detail, I shall give an overview of the other sites in the Pavlov Hills, moving from west to east. All sites are attributed to the Pavlovian, unless stated otherwise.

#### 9.2.1 OVERVIEW OF SITES

The third major site is Dolní Věstonice II, located on a loessic ridge just outside the village of Dolní Věstonice. It consists of several parts: the brickyard, a northern and western slope, the top part, and a mammoth bone deposit (figure 9.2).

The loess exploitation of the brickyard had yielded a substantial number of stone artefacts and bones, usually without adequate stratigraphic provenance. In the course of the multi-disciplinary study of the brickyard sections in the late 1950s, ten profiles were carefully cleaned, described in detail and sampled (Klíma et al. 1961, see also chapter 2) (figure 9.3). In addition to a flake found just above the second soil complex (PK II) in profile 5, three other profiles yielded artefacts in a stratigraphic position just above PK I. In profile 3, in the western wall, an area of six m<sup>2</sup> could be excavated. It contained a hearth, deformed by solifluction, accompanied by a mammoth rib fragment, part of a reindeer antler and about eighty stone artefacts. There are two C14 dates available for the deformed hearth: 29,000 ± 200 yrs BP (GrN-2598) (Klíma et al. 1961, 120)<sup>1</sup> and 24,470 ± 190 yrs BP (GrN-11003) (Klíma 1995, 53). Another date, for a find

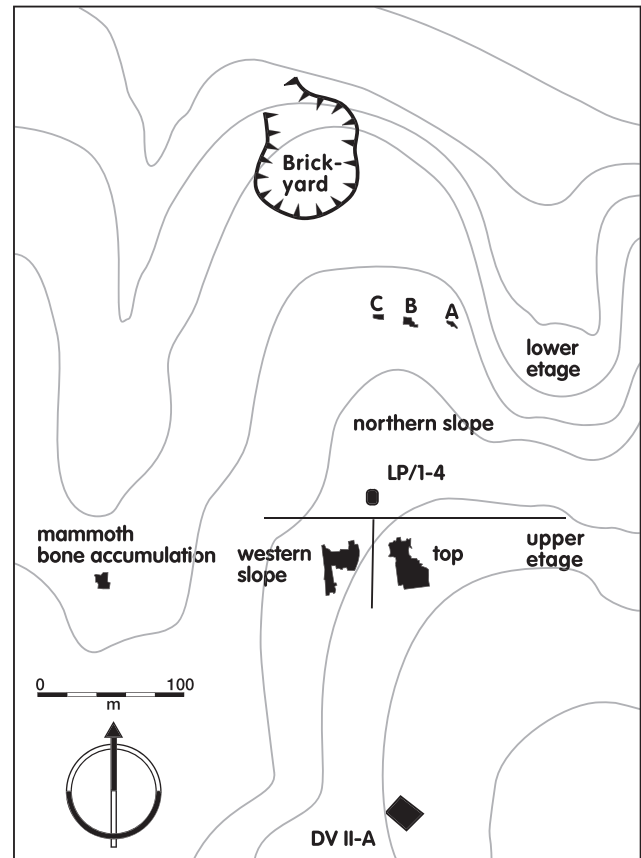


Fig. 9.2 Overview of Dolní Věstonice II and II-A.

horizon below the ‘cultural layer’, is 28,220 ± 370 yrs BP (GrN-11196) (Klíma 1995, 53). Remarkable is that more than thirty of the stone artefacts are rough and heavy artefacts on local pebbles (pebble tools, large scrapers). Another pebble tool was found, as a single find, in profile 8, adjacent to profile 3. A surface of fourteen m<sup>2</sup> was excavated in profile 4, yielding only twenty stone artefacts. A soil sample gave a C14 date of 28,300 ± 300 yrs BP (GrN-2092). Further upslope of the old brickyard, a new brickyard was exploited for construction works in the late 1980s. At the lower ‘etage’ of this new brickyard, three hearths with scatters of stone artefacts were excavated in 1985 (Klíma 1995, 60). There is one C14-date available, probably of a bulk sample from the three hearths: 27,660 ± 80 yrs BP (GrN-13962). The low standard deviation of this date is therefore rather deceptive. The date must be considered an average and cannot be taken to date any of the three hearths individually. The contemporaneity of the three hearths and their relative age remain unknown. More interesting however is the variation in the contents of the three scatters. They differ in terms of amounts, typology, raw materials and

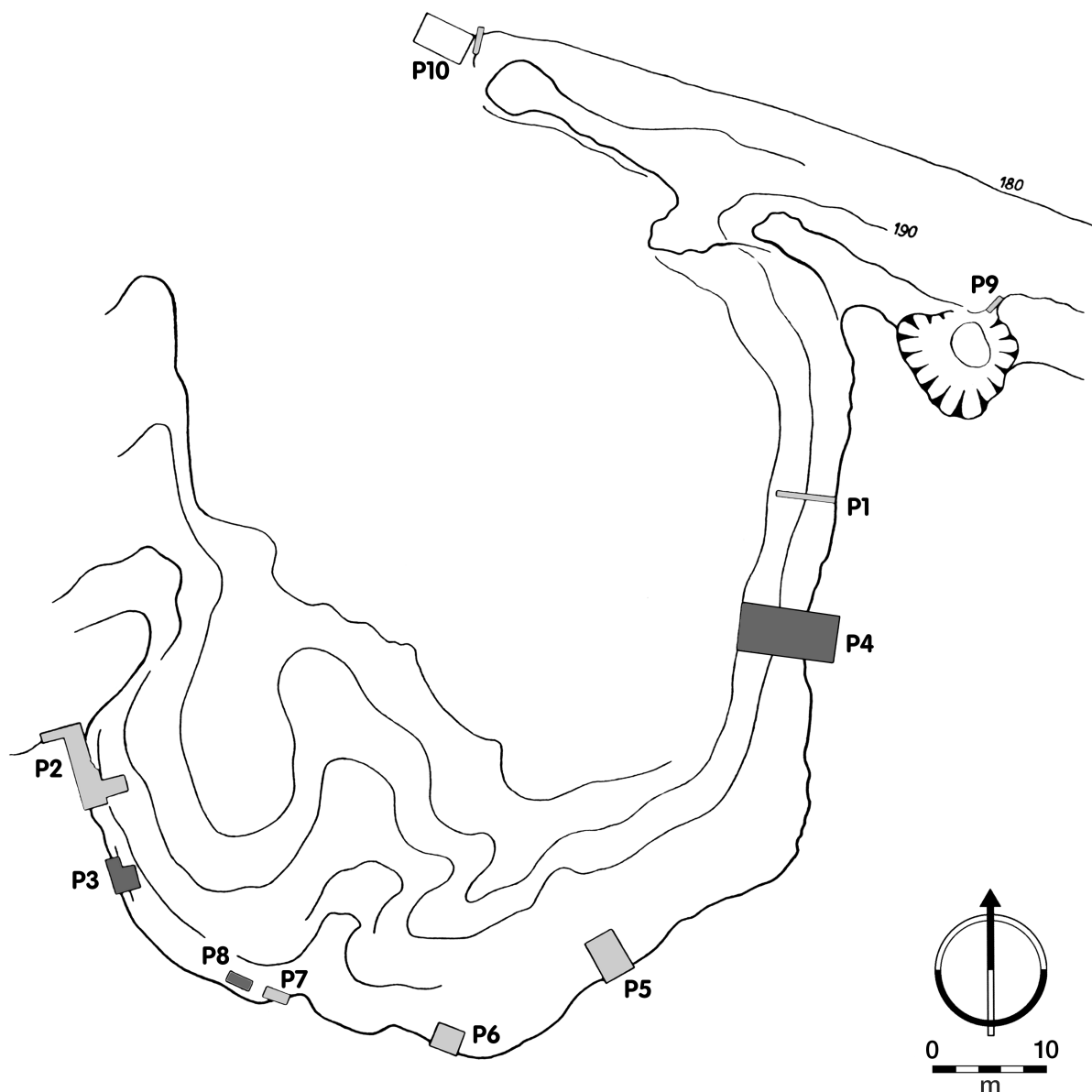


Fig. 9.3 Plan of profiles in the Dolní Věstonice brickyard (dark areas contain Pavlovian artefacts).

average weight per artefact (Klíma 1995). Higher upslope, a small, disturbed concentration was excavated, termed LP/1-4 or *Siedlungseinheit E* (Klíma 1995, 69). It was dated to  $26,100 \pm 200$  yrs BP (GrN-21123) (Svoboda, Ložek, Vlček 1996, 136). These small excavations above the old brickyard are collectively referred to as the northern slope of Dolní Věstonice II.

The most extensive excavations took place at the upper 'etage' of the new brickyard. The research had to take place under far from favourable circumstances, in particular at the top part. As Klíma describes:

*It was not possible to save the record in an entirely reliable fashion in the vicinity of the operating heavy machinery. In many parts of the investigated areas, the upper part of the cultural layer was simply dragged away by huge bulldozers, in other parts it was attacked by draglines or even destroyed (Klíma 1995, 132)*

The excavations on the northern slope covered about 670 m<sup>2</sup>. Despite the rescue character of the excavations, several concentrations of stone artefacts could be documented. They are associated with complex constellations of hearths. Klíma

(1995, 61) describes it as 'a more or less vague and flowing form of hearths that partly overlap', affected by solifluction and slope movement. Klíma differentiates three units, which he interpretes as dwellings. According to Klíma, settlement moved upslope in the course of time. The three units follow one another in time.

The area also contained the well-known triple burial. It concerns three subadult individuals. Two of them are male, while the third skeleton (DV XV), located in the middle, could not be attributed to sex. The three skeletons were laid down in a shallow burial pit or natural depression. Large pieces of burned wood were found among and around the human remains, suggesting the burning of some kind of grave structure. Ochre covers the skulls as well as the pelvic area of the middle skeleton. Rows of pierced fox and wolf teeth were found on the foreheads. The triple burial is dated to  $26,640 \pm 110$  yrs BP (GrN-14831). There are two dates for a hearth near the triple burial:  $24,000 \pm 900$  yrs BP (ISGS-1616) and  $24,970 \pm 920$  yrs BP (ISGS-1617). These dates suggest that these hearths are younger than the burial. The dates for both features are however from two different laboratories and the comparability of the dates is not clear<sup>2</sup>. On the western slope, excavations have been conducted by Klíma and Svoboda. The first area, excavated by Klíma, covered about 370 m<sup>2</sup> including six hearths. The hearths are surrounded by several concentrations of stone artefacts. Four of these hearths are dated and the results are all close to 27 kyr BP (Klíma 1995):  $27,080 \pm 170$  yrs BP (GrN-15327),  $27,070 \pm 170$  yrs BP (GrN-15324),  $26,970 \pm 160$  yrs BP (GrN-15326) and  $26,550 \pm 160$  yrs BP (GrN-15325). One hearth was surrounded by seven kettle-shaped holes. Another one was accompanied by some possible postholes. Klíma distinguished three settlement units, which are considered more or less contemporary. He claims that these dwellings are constructed on an artificially flattened part, a kind of platform. Two more hearths were located in two adjacent trenches. Another adjacent, western area covered about 98 m<sup>2</sup>. It included the remains of two hearths (Svoboda, Škrdla, Jarošová 1993). This area, complex or unit 4, was dated to  $26,970 \pm 200$  yrs BP (GrN-21122) (Svoboda, Ložek, Vlček 1996, 136).

The second excavation on the western slope of Dolní Věstonice II consists of an area of about 230 m<sup>2</sup>. The area is split in two by a zone that was destroyed by the quarry activities. Three complexes with hearths are distinguished (Svoboda 1991a). One of these, the first settlement unit, also yielded an adult male skeleton, laid down in a shallow depression. The skeleton was very close to the hearth. Charcoal from the 'burial' area was dated to  $25,570 \pm 280$  yrs BP (GrN-15276). The hearth consisted of thirty-five centimetres of alternating charcoal and red-burnt loess, indicating frequent reuse. Charcoal samples were dated to

$25,740 \pm 210$  yrs BP (GrN-15277) and  $26,390 \pm 270$  yrs BP (ISGS-1744). The two other hearths are dated as well.

The second settlement unit is dated to  $26,920 \pm 250$  yrs BP (GrN-15279)<sup>3</sup> and the third unit to  $27,070 \pm 300$  yrs BP (GrN-15278)<sup>4</sup>. These dates as well as the spatial distribution of artefacts suggests that the first settlement unit is slightly younger than the second and third unit that could be more or less contemporary (Svoboda 1991a, 55-56).

Lower on the western slope, a small mammoth bone deposit was located in fluvially redeposited loess-derived sediments. Among the few stone artefacts, there are several large and heavy tools. Charcoal from the area provided a date of  $26,100 \pm 200$  yrs BP (GrN-14830)<sup>5</sup>, suggesting possible contemporaneity with the first settlement unit of the western slope.

Further upslope of the excavations, remains of hearths were observed in a hollow road (Klíma et al. 1961, 131). Klíma also refers to finds at an even higher field. They possibly refer to a location where stone artefacts and bones were continuously ploughed to the surface. This location, known as Dolní Věstonice II-A, was partially excavated in the summer of 1999 in order to explore the nature of the site and to protect it from further disturbance (Svoboda 1999 pers. comm.). Klíma concludes the documentation of the traces on the northern slope with an interpretation of Dolní Věstonice II. The evidence, he suggests, reflects 'multiple visits, repeated stays, but also short visits, that, according to the dwellings, occurred during different seasons' (Klíma 1995, 176). The interpretation of the western slope is in good accordance with this (Svoboda 1991a).

Further to the east of Dolní Věstonice II, there is another loess ridge flanked by two deep valleys. With the modification of the slope into vineyards, a thin 'cultural layer' was touched. The site was termed Dolní Věstonice III, sometimes accompanied by the fieldname 'Rajny'. Based on the first observations and a trench by Klíma in 1969-70, further small-scale excavations were initiated in the 1990s (Škrdla, Cílek, Přichystal 1996). Two Pavlovian units are distinguished: unit 1 on the fifth terrace and unit 2 on the third terrace of the present vineyard. Further upslope, surface finds indicate the presence of an early upper palaeolithic site. Unit 1, uncovered over an area of about 20 m<sup>2</sup>, consists of a soliflucted layer. It contains traces of a hearth surrounded by a scatter of stone artefacts, bone fragments, red ochre particles and two dentalia. The charcoal fragments are dated to  $24,560 + 660/- 610$  yrs BP (GrN-20342). Unit 2 is exposed in a small pit of 4 m<sup>2</sup>. Two find horizons are distinguished in a complicated geological sequence with evidence for a gully infill, slopewash, solifluction and landsliding. The upper horizon is located in soliflucted silt loam. Charcoal fragments were dated to  $26,200 \pm 1100$  yrs BP (GrN-22306). The lower horizon is found in the

laminated infilling of a shallow gully, indicating that the artefacts are redeposited. Charcoal fragments from these sediments date to  $26,160 \pm 770$  yrs BP (GrN-22307). Moving further along the slopes of the Pavlov Hills, passing Dolní Věstonice I and Pavlov I, another site is located on the eastern edge of the village of Pavlov: the site of Pavlov II (Klíma 1976). The excavations covered an area of approximately 160 m<sup>2</sup>. The site was partially destroyed by ploughing. The excavated area included two slightly deepened hearths with stone settings and three ash-and-charcoal lenses. The stone artefacts are concentrated around these hearths and lenses and seems to have continued in the adjacent area touched by ploughing. In addition to stone artefacts and animal bones, there are also pierced animal teeth, molluscs and thin, elongated pebbles, possibly from the valleys of the Dražanská plateau. No radiometric dates are available.

Moving further to the south-east towards the village of Milovice, other sites are known. The best known site is Milovice I, subject of excavations in the late 1980s by Oliva (1988, 1989b). The multi-level location consists of a sequence of fairly small Aurignacian, Gravettian and Late Aurignacian assemblages. The Gravettian is dated to  $25,220 \pm 280$  yrs BP (GrN-14824),  $25,570 \pm 170$  yrs BP (GrN-22105) and  $24,530 \pm 300$  yrs BP (GrN-22104). The Gravettian layers are attributed to the Pavlovian and the Willendorf-Kostienkian. The site includes a mammoth bone deposit and a more or less circular accumulation of mammoth bones interpreted as a mammoth-bone dwelling attributed to the Willendorf-Kostienkian phase (Oliva 1988).

This overview presented the sites which were subject of archaeological excavations. Single finds of stone artefacts and mammoth bones, and small surface collections are known from still other areas (e.g. Klíma 1986, Svoboda in prep., Verpoorte and Žemla 2000a & b). A rough overview of the area between Pavlov and Dolní Věstonice can be provided by the average stone artefact densities for the excavated areas (table 9.1). Densities vary considerably. They range between less than ten stone artefacts per square metre in parts of Dolní Věstonice II and more than three hundred per square metre in Pavlov I as a whole.

#### 9.2.2 C14 CHRONOLOGY

A large number of radiocarbon dates is available from the Pavlov Hills. The available data have been presented in the site descriptions above and in chapter 3. They allow for comparisons between the different sites. Before comparing the C14 chronology of different sites, it is important to mention some general problems with these dates. The dates have to be clearly associated with archaeological remains. If dates are based on 'bulk samples', the result is the 'averaging' of a possibly larger age-range. It is crucial to avoid or to account for the possibility of contamination. This counts for the intrusion of older, e.g. PK I material as well as younger material. The available data largely derive from the Groningen laboratory, but other laboratories have contributed as well, especially the Illinois laboratory (ISGS), with subsequent questions of comparability. In addition, the datelist has accumulated over a timespan of more than forty years, i.e. from the very first applications of the C14 method

Table 9.1 Approximate density per square metre for tools, cores and all stone artefacts at Dolní Věstonice-Pavlov-sites.

Site	Area	m <sup>2</sup> exc.	Tools	Cores	Stone artefacts
Pavlov I	South-east North-west	~ 910 ~ 266	11 13	0.7 1.7	~ 300 ~ 360
Pavlov II		~ 160	2	0.5	20
Dolní Věstonice I	'First settlement' 1924-1926 (Absolon) 'Second settlement'	~ 200 ~ 700 ~ 320	7 4	0.7 0.2	156 ~ 71 45
Dolní Věstonice II	Top + Western slope (note 1) Western slope (note 2) Unit 4 (Western slope) (note 3) Hearths A-B-C Brickyard	~ 1000 ~ 54 ~ 98 ~ 200 ~ 20	1 4 1.5 0.8	0.5 1 0.25 0.1	29 140 40 12.5 5
Dolní Věstonice III	Unit 1 (5th terrace) Unit 2 (3rd terrace)	~ 20 ~ 4	1 2	0.2 0.5	12 71

Note 1: after Klíma 1995

Note 2: after Svoboda 1991a

Note 3: after Svoboda, Škrdlá, Jarošova 1993

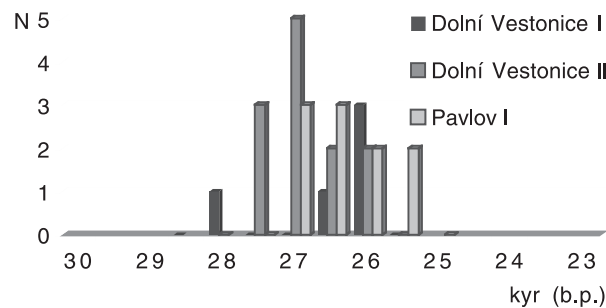


Fig. 9.4 Radiocarbon dates for Pavlov I and Dolní Věstonice I and II.

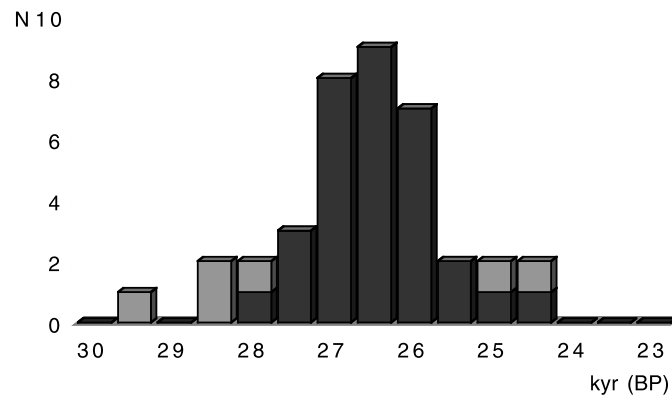


Fig. 9.5 Radiocarbon dates from all Dolní Věstonice and Pavlov sites. Light-grey areas refer to radiocarbon dates with doubtful associations with archaeological remains.

onward. Meanwhile, cleaning, measuring and calculating procedures have progressed considerably. Therefore, an assessment had to be made about the comparative reliability of the dates from different laboratories as well as different periods in the application of the radiometric methods. These problems have resulted in the acceptance and dismissal of dates as presented in the site descriptions.

In the light of these remarks I have not chosen for statistically elegant solutions to the addition of C14 dates with their standard deviations and I have not considered recent efforts at the calibration of C14 dates for the period at stake. Avoiding an illusory exactness I have simply counted the number of median ages in 500-year intervals between 30 and 23 kyr BP for each of the sites. The comparison of the different sites based on histograms demonstrates several interesting aspects (figures 9.4 and 9.5).

First, there is no clear-cut chronological difference between Pavlov I, Dolní Věstonice I and Dolní Věstonice II. They all cover the same period. Only the peaks are slightly out of phase.

Most dates for Dolní Věstonice II fall in the interval between 26,5 and 27 kyr BP, whereas most dates of Dolní Věstonice I fall in the interval between 25,5 and 26 kyr BP. The dates for Pavlov I do not display a clear peak and cover the entire range between 25 and 27 kyr BP. In general terms, these sites are more or less contemporary. In other words, the C14 chronology does not support an interpretation of the settlement history of the Pavlov Hills in terms of large-scale settlement shifts from Dolní Věstonice II to Dolní Věstonice I to Pavlov I. In chapter 3, it was argued that there is no chronological difference between the geomorphologically defined parts of Pavlov I and Dolní Věstonice I: large-scale settlement shifts from one part to another are not supported either. Second, the C14 chronology of Dolní Věstonice II supports the interpretation of the non-contemporaneity of several hearths on the western slope. This is in good accordance with geological observations in both Pavlov I and Dolní Věstonice I. In other words, within the time range of occupation, several phases can be distinguished.



In general, the Pavlovian occupation of the northern slopes of the Pavlov Hills is dated between 29 and 24 kyr BP with most dates falling between 27 and 25,5 kyr BP (figure 8.5). In this period the occupation took place more or less across the entire slope. By the example of Pavlov I I shall try to illustrate the nature of the occupation in more detail.

### 9.3 Pavlov I

#### 9.3.1 A SHORT HISTORY OF INTERPRETATIONS

The question of the interpretation of the large site clusters in the Pavlovian is a longstanding one. The spatial organisation of the sites runs through the research history as a continuous thread. A short history of the interpretations is illuminating as a background for looking at Pavlov I.

When Absolon began his systematic excavations in Dolní Věstonice I in 1924, his fieldwork was explicitly directed at analyzing the spatial organisation of this site. While opening large areas 'in continuo', Absolon noted: 'before my eyes sketched the outlines of a fabulous image, but in no way a fantasy: the paleo-ethnological reconstruction of a diluvial Pompeii, submerged in a ten thousand year long sleep' (Absolon 1938a, 5). Absolon considered all remains as parts of a single settlement covering over one square kilometre.

As a consequence of this premise, Absolon did not devote much attention to the stratigraphic context of the cultural materials (Klíma 1963a, 14). On the basis of the post-war investigations, Klíma distinguished four settlement phases separated by three stages of slope processes in Dolní Věstonice I. He proposed a model of the spatial organization for these phases (Klíma 1963a, 1984). The model consists of a central, communal hearth surrounded by five to six dwellings. Activity areas and raw material caches were located in the vicinity. The settled area was set off by a simple fence. Outside the fenced area, a mammoth bone deposit was located and some specific activities took place such as the production of 'ceramics'. In the course of time, economic circumstances and terrain conditions necessitated the relocation of the settlement higher upslope (Klíma 1962b, 1963a). The two phases distinguished in Pavlov I are interpreted as a similar relocation of settlement.

The investigations of Dolní Věstonice II question the validity of this model. They demonstrated that the contemporaneity of neighbouring hearths cannot be assumed *a priori* (Svoboda 1991a). Instead the chronological and spatial relations within sites and phases have become a major research problem. Summarizing the history of interpretations, there is a shift from a Pompeii premise of everything belonging together, through a middle position of a sequence of phases and shifting villages, to the question of demonstrating relations and contemporaneity. This shift in interpretative framework forms the background for looking at Pavlov I.

#### 9.3.2 GEOLOGICAL OBSERVATIONS

Two aspects of the geological situation of Pavlov I, as summarized in chapter 3, are particularly relevant here. In the first place, multiple layers and overlapping lenses with cultural remains have been observed in various parts of the site. The observation of two superimposed hearths, separated by a layer of silt loam, is a striking example. Secondly, in geological terms the sedimentation rate in the Pavlovian was rather low. In addition, it is important to point to the dynamics of the loess landscape, which is characterised by substantial accumulation in a short timespan, but also high vulnerability to erosion and redeposition. As a result of the generally low rate of sedimentation, layers with cultural remains were hardly separated by 'sterile' sediments. These two aspects indicate the palimpsest nature of Pavlov I. Patterns in deposited materials have been overwritten by the remains of later activities. Following Binford's terminology, the assemblage can therefore be characterized as having a high integrity and a low resolution, i.e. '[a] single agent [is] responsible for the deposition of material, performing a wide range of activities, [with] multiple re-use of the location where residue accumulation occurs' (Gamble 1986, 23)<sup>6</sup>.

#### 9.3.3 ARCHAEOLOGICAL OBSERVATIONS

A conservative estimate of the total amount of stone artefacts in Pavlov I comes at more than 600,000 objects larger than five mm (Verpoorte in press). Over an excavated area of approx. 2100 m<sup>2</sup> this means an average density of about three hundred stone artefacts per square metre. An assemblage with these densities is best understood as a palimpsest as also documented in other aspects such as the spatial distribution and technological characteristics. The general distribution of stone artefacts displays two main centres: one in the south-east and another in the north-west. In more detail these centres are formed by a clustering and overlapping of concentrations (Verpoorte in press). In this respect, it is striking that the two superimposed hearths mentioned above are accompanied by a major concentration of stone artefacts. It seems that the other concentrations of stone artefacts are also closely associated with concentrations of overlapping and disturbed hearths and ash-and-charcoal lenses, whereas relatively low-density areas are associated with more distinct and better preserved hearths. This scale of patterning seems to be best explained in terms of an accumulation of hearths and debris scatters over a considerable period of time (some 2,000 C14 years) on a relatively stable surface. The site was, in my opinion, frequently visited over a prolonged period of time. This also has consequences for several other characteristics of the stone artefact assemblage.

The enormous amount of more than 600,000 stone artefacts amounts to a relatively low total weight of more than 400 kgs.



The average weight for the stone artefacts, including cores, is only about 0.7 grams. The assemblage is characterized by small dimensions, exemplified by a variety of microlithic elements, e.g. microgravettes and crescent-shaped points. The small dimensions cannot be accounted for by small raw material nodules, but are the result of a high degree of reduction. The degree of reduction is also reflected in a high percentage of breakages. In tool types such as endscrapers, pointed blades and retouched blades, about 90% is represented by fragments. At least 75% of the unretouched blades is broken (Verpoorte in press).

On the one hand, this degree of reduction might be the effect of the long distance to raw material sources. Most stone artefacts (more than 90%) are made of either silicites originating in the northern moraine fields in Silesia and South Poland or radiolarites probably originating in the White Carpathians on the Czech-Slovak border. These sources are at least 150 km respectively 100 km away from the Pavlov Hills. On the other hand, the degree of reduction might be associated with the length of occupation: the longer the occupation, the more reduction of stone artefacts. Both arguments are based on the idea that artefacts will be reduced further in the absence of new raw materials. However, even in areas with locally abundant raw material sources, reduction of artefacts takes place. One reason for this may be that it is often more economical to modify and reuse an artefact than to make a new tool on a new blank. As all these factors may play a role in Pavlov, I do not think that the amount of reduction is a reliable index for the duration of occupation.

I want to point to another, more ambiguous aspect of the stone artefacts. In addition to refitting evidence for re-utilizations, there are also other indications for re-utilizations. There are some examples of artefacts with two types of patination suggesting that an artefact was collected at the surface and re-used (Verpoorte in press). There are also some examples of artefacts that have been re-used after water transport which is indicated by slight rounding of edges (Verpoorte in prep). Some artefacts in the Pavlov assemblage stand out by a larger size. They include two large tools of 8,5 cm and 13 cm, found together in a small hole (Klíma 1959a, 6-11). Klíma suggests that these tools may form a (part of a) cache. This interpretation would indicate a planned reoccupation of the site in the near future. I take these more ambiguous aspects of the stone assemblage to point to the possible importance of surface scatters in the frequent occupation of the location. To some extent, the site has changed in the course of time into a local source of raw material. Lithic scavenging has influenced the characteristics of the stone assemblage. The small dimensions of the assemblage may be attributed to a degree of reuse of these surface materials.

There is some refitting evidence to suggest the extent of the settled areas. In view of the hundreds of thousands of stone artefacts, the few lines are only suggestive, but they point to interrelations between several areas of the site. One sequence of refits relates the two main centres of Pavlov I (cf. Škrdla 1997). Two artefacts from this refitting sequence are found in the southeastern part, whereas the preceeding and the following artefacts are found in the northwestern part of Pavlov I. Another set of refitted artefacts belonging to one radiolarite core relate several areas in the southeastern part of Pavlov I (Verpoorte in press). These few examples suggest that quite extensive areas were occupied, at least for some time.

#### 9.3.4 CONCLUSION

In the matter of settlement duration, it is important to make a clear distinction between two aspects: on the one hand, the repetition of occupation (one or more episodes) and on the other hand, the duration of uninterrupted episodes (days, months or years). The question regarding Pavlov I is whether the remains represent many occupational episodes or one/few uninterrupted episodes. I interpret the site of Pavlov I as the result of repeated occupational episodes over some two thousands years. On the question 'whether the whole settlement area has been settled at the same time, or whether it accumulated by short-term stays during longer time span' (Svoboda 1991, 5), I unambiguously take the latter position. The duration of these episodes is in my opinion hard to measure. Its most obvious measure, the amount of artefacts, is not straightforward at all, because that number is not only influenced by duration, but also by for example group size, reutilization, technological aspects, raw materials and activities producing discard. In my opinion, the C14 and refitting evidence suggest that occupational episodes have varied from quite extensive settlements with contemporary units to just short-term use of an isolated hearth. What actually distinguishes Pavlov I is not the duration of occupational episodes or the size of contemporary 'villages', but the accumulation of episodes itself. One of the aspects in the re-occupation formed the presence of surface scatters of material. In other words, the site is not a 'simple' accumulation, but the previous occupational debris also contributed to the character of the assemblage and the nature of the site.

In my opinion, this interpretation of Pavlov I can be generalized to the area of the Pavlov Hills. The traces of Pavlovian occupation in the area can be explained as the result of repeated occupation of the northern slopes, once here, once there. The extent of the occupied areas and the diversity of activities suggest both stays for a prolonged period (several weeks, several months) and overnight camps, but evidence of year-round occupation is not available in my

opinion (*contra* Klíma 1963a, Otte 1981, Kozłowski 1986, see chapter 2). Unfortunately, detailed and substantial information on seasons of occupation is lacking for the moment, but the few scraps of information point to autumn and winter occupation in particular (Opravil 1994).

An important aspect of this interpretation is the low rate of sedimentation in the period of the Pavlovian (cf. Gamble 1986, 367). In this respect a comparison with the accumulations of Willendorf-Kostienkian sites is illuminating, e.g. in Kraków-Spadzista street (Kozłowski and Sobczyk 1987, Sobczyk 1995) and the Moravany region (Hromada and Kozłowski 1995, Hromada 1998, Hromada pers. comm. 1998/2000). In the Moravany region for example, about fifty Upper Palaeolithic sites are known, mainly surface scatters attributable to the Willendorf-Kostienkian on the basis of the presence of shouldered points. They are located in an area (fifteen kilometres long, several hundred metres wide) consisting of a series of thick loess ridges intersected by erosive valleys. The Willendorf-Kostienkian occupation in the Moravany area differs from the Pavlovian in the Pavlov Hills in two respects: the artefact densities are lower and the distribution of the sites is less compact. In both respects, the high sedimentation rate between about 24 and 15 kyr BP plays an important part. Single occupational episodes are more quickly covered and separated from subsequent occupations and surface scatters will be less frequent and less important in reoccupation.

## 9.4 Settlement system

What kind of settlement system are site clusters like the one in the Pavlov Hills part of? Raw material evidence from the Pavlov Hills indicates relations to the northern moraines in Silesia and South Poland, to the White Carpathians and possibly even further to the east, and to the Vienna and Middle Danube basins in the south (see chapter 2). The distribution of glacial silicites, Carpathian radiolarites and fossil molluscs in the Pavlovian generally indicates movements throughout the entire region, mainly along the large river valleys. The nature of these movement, e.g. in terms of seasonality, cannot be substantiated yet for a lack of adequate data. Nevertheless, it seems that the Pavlovian site clusters we know of formed fixed points in these webs of movement. They are places of frequent return.

### 9.4.1 TETHERED NOMADISM

Such a mobility pattern is adequately described by the term ‘tethered nomadism’ (Taylor 1964, Binford 1980, Ingold 1987, Kelly 1995). This type of nomadism is characterized by extreme redundancy in the reuse of particular locations over long periods of time. One definition, emphasizing the importance of the spatial concentration of critical resources at such locations, is provided by Binford. He states:

*Such spatial discreteness tends to ‘tie down’ the settlement system to specific geographical areas while other areas would be occupied little or rarely used because of their distance from such limited and crucial resources.* (Binford 1980, 7)

Kelly noted that actually ‘most contemporary hunter-gatherers follow a pattern of tethered foraging’ (Kelly 1995, 127). The places Taylor, Kelly and Binford have in mind are first of all waterholes, but also drugstores and mission posts. They emphasize the survival value of the critical resources that are available at these particular locations. Ingold (1987) distinguishes three varieties in the general category of nomadism:

1. full nomadism, i.e. without fixed locations,
2. tethered nomadism, i.e. tied to a centre, but without regular reuse of peripheral locations,
3. fixed-point nomadism, i.e. tied to a centre and with regular reuse of peripheral locations.

All three may show seasonal patterns of aggregation and dispersal. Ingold does not discuss the nature of the centres in terms of crucial resources. With respect to the Pavlovian, one might think of access to game, perhaps in particular seasons. Another interpretation, in terms of ‘symbolic resources’, will be mentioned in the next paragraph concerning the relation between art and these site-clusters.

A major advantage offered by the term ‘tethered nomadism’ is its temporal dimension, which allows to break away from the continuum — more often dichotomy — of forager and collector systems. The distinction of forager and collector systems is based on the difference between moving consumers to resources (foragers) and bringing resources to the consumers (collectors). Archaeologically, this difference is translated particularly in the character of residential sites: foragers are characterised by high residential mobility, leaving few archaeological traces, whereas collectors have more stable residential camps, where archaeological traces can accumulate, usually a winter camp which is deserted in spring. The distinction is supported further by a difference between non-storing foragers and storing collectors and a difference in the variation of non-residential sites (Binford 1980). The continuum is based on the allocation of people in answer to the changing distribution of resources in a year cycle. The archaeological recognition of these two systems however has caused many problems (e.g. Rensink 1995). Tethered nomadism is a more neutral and archaeologically useful description of a mobility pattern, as it develops over a longer period of time, potentially beyond the human life-span (cf. Binford 1980, 18). In terms of relative residential mobility, hunters and gatherers with tethered nomadism can be closer to the forager or the collector end of the spectrum. In the case of the Pavlovian, the collector end seems more likely.

#### 9.4.2 IMPLICATIONS FOR OTHER SITES

The kind of mobility described as ‘tethered nomadism’ has also implications for the kind of sites to be expected next to the large and central site-clusters. The more peripheral locations are not expected to be reused on a regular basis. Other Pavlovian sites are therefore expected to be usually quite small and variable in content. This expectation in itself implies that these sites might not be very distinctive typologically and therefore hard to attribute to any specific Upper Palaeolithic period.

The scant evidence for Pavlovian cave occupation is a case in point. The archaeological remains in caves such as Pod hradem (Valoch 1965), Slaninova (Kaminská 1993), Dziadowa skała (Chmielewski 1958) and Obłazowa (Valde-Nowak 1991) represent just short, maybe overnight stays, on an irregular basis<sup>7</sup>. Also smaller Moravian collections such as Mladeč-Plavatsko (Valoch 1981), Blatec (Svoboda et al. 1994), Kyjov (Svoboda et al. 1994), the Napajedla sites (Oliva 1998), Spytihněv (Hruby 1951, Škrdl 1999 pers. comm.), Boršice (Klíma 1965, Oliva 1998), Jarošov-bone accumulation (Procházka 1983) and Jarošov-II (Škrdl and Musil 1999) represent small-scale, short-term and less frequently reoccupied settlements. The small Austrian site of Langenlois fits in this picture as well. The site consists of a scatter of stone artefacts, bones and ivory fragments around two hearths. The preliminary results of the analyses point to a single occupational episode (Einwögerer 1999 pers. comm.). A deviation from this pattern is presented by the sequence of Gravettian levels at the site of Willendorf II in the narrow Danube valley in the Wachau. From the nine archaeological horizons, levels 5 to 8 are attributed to the Pavlovian, whereas level 9 (with the ‘Venus’ of Willendorf) is attributed to the Willendorf-Kostienkian phase. The sequence forms the most important basis for a typochronology of the Central European Gravettian (a.o. Otte 1981, 1991). Inextricable from certain typological trends are the functional differences between the levels. The levels differ in terms of the amounts of tools as well as the proportion of different toolclasses and raw material types<sup>8</sup>. Whatever the exact nature of the different levels, the location is frequently reused, leaving behind different archaeological signatures over a long period of time. It suggests that there is a degree of reuse of more peripheral locations in the Pavlovian tethered nomadism, at least in certain parts of its total living space.

#### 9.5 Site clusters and art

Why is Pavlovian art concentrated at these frequently reoccupied locations? What is the correlation between the presence of art and the site clusters? First of all, it must be stated that most intensive, large-scale research has taken place at these site clusters. In contrast, there are only a few well-excavated, small sites. Their content, variability and

structure are not well known. Secondly, it is necessary to differentiate in the category of ‘art’ between ‘ceramics’ and ivory figurines, and decorative objects such as ornamented tools or ivory fragments. The first are at the moment only known from the large site-clusters, whereas the second are occasionally found at other, small sites with favourable conditions for preservation, for example, in Langenlois (Einwögerer pers. comm.) and Kůlna cave (Valoch 1988). The central issue here is therefore the relation between the ‘ceramics’ and ivory figurines and the intensively reoccupied site clusters. In the current discussions, three main lines of interpretation can be distinguished.

One approach is to focus on the strategic position of such centres in the networks of information exchange, in particular under unpredictable environmental conditions such as those in the Pavlovian. The Pavlovian site clusters form fixed points where individuals and groups meet frequently and where the chances to meet others may always have been considerable. Under conditions where the resources are concentrated in herds, but not fixed to particular locations (e.g. horses, reindeer and mammoth), it may be more advantageous for individuals to concentrate in order to share knowledge about the location of prey, and to exploit it effectively (Ingold 1987, 141). Identifying art as a system of communication by means of visual symbols (e.g. Gamble 1982), the concentration of art at such central, strategic places is understandable. In this interpretation, the making and presenting of art plays a role in the sharing of information about the social and natural environment. Another interpretation stresses the social tensions in situations where larger groups of people gather (cf. Conkey 1980). The fixed points may — at certain times — have been the scene of such aggregations of people. Art (and ritual) serves to control and channel the social conflicts developing in such large groups. In other words, art is a kind of group therapy, a form of social technology for maintaining a basic level of social cohesion.

A third kind of interpretation stresses the ‘creation’ and special identity of the place, possibly in terms of a mythical geography. It focuses on the local and particular, the conditions then and there, the *genius loci*. The place forms a ‘symbolic resource’. The art as such can be considered as a kind of *land art* (cf. Zijlmans 1999). Through the cultural form of art, the mythical identity of the place is both appropriated and performed: it provides it ‘with that sense of place as the gestures which were used both created and recreated its history and continuing significance for the people’ (Gamble 1999, 401).

These different perspectives all focus on particular aspects of the relation between art and place, either communicative, social-functional or cultural-historical. Though I think that arguments may be provided in favour of all three

perspectives, I have a preference for the last option. As argued in chapter 6, I doubt whether the objects are to be read as visual means of communication. In this chapter I have presented evidence that makes me doubt whether the site clusters, or at least those parts where the figurines occur, actually result from the aggregation of large groups of people. The correlation between the Pavlovian art ('ceramics' and ivory figurines) and the repeated occupation in a particular location, a nest of campsites, suggests that the art is somehow involved in establishing and maintaining the identity of such a place, its so-called *genius loci*. But what is the identity of a place in mobile hunting and gathering societies? I situate the issue in the light of the relation of hunter-gatherers to land and the nature of mobility.

## 9.6 Places and paths

In the history of hunter-gatherer studies, there is a long-standing controversy concerning the relation between hunter-gatherers and land (Myers 1986). On the one hand, distinct social groups such as clans, bands or tribes are recognized and the problem is how these social units match to territorial units (Radcliffe-Brown 1930). This kind of relation is implied in discussions concerning the distribution of and relations between Aurignacians and Gravettians<sup>9</sup>. On the other hand, and in reaction to the first tradition, it was argued that no permanent social units exist in actual, on-the-ground life and that territories are not characterized by restricted access to resources. Instead the social organisation is flexible in function of the changing distribution of natural resources (Lee 1976).

Both approaches regard land first and foremost as a resource base defined by food-gathering activities. Both consider the object of landownership to be a more or less clearly bounded stretch of land. Places are here understood as centres of catchment areas or territories, tracks in terms of the interception of animals or coming across patches of nutritious plants. Binford (1987) describes this way of relating to the land by 'modern' hunter-gatherers in terms of a cultural geography. He writes that 'modern humans construct environments (residences, settlements, etc.) or modify their environments to serve their needs and then exploit their natural setting in ways that sustain both themselves and their cultural construct' (Binford 1987, 18).

However, Ingold (1987) has argued that what hunter-gatherers 'own' — or better what they belong to — are not territories, but paths and places. Ingold provides amongst others the example of the Australian Aborigines whose 'primary affiliation to land is not to a bounded territory, nor yet to a specific site within a bounded area ... [but] comes about as a result of being born at a particular place, near a waterhole on the track of a particular totemic ancestor' (Hamilton cited in Ingold 1987, 151-152) and this birthplace

gives him access to sites all along this track. Belonging to a cluster of places and a network of paths or tracks does not entail belonging to a particular, let alone exclusive territory around these places and paths (cf. Myers 1986).

Mobility then is not simply bridging the distance between places and resources. Nor can it be stated that places are just marking resources and tracks, affording passage and movement. The nature of mobility can best be understood by the spatial model of the hunting journey (Tanner 1979, cf. Fienup-Riordan 1994). Tanner (1979) describes it as the movement outwards from the camp to the domain of the prey animals and back to the camp, ideally followed by sharing the game. It seems to me that mobility has this character of movement away from a camp and back to a camp. Tanner emphasizes two themes: the distinction between the camp and the 'bush', and the mediation of the gap between the two. The boundary between camp and 'bush' then has a sheet-like, membrane quality: it is both linking and separating the two domains (Tanner 1979, 130-131). This relation of camp and 'bush' is also described by Myers for the Pintupi of Central Australia. It comes to the fore in the dual meaning of the word 'ngurra', translated as 'home'. It refers to 'the human creation of "camp", but also [to] the Dreaming creation of "country"' (Myers 1986, 54). It is only partially adequate to refer to a camp as a home base, because actually they are at home in their 'country', i.e. the landscape of paths and places founded in the Dreaming (in contrast to the 'cultural geography' of a culturally constructed home from which to exploit a natural environment).

## 9.7 Pavlovian camps

In order to move towards the Pavlovian from these ethnographic examples, it is necessary to make a detour along one particular archaeological feature, i.e. the so-called 'shaman's hut' in Dolní Věstonice I. Klíma (1963a) interprets the situation at the 'second settlement unit' in what is known as the uppermost part of Dolní Věstonice I (see chapter 3, figure 3.32) as follows:

*The second hut takes in a special place by its better construction, its content as well as the separation from the rest of the settlement. It was not a normal living structure, it surely had a special meaning. It seems to concern a place where the figurines of fired loam and objects for magical practices were produced, and also the home of its specialised producer. Who was the one whose hut was different by its more perfect construction and by its content, who produced the objects that display very accurate observation, skill in the use of loam and its firing as well as pronounced artistic expression? Who retreated and why? The answer would be easy, if we would discover a similar situation at settlements of a younger period, where we can*



*presume the function of the shaman on the basis of a higher stage of economic and social conditions and a more developed stage of religious representations. However, it seems probable that already in the Upper Palaeolithic such a sorcerer had his oldest predecessor.* (Klíma 1963a, 260)

The finds and features at this part of the site are interpreted as the hut of a religious specialist, the shaman. The shaman produced objects for magical practices in a special construction, a 'kiln-like' hearth located away from the everyday settlement. The interpretation suggests that the production of 'ceramics' (and possibly other art) is separated from other, daily and normal activities at the main settlement. It suggests a separation of ritual and secular activities.

There are several problems with this interpretation (apart from those mentioned already in chapter 3). First of all, later excavations in the uppermost part of Dolní Věstonice I have exposed other settlement evidence in the vicinity of the 'hut'. It seems to be less isolated than it might have seemed at first. Secondly, the other hearths with evidence for the firing of 'ceramics' are located in common settlement contexts. This is clear not just in the other parts of Dolní Věstonice I, but also in Pavlov I and II as well as in Krems-Wachtberg. In other words, the general pattern is the firing of 'ceramics' in a settlement context and not secluded and separated from it.

The interpretation as a shaman's hut is based on the opposition and separation of sacred, ritual and profane, secular realms and objects. It corresponds with another issue invoked with respect to Dolní Věstonice I: the question of the boundaries of the upper part of the site. Based on the rather abrupt limit of the distribution of archaeological material, Klíma reconstructed a fence around the upper part of Dolní Věstonice I. The fence was supposed to have defended the settlement against dangerous animals such as lion, bear and wolf that were attracted by the spoils of food (Klíma 1979). Unfortunately the reconstruction of a fence is not supported by evidence in the form of postholes etc. In addition, the limits of the distribution seem to correspond more or less with the limits of a landslide lobe. It is not entirely clear whether the extent and documentation of the excavated areas actually allows judgements concerning the presence of such a boundary, but, in my opinion, the evidence in general suggests that a constructed boundary separating a camp from the "bush" is not substantiated. These two specific issues concerning Dolní Věstonice I imply, in my opinion, three more general aspects of settlement in the Pavlovian (though not distinctive vis-à-vis other Upper Palaeolithic or Mesolithic units). The sites are not structured according to principles of the separation of sacred and profane realms. The human cultural space, the

home base, is not set apart *in opposition to* a wild, natural environment, the bush. The site is not an island of culture carved out of a natural and dangerous wilderness. Finally, the settlements do not seem to be structured with respect to boundaries, but instead orientated towards a focus, the hearth. These aspects form the impetus for a speculative consideration of the low archaeological visibility of Upper Palaeolithic 'architecture' in the next, concluding chapter.

## notes

1 Klíma (1995, 53) attributes this date by mistake to the eastern wall of the brickyard.

2 Sometimes the ISGS-dates are older than GrN-dates of the same feature, sometimes they are younger. See the description of the western slope of Dolní Věstonice II below.

3 Another date is dismissed as too young:  $22,570 \pm 766$  yrs BP (CU-748) (Svoboda 1991a, 20).

4 Two other dates are dismissed as too young:  $24,513 \pm 876$  yrs BP (CU-747) and  $22,630 \pm 420$  yrs BP (ISGS-1899) (Svoboda 1991a, 26).

5 A younger date is dismissed:  $22,368 \pm 749$  yrs BP (CU-749) (Svoboda 1991a, 56).

6 It should be mentioned that the impact of other than human agents is not well researched at the moment. The impact of geological processes may have been considerable in particular in the north-western part of the site (see chapter 3). The impact of agents such as carnivores is not well investigated yet, but the data presented so far suggest relatively little influence (Musil 1994, 1997).

7 See chapter 2 for the dating evidence of the last three sites mentioned. Their attribution to the Pavlovian is questionable.

8 There are several problems with the Willendorf data. The artefacts attributed to the levels and stored in the Museum of Natural History in Vienna consist of mostly complete tools and larger blades, flakes and cores. Debitage and probably broken tools and tool fragments are not attributable to the different levels. This means that the typological composition of the levels is distorted (in the same way for all levels?) and that it is unknown what the selection actually represents in terms of a primary classification of the whole assemblage. In addition, the upper levels are excavated at a larger scale (over  $100 \text{ m}^2$ ) than the lower levels (e.g. level 5 covers about  $50 \text{ m}^2$ ), which has to be accounted for in comparing assemblage size. It is not clear what part of the total extent of the levels is actually excavated and it is unlikely that these parts are the same for all levels.

9 These archaeological 'cultures' are considered to reflect societies and the relations between these 'cultures' as similar to relations between countries, say Germany and France. From a historical perspective, however, it seems more logical to consider them as historical epochs similar to e.g. the Renaissance.