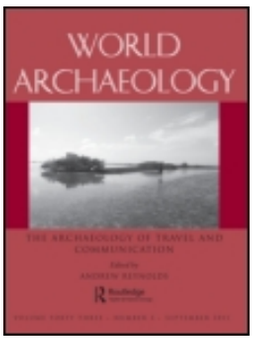

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The household cluster at Brześć Kujawski 3: small-site methodology in the Polish lowlands

Peter I. Bogucki and Ryszard Grygiel

The proposition has been advanced that in order to understand human behaviour on large sites with complex architectural patterns, it would be useful to find and excavate smaller sites with many of the same formal characteristics as the large sites but without the confusing rebuilding and expansion episodes of the latter (Moseley and Mackey 1972). Although this notion was originally put forward with reference to the large and complex sites of the Peruvian coast, it is equally useful wherever the archaeologist is faced with complicated patterns of architecture with many phases of addition, tearing down, and reconstruction. In particular, difficulties of dealing with intense settlement of large sites for long periods of time are encountered by archaeologists who study the earliest food-producing cultures of central Europe. The large village sites of the Linear Pottery culture and the succeeding Lengyel/Stroke-ornamented/Rössen/Cerny complex are complicated palimpsests of postholes, bedding trenches, pits of various types, and often graves. These settlements often expanded laterally, so that houses were usually not built on the same sites but were scattered all over the area of the settlement at different periods of time (although a possible exception to this generalization has been recognized on the Aldenhoven Plateau by Kuper *et al.* 1974). As a result, individual structures can be identified, but except for the pits immediately adjacent to them, it is usually impossible to correlate most features, and the human activities reflected by their contents, with specific houses and their inhabitants. We thus know little about the spatial patterning of activities which took place in and around the houses, such as preferred locations for rubbish disposal, graves, and storage.

Brześć Kujawski excavations

The authors faced precisely this problem in their excavations at the large Lengyel Culture settlement complex at Brześć Kujawski, Włocławek district, Poland (fig. 1). This site is well-known in European archaeological literature as a result of the large-scale excavations carried out by Professor Konrad Jażdżewski between 1933 and 1939 (Jażdżewski 1938; Gabałówna 1966; Grygiel 1976). At that time, a large Lengyel village over fifty trapezoidal longhouses was revealed (fig. 2). The outlines of many of these overlapped, indicating considerable rebuilding activity on the site, although the use of specific house sites (A and B on fig. 2, for example) militates against any notion of periodic site abandonment. In the course of all this prehistoric construction

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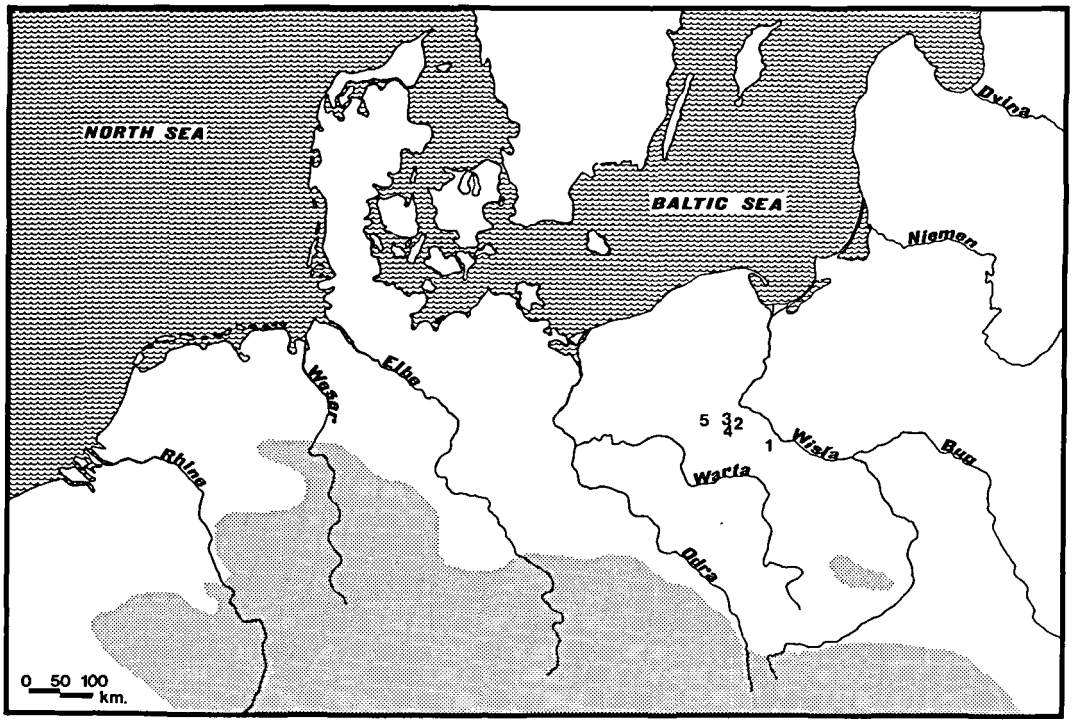

Figure 1 Map of the North European Plain showing locations of sites mentioned in text: 1 – Brześć Kujawski; 2 – Krusza Zamkowa; 3 – Dobieszewice; 4 – Kościelec Kujawski; 5 – Biskupin. Shaded areas are over 300 metres above sea level

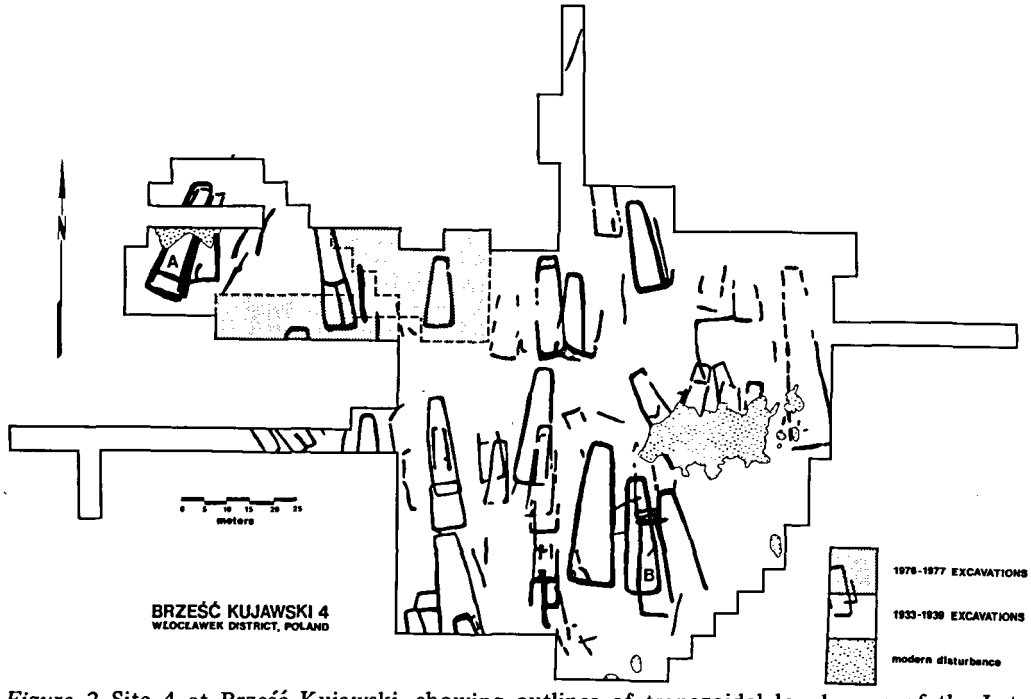

Figure 2 Site 4 at Brześć Kujawski, showing outlines of trapezoidal longhouses of the Late Lengyel Culture (3500–3100 B.C.)

activity, pits of earlier Lengyel phases were cut through by bedding trenches of later phases. This, coupled with the density of the architectural evidence, has turned 'site 4', as this area is known, into a complicated archaeological problem. It is difficult enough to sort out which houses have stratigraphic priority over others (Gabałówna 1966; Grygiel 1979), and of course even harder to associate particular features with specific houses and thus with the residential unit inhabiting these houses.

In 1978 and 1979 we shifted our attention from 'site 4' to the area known as 'site 3', approximately 200 metres to the east. The knoll on which site 3 is located is separated from the area of site 4 by a saddle in which the 1979 test excavations disclosed no Neolithic remains. As a result of some preliminary excavations by Jażdżewski in 1937, it was known that site 3 was occupied at the same time as the large Lengyel village on site 4 (Jażdżewski 1938), and that there were the remains of two trapezoidal longhouses stratified one on top of the other. At the time, Jażdżewski only traced out the house outlines, leaving the rest of the knoll, including most features associated with the structures, unexcavated. During a total period of seven months in 1978 and 1979, we excavated virtually all the rest of the area of site 3 and conducted a coring program around the periphery of the excavated area to be certain of the limits of Neolithic settlement on the site. Thus we are able to say with confidence that we have excavated all the features associated with the structures excavated by Jażdżewski in 1937.

Chronology

The two trapezoidal longhouses on site 3 (fig. 3) are both dated to the Late Lengyel period. House 41 belongs to the second phase of Late Lengyel in the Polish lowlands according to the chronology proposed by Grygiel (1979), while House 42 is associated with Late Lengyel phase III. These two phases cover the period from *c.* 3400 to *c.* 3100 B.C. Of the associated features, the best preserved are those datable to phase III. There are markedly fewer areas of phase II activity, although there are several large features definitely associated with this phase. There appear to have been several places where phase II features were disturbed by later phase III digging. Accordingly, we will concentrate here on the phase III house and associated features and the evidence that they yield for the spatial organization of activities at Brześć Kujawski 3.

The concept of the 'household cluster'

Winter (1976) has introduced the concept of the 'household cluster' as a unit of analysis in the investigation of early Mesoamerican villages. The household cluster is defined as the house itself, along with the associated features which were formed as the result of the activity of its inhabitants. Clearly, this assumes that activities in closest proximity to a house were performed by the people living in that house, but on site 3 at Brześć Kujawski we have the fortunate situation where only one house on this well-defined topographical feature was occupied at any one time and where the group of features surrounding this house is separated from the nearest contemporary traces of settlement on site 4 by at least 200 metres. Winter (1976:25) emphasizes the distinction between a 'household cluster' and a 'household'. A household cluster is composed of archaeological data – artifacts and features – while a household refers to the

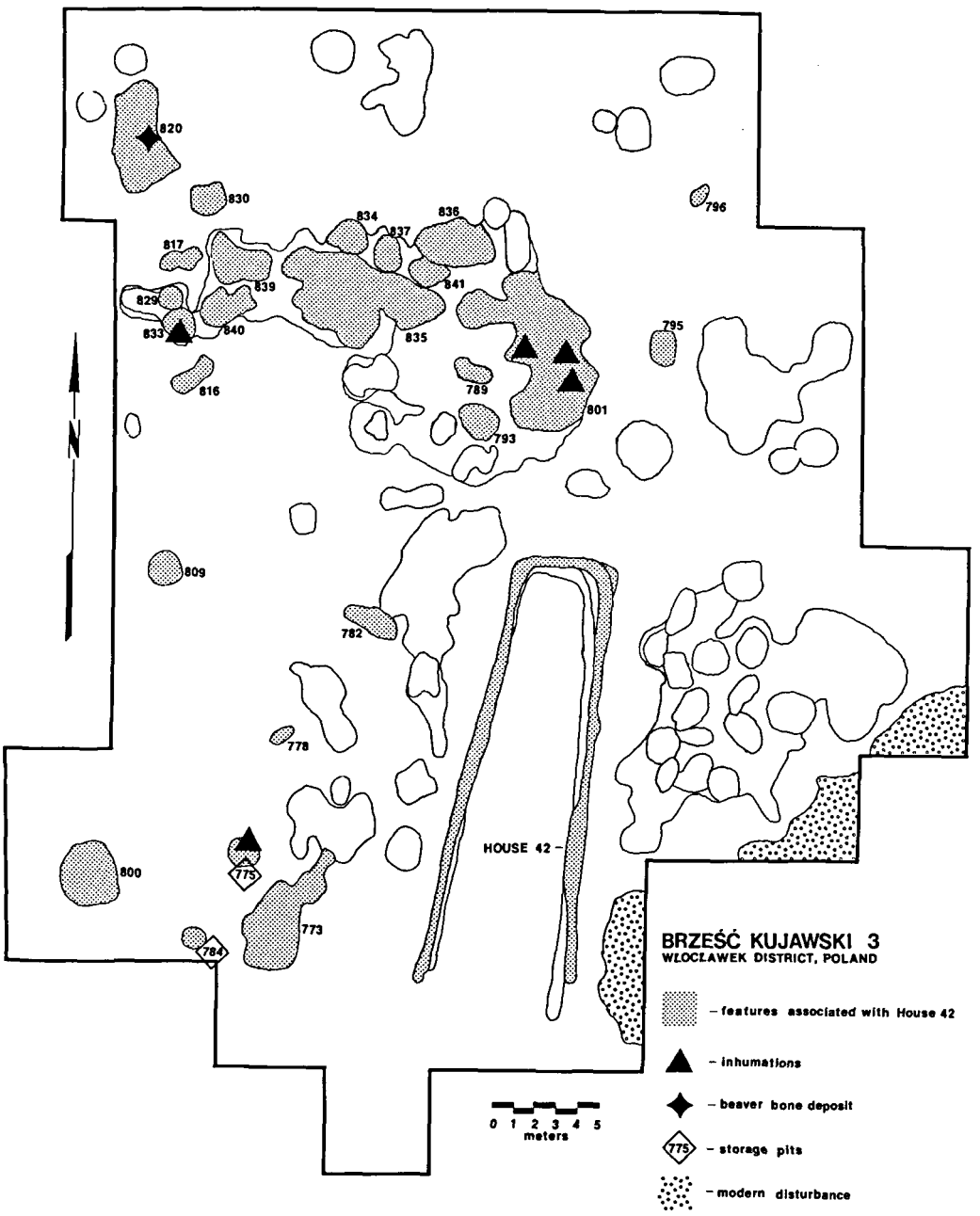

Figure 3 Site 3 at Brześć Kujawski, showing Neolithic features. Shaded features are those contemporary with House 42 (*c.* 3200–3100 B.C.)

people who produced these data. The household cluster concept is intended to 'provide a context in which pits, burials, house remains, and other features can be understood not as isolated cultural features, but as manifestations of a specific segment of society' (Winter 1976:25). We would argue that the well-delimited nature of the archaeological remains on Brześć Kujawski 3

allows us to conclude that the activities which they represent must have been performed, for the most part, by members of the residential group living in the house on this site.

The Late Lengyel household cluster at Brześć Kujawski

The house: The Late Lengyel III longhouse, House 42, under consideration here is much like those found elsewhere at Brześć Kujawski and at other Late Lengyel sites in the Polish lowlands such as Kościelec Kujawski (Czerniak 1979), Broniewice (Bednarczyk, Kośko, and Krause 1979), Dobieszwice (Bednarczyk and Kośko 1975), Dobre (Jażdżewski 1938), and Biskupin (Maciejewski 1956). There is very little variation in these houses, and what there is usually amounts to no more than a matter of length or width. The house at Brześć Kujawski 3, trapezoidal in plan as are all the houses at the above sites, is five metres wide at the northern end, seven metres wide at the southern, and 20 metres along each of the sides. The longitudinal axis of the house runs NNE–SSW. Most Late Lengyel houses in the Polish lowlands have similar, basically north-south orientations, except for the one known from Dobieszewice which is oriented WNW–ESE. The walls of these structures are constructed of posts set into bedding trenches excavated to a depth of between 20 and 50 cm. below the plough zone/sterile soil interface. It is difficult to determine the original depth of these trenches below the ground surface due to disturbance caused by later cultivation on the site. Although the House 42 trenches were not sectioned longitudinally in 1937, our excavations of other longhouses on site 4 in 1976 and 1977 and the excavation of longhouses at Kościelec Kujawski (Czerniak 1979) and Dobiezewice (Bednarczyk and Kośko 1975) have shown that the posts were set into these trenches at irregular intervals rather than immediately next to each other. The spaces between posts were filled in with wattle and daub, as is indicated by our finding of a number of pieces of burnt daub with the impressions of twigs up to two cm. in diameter.

The disturbance from later cultivation noted above has resulted in the fact that it has proved impossible to detect anything which might be considered a 'living surface' within the house. As a result, it is not possible to perceive any patterning of activities within the house itself. However, in sites with occupation spans long enough for each on-site activity to have been performed a large number of times (as would be indicated by the relatively substantial construction of the Late Lengyel longhouses), it would be expected that the 'blending and smearing' effect described by Ascher (1968) would come into play with the resultant obliteration of specific 'activity areas'. It is not our desire here to locate such specific areas of different activity on the scale with which it is usually attempted at less permanent sites, but rather to examine the range of on-site activities which are visible archaeologically and the proximity of these to the focus of habitation, the house.

The actual use-life of these structures is a matter of some discussion. Jażdżewski (1938:6) estimated it at 50 years, whereas Gabałówna (1966:46) argued for the more conservative figure of 20 years. Kuper (1974), who is dealing with Linear Pottery structures in the Rhineland, notes that his inquiries among people knowledgeable about post structures indicate a use-life of 20–30 years. With periodic repairing, this could probably be extended even further. At any rate, it is evident that these structures were not meant to be occupied for a single season, a year, or even a couple of years, and that they represent a conscious decision to occupy a particular site for a long period of time (Bogucki 1979:244). However, even if the use-life of one of these

structures were to be known more precisely, there is always the possibility that it was abandoned before the end of its use-life due to factors having little to do with the condition of the house.

Storage facilities

During our excavations on site 3 at Brześć Kujawski, we excavated two Late Lengyel III features which we believe to have been pits for the live-storage of lacustrine resources such as fish, molluscs, and turtles (fig. 3: pits 775, 784). These are relatively small, almost perfectly round pits which in profile are wider at the bottom than at their opening at the top. The stratigraphy of one of these features (fig. 4) led to our assessment of their function. On the bottom of this pit were many laminae of water-deposited sand (5) which contrasted markedly with the clay subsoil into which the pit was dug. These indicate that standing turbid water was present in the bottom of the pit and was renewed at intervals. Directly on top of the uppermost of these laminae was a layer of freshwater mollusc shells (*Unio* sp.) lying one mollusc thick across the entire interior of the pit. This layer of mollusc valves was too uniform, in our opinion, to represent discarded consumption refuse and appears instead to be the remains of stored uneaten shellfish. Similar cases of shellfish storage are known from Lengyel sites at Krakow-Pleszów (Kulczycka-Leciejewiczowa 1969:51) and Poznań-Dębiec (Smoczynska 1953:35). Lying directly upon this layer of shell in one corner of the pit was a skeleton of an adolescent between 14 and 16 years of age. The shells do not appear to have been connected with any sort of burial ritual, since they do not appear in any other Late Lengyel grave at Brześć Kujawski (where there are over fifty) or any other contemporary site in this part of Europe, nor were there any other grave goods in this particular burial. The interment of this individual ended the use of this pit for storage, and the rest of the feature is filled with refuse, including many fish and turtle bones. A smaller feature nearby lacked this detailed stratigraphy but had the same overall shape and, we believe, a similar function. The use of lacustrine resources such as turtles, molluscs, and fish rises markedly during Late Lengyel phase III at Brześć Kujawski (Bogucki 1981), and the finding of such features is not especially surprising. Similar pits were known within recent memory among fishermen in the Polish lowlands and are called '*sadzy*' (S. Madajski, pers. comm.).

Soudský (1962:198-9) hypothesized that certain pits at the Linear Pottery site of Bylany (antedating the Late Lengyel occupation of Brześć Kujawski by about 800 radiocarbon years) were used for grain storage and were disinfected periodically by setting fires in the interior and then relining the pit with clay. In spite of extensive finds of carbonized wheat in Late Lengyel III rubbish deposits at Brześć Kujawski 3, no similar pits were found. Buckland (1978:43-5) and Reynolds (1974) have shown that the storage of grain in closed, airtight pits can be an effective means of minimizing losses to insects who thrive on grain, due to the lethal (for vermin) concentrations of carbon dioxide which would have formed. However, the pit storage of vegetal foodstuffs is impracticable in subsoils which are not well-drained, such as the clay subsoil underlying Brześć Kujawski 3. Grain stored in pits in such subsoil could have potentially become waterlogged, with resultant losses to microflora and microfauna. As a result, it would appear that grain storage at Brześć Kujawski was done above ground. It is possible that a portion of the house was used for this purpose.

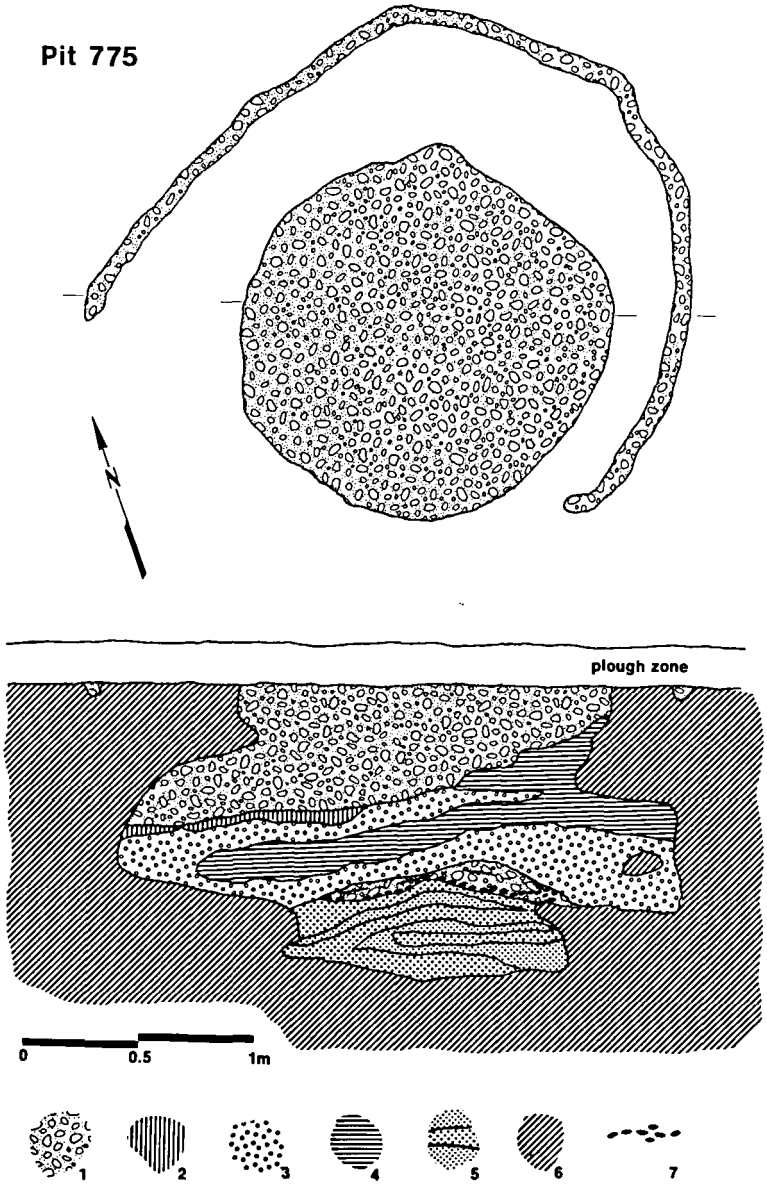

Figure 4 Pit 775, believed to be a storage pit for lacustrine resources. Key: 1 – dark brown fill with artifacts; 2 – lightly burnt clay; 3 – dark brown fill without artifacts; 4 – light brown fill mixed with clay; 5 – laminae of water-deposited sand (only major units of this deposit are shown, since most laminae are very fine layers); 6 – sterile clay (subsoil); 7 – mollusc valves (*Unio* sp.)

Human burials

Human burials are another major component of the Late Lengyel household cluster at Brześć Kujawski 3. Of these, five can be directly associated with House 42. One of these is the adolescent found in the storage pit mentioned above, while three adults were found in a rubbish pit north of the house (fig. 3: black triangles) and another adult lay in a rubbish pit northwest of

the house. The accumulation of pit fill beneath the adult skeletons indicates that these pits had already been functioning as rubbish deposits before the interment of these individuals. The practice of burial in already-existing pits represents a marked change from the burial pattern found in the earlier Late Lengyel periods (I and II), when a rite combining contracted inhumations in specially-dug rectangular pits with heads oriented to the south-southeast was practised almost exclusively (Grygiel 1979). In addition to the skeletal remains in these rubbish pits, several deciduous human teeth were found in a small (less than 1m. in diameter) shallow Late Lengyel III pit northeast of the house, under a quern. Whether this represents the burial of a child whose bones have disintegrated, or the collected deciduous teeth of a child which were buried for some other reason, cannot be determined.

Clearly, we cannot state with certainty that these individuals found buried within the household cluster on site 3 lived in the house which stood there. However, the fact that there was only one house on site 3 at the time under consideration, separated from the nearest contemporary house by at least 200 metres, suggests that individuals found no further than 20 metres from the house on site 3 probably were occupants of it at some point in their lives.

Rubbish deