



JINDRA NEKVASIL

CONFRONTATION OF THE ARCHAEOLOGICAL AND ANTHROPOLOGICAL CONCLUSIONS OBTAINED FROM GRAVES BELONGING TO THE LUSATIAN CULTURE

ABSTRACT — *A systematic research of a Lusatian culture cemetery in Moravičany, Šumperk District, Northern Moravia, has provided an extensive collection of remains of cremated bodies for anthropological analysis. Let me return to the question of the conclusive evidence of these finds for demographic calculations, if we take into account to what degree had we been able to discover the entire group of people buried here. It is pointed out in the paper that not all burials could have been researched, some were destroyed or ploughed away. There were also graves not yielding any remains, cenotaphic graves and also graves of animals. It is mentioned that about 15 % of the people were buried in pit burials and in cremation ash layers, i.e. these people may represent a special group of the population. It follows from the above that at demographic calculations it is necessary to take into account also many other factors, and that future research will have to use improved methods of co-operation between archaeologists and anthropologists.*

KEY WORDS: *Lusatian culture — Moravia — Moravičany burial site (Šumperk District) — Cremation graves — Demographic analysis.*

The solution of archaeological problems through an attempt at a systematic excavation of a complete Lusatian culture cemetery in Moravičany, Šumperk District, inevitably resulted in co-operation with anthropologists. The extent of this paper does not allow us to try and solve directly some of the problems. I would like to point out only to some of the stumbling blocks of such a co-operation. Some archaeological conclusions of this research have been already published (Nekvasil 1978, 1982a) and a catalogue of finds has also been published (Nekvasil 1982b). The remains of the buried were analysed by M. Stloukal, his expertise has already been presented and some of his conclusions have also been published (Stloukal 1968, 1974). Let us try now to find out whether the materials handed over to the anthropologists for expertise form a compact set that might serve as a basis for working out demographic data. I shall present here only some conclusions from the Old Lusatian part of the burial site, forming a good

chronological and evolutionary sample from the middle and from the beginning of the Younger Bronze Age (BC—HA 1). One of the interesting features of this period is that it represents the genesis of the Lusatian culture and the cementing of various development elements. The research put the number of graves, including the Hallstatt part of the cemetery, at 1260, and by the gradual determination of double or multiple burials their number reached 1310. 976 out of the above number belonged to Old Lusatian period. The anthropological analysis, however, covered only 788 graves containing the remains of 861 individuals. We have to explain this difference, and also to decide to what extent has been excavated the burial site in Moravičany.

First let me outline the state of remains of the cremated bodies from the viewpoint of archaeological practice. I am sure it would not present any serious problem for the contemporary natural sciences to calculate what remains after

individual cremations in the various age groups, including the variations caused by differences in the individual build of the body (Stloukal 1968, 332). Perhaps we could draw up also correction tables according to the degree of cremation heat determined by the amount of fuel, eventually combustibles for the individual cremated body. But these aids could help us only if the anthropologist received all the cremated skeletal remains of the cremation. In general we can say that the amount of preserved remains does not reach the expected values (Chochol 1958, 560; Stloukal 1968, 33). Several graves contained urns perfectly sealed with plates and both vessels have remained intact. They document that only charred bone fragments were collected from the pyre. Take e.g. grave 360B, with remains of a 5-6 years old child with the volume of bones reaching 3 000 cm. I cannot imagine any way of measuring or explaining the loss of bones. Neither is there any plausible way of explaining the small amount of bone fragments in the burials of some of the adults. It holds only for the burials of children that the smaller the child, the fewer the remains. During the excavations, however, it was sometimes quite a problem to perceive the graves of small children; the content of miniature urns looked as a rule as whitened clay. When appeared at least remains of charred bone, it was possible to identify the grave. If not, the small isolated vessels — fairly subjectively — were regarded as burials, or in 19 cases as non-burial finds. As an example let me mention "grave 769 with non-identified burial". It was a small jug placed in a dish-like depression and containing ash-like light-grey clay. Close to it there was, bottom up and further aside the skull, another, typologically evidently younger jug. Is it possible to regard this group as a grave, or even as three graves? In some graves containing double burials were found two small vessels placed on burnt bones (201 — two children; 247 — female and a new-born; 319 — two children; 499 — two children; 710 — woman and fetus — 881 adult and child. We lack conclusive evidence if other graves contained two vessels outside the urn as part of sets of vessels (141, 360B, 696, 707, 733, 846, 853, 1044, 1094, 1221, 1223). The problem is, whether in complexes containing such couples of vessels, but no conclusive double-burials, we can accept that there are non-identified remains of individuals. But this cannot be accepted as a guideline, as we know a number of double-burials with no accompanying vessels (511, 529, 577, 586, 672, 692, 723, 804, 897, 934). It is quite possible that a smaller number of the graves in which no remains of bones have been found, are in effect cenotaphic graves. Thus in grave 370 in the burial pit there was a cup with its bottom up, covered with a cup with a "soul-hole" at the bottom. Below these vessels there was only a slight amount of flooded clay, without any traces of bones. Such graves are known also from other regions of the Lusatian culture (Plesl 1969, 122; Veliačik 1983, 155; Rataj 1964, 500), at some places they appear in quite considerable numbers (Hralová 1962, 61). The loss of bones evidently increased by grave robbers. In

Moravičany we found well perceptible traces of interference in the barrows with storage vessels used as urns (Nekvasil 1982a). The charred bones were dispersed in the clay, mixed with the whole content of the vessel, sometimes spilled also outside it. Grave robbery, however, might have affected also other urn burials, but we did not arrive at such detailed conclusions at Moravičany.

If the anthropologist is to make a demographic analysis, the first thing he has to ask the archaeologist, to what extent has the burial ground been excavated? In Moravičany we managed to mark off the early Lusatian part of the burial ground, and we can presume that beyond the line connecting the cavities around the oldest barrows there were no further graves. But on the southern side of the burial ground we were not able to delimit the outline, as part of the burial ground has been destroyed by construction activities or is situated below roads. Here we have at least to assess the number of graves. It is possible to count some 70 circular areas, places where the barrows were originally heaped up, but only in 18 were there central pit-type graves, in one case there were even two. It should be presumed that the rest were destroyed on levelling the barrows and by tilling the burial ground. Of course we should count also with burying other dead in the heaped material of the barrows in the later period. Only a few of them have been preserved, namely towards the fringe of the barrow, and those which were deeper. Two circular areas phosphate tests were realized (Págo 1963) and at their centres appeared extensive areas with increased reaction; the size of these areas corresponds to the situation of the grave pits, and towards the edge of the circular surface there are smaller active surfaces, marking the sites of secondary burials. It follows that we should count with probably 5 graves per barrow. Thanks to the fact that most graves were situated in the depressions around the barrow, they have remained undisturbed by ploughing. Anyhow, a number of such disturbed burials have been also recorded, some of them almost destroyed. We should add to them a group of 40 graves, marked as "dispersed". They are probably remains of graves disturbed in the course of later burials, or due to the slipping of barrows. The number of graves escaping research in this way could have been estimated only approximately. I think that there were at least 250 barrows, but maybe their number amounted to 500.

After these uncertainties and complications in making estimates and counting the graves and urns inside them we may arrive to the figure of 967 graves. But our estimates were complicated by group burials, agglomerations of several, sometimes up to 10 graves. In this way, through additional analysis of the groups of vessels and by studying their contents, their original number had increased by 36 graves (marked with letters attached to grave numbers). It is well perceptible in the following examples that sometimes it was quite difficult to come to a grave marking free of problems. In grave No. 360 besides the usual pottery there were also cremation layers and sherds of a large vessel with a „soul-hole“ at its bottom and

of dishes, put in the grave pit evidently already in pieces. It seems to be older than the other vessels also typologically. They have been therefore defined as remains of an older, already destroyed grave, although no bones were found. The situation was even more complicated in grave 165 fitted with 22 vessels. It contained two large trenchers, the first (B) with the burial of a 4-5 years old child, accompanied by rich jewels. As the other trencher (A) contained only a small amount of bones of a different child (inf. I), as found out later in the laboratory, I thought first that the burial has been replaced to the dish placed to the trenchers. But the bones decomposed, equally to the bones found at three other places, where they probably formed part of the cremation layer. Thus we can neither prove, nor exclude the existence of a third burial. The fact that we have to do here with at least two burials is documented — not quite convincingly, however — by the pottery showing some typological features of two subsequent degrees. But we must add that such cases are rare, and that first we shall have to check the graves with large numbers of pottery, whether they do not hide a larger number of buried.

Most complicated is the problem of small-pit graves. Their most characteristic features are that the filling comprises ashy clay, charcoals, lumps of fired clay, but also small, sometimes isolated fired bones. Here and there appeared also a sherd or bronze fragment, more often a cup. The proportion of these components varied, in some cases certain components were absent. I do not mention exact numbers, I must confess that their analysis was not realized. Besides separating the charred bones and describing them in the field we had to do with basic characteristics. Altogether 184 bones have been recorded and we have to draw attention to the fact that besides missing, or destroyed bones some pieces may be still hidden in the grave pits or are scattered in the clay. Their proportion amounts to 15 % of the total number of bones in the urnfield graves, and it seems that there will be no considerable changes in this proportion. I have worked out a chart from the analysis made by M. Stloukal. The chart comprises the state of preservation of the bone fragments, and the age group to which they belonged. The table includes also remains of 3 double burials.

State of bones:		Age group:	
not identified	63	not found	63
small fragments	23	not-identified	23
very small amount	80	infans I	13
small amount	12	infans II	4
medium amount	2	non-identifiable	
		child	26
large amount	1	sub-adult	5
very large amount	6	adult	7
		mature	5
		non-identifiable	
		adult	42

From the above facts we can draw conclusions concerning relatively small remains of human bodies. But there are 9 finds forming an exception to the rule, showing that some small-pit graves preserved more substantial remains. I checked our field records, but I did not notice the difference. The objection that

these are remains from urnfield graves could be accepted if it were an isolated case, not a whole group. I cannot tell whether the small-pits, whose records say that there were no bones preserved, really did not contain bones, or they contained some which however decomposed during the excavation. Relevant are the data on the age of the buried: we have a broad scale of age groups represented, with a prevalence of adults over children. The information seems to be distorted as the 46 % of the non-preserved or non-identifiable remains contain probably remains of children. Only in very few cases was it possible to determine the sex, namely in females: 3 sub adults, 1 matusus, 3 adults, a total of 7 individuals; a single male, an adult. Animal bones were found only in the grave of an adult individual (grave No. 471), namely fragments of teeth, probably from a collar. In case of double burials in graves 136, 146 and 665 we always found an adult with a child.

The layers in the urnfield graves were very similar to the fillings of the pit graves. These layers appeared usually around the bottom, but sometimes also elsewhere in the filling. In places where there was fired clay, the identification was easier, but in some cases the layer appeared only as an ashy clay mixed with charcoals, and sometimes appeared only ashy layers with bones. Hence it was difficult to find out whether we had to do with an independent layer, or just with bones washed out of the urn. But in many cases no charred bones appeared. This is better expressed in the following table:

Cremation layers with fired clay:			
with bone fragments	31	without bones	50
with charcoals and bone fragments	20	without bones	46
with bones only	7		—
total (out of 154)	58		96

Now we shall take into account the anthropological analyses, where it was viable:

grave No	in urn	amount	in filling	cremation layer — amount
131	adult	(lost)	child	fragments + animal teeth
151	adult	very small	infans I	very small
452	infans II	very small	infans I	very small
502	matusus	small	adult	small
687	adult	very big	child	small
	woman			
1221	2× matusus	very small	matusus	very small + animal bones

The similarity of small-pit graves and of cremation layers was evident already during the excavations and the cremation layers were regarded as remains of cremation pyres put into the grave pit, and in the small-pit graves we may have to do with similar pyre remains. Now the question is, why is it so only in case of some graves, and why were the other cases found outside the graves. The results of the anthropological analysis have shifted these ideas into another position. It showed namely that neither in the pit graves, nor in the cremation layers were found some clear-cut age or sexual groups of the population. The determinable remains found in

cremation layers showed that we have to do with remains definitely differing from those in the urns, that there prevails the adult-child relation, but in one case there are the remains of two children, and in other with two adults. We have to add that only grave 687 had a layer containing also fired clay, the rest contained charcoals. While small-pit graves are believed to be burials of isolated individuals, the case with cremation layers is not so explicit, only 4 % of them contained human remains. Puzzling is also the small number of charred bones (if any). Evidently they were exposed more directly to adverse influences of the soil, climate, etc., and their decomposition, namely of the remains of children took place more rapidly than was the case with bones buried in urns. If we accept the view that both groups are burials of individuals, then we have to do with two different ways of cremation rites, differing namely in the way of collecting and burying the cremation remains. Did they belong to two different ethnic or social groups within the Lusatian society? We have to bear in mind that faulty anthropological conclusions could lead us in a wrong direction. Nevertheless this group of at least 134 graves excavated in the above way may influence our demographic calculations.

The excavations in Moravičany have brought about also a series of other observations that may influence only marginally the demographic calculations, and they are more concerned with the cultic sphere. Let us take e.g. the burial of non-cremated bodies (Moravičany 1 case, Moravia 5 cases) or burials of animals (Moravičany 1 case). Another problem is the breaking of "soul-holes" into the bottom of the urns — similar "soul-holes" appear sometimes also in other vessels in the grave. The question is whether even these urns ever contained preserved remains, or whether they contained non-cremated parts of cremated bodies? At the present state of research of the Lusatian culture the archaeological observations are transferred to the entire Moravian branch of the Lusatian culture as a type model. The same attitude should be assumed also towards anthropological observations, of course if all this structure is not shaken by new results of the research. I cannot explain here in detail how the above phenomena can be regarded as common for the Lusatian culture as a whole — I can only recommend a large selection of the extensive literature (Gedl 1974; Hralová 1962, 1975; Malinowski 1961; Plesl 1969; Rataj 1964; Veliačik 1983; Vokolek, Rataj 1964; Pleiner et al 1978). We should bear in mind that elsewhere anthropological analyses may lead to different conclusions, e.g. Tornow, Kr. Calau in the GDR, where the small-pit graves yielded mainly charred animal bones (Bredin 1978).

In conclusion I would like to stress that in the archaeological practice we have failed to reach such a perfectness as to be able to offer exact data to the anthropologists. In the future we shall have to work out more detailed investigations of human and animal remains, and it seems that we shall have to invite the anthropologist to participate in the fieldwork, to make his observation already during the excavations.

REFERENCES

- BREDIN R., 1978: Die Ausgrabungen auf dem bronzezeitlichen Hügelgräberfeld von Tornow, Kr. Calau. In: *Mitteleuropäische Bronzezeit*, Berlin, 299—305.
- GEDL M., 1974: Uwagi o wynikach badań kości z grobów ciałopalnych kultury lużyckiej w południowej Polsce. In: *Metody, wyniki i konsekwencje badań kości z grobów ciałopalnych*. Poznań, 81—84.
- HRALOVÁ J., 1962: Das Lausitzer Gräberfeld in Malá Bělá. *Fontes Archaeologici Pragenses*, Vol. 5, Praha.
- HRALOVÁ J., 1975: Žárové nekropole v Kunšticích a Lukovně. *Sborník Národního muzea v Praze*, R. A XXIX č. 2, 49—104.
- CHOCHOL J., 1958: Dosavadní výsledky anthropologického rozboru lužických žárových pohřbů z českých zemí. *Památky archeologické* 49, 559—582.
- MALINOWSKI T., 1961: Obrządek pogrzebowy ludności kultury lużyckiej w Polsce. *Przegląd Archeologiczny* XIV, 5—135.
- NEKVASIL J., 1978: Mohylníky lužické kultury na Moravě. *Památky archeologické* 69, 52—116.
- NEKVASIL J., 1982a: Mohyly s kamennými konstrukcemi na pohřebišti v Moravičanech. In: *Południowa strefa kultury lużyckiej i powiązania tej kultury z południem*. Kraków, 153—178.
- NEKVASIL J., 1982b: Pohřebiště lužické kultury v Moravičanech, I, II, *Fontes Archaeologiae Moraviae* T. XIV-1, 2, Brno.
- PÁGO L., 1963: Chemický výzkum pohřebiště lužického lidu popelnicových polí v Moravičanech (okr. Šumperk), *Přehled výzkumů* 1962, Brno, 38—40.
- PLEINER R. et al., 1978: Praveké dějiny Čech, Praha.
- PLESL E., 1969: Bemerkungen zur Bestattungsform auf den Gräberfeldern der Lausitzer Kultur. In: *Beiträge zur Lausitzer Kultur*, Berlin, 211—220.
- RATAJ J., 1964: Lužické pohřebiště v Hrušově, *Archeologické rozhledy* 16, 497—502.
- STLOUKAL M., 1968: Problematika antropologického rozboru žárových pohřbů, *Archeologické rozhledy* 20, 330—347.
- STLOUKAL M., 1974: Palaeodemographical analysis of cremation cemeteries, *Anthrop. Kôz.* 18, 83—189.
- VELIAČIK L., 1983: Die Lausitzer Kultur in der Slowakei. Nitra.
- VOKOLEK V., RATAJ J., 1964: Lužický mohylník v Jeřicích, *Archeologické rozhledy* 16, 20—27.

PhDr. Jindra Nekvasil, CSc.
Archeologický ústav ČSAV
Koliště 17
662 03 Brno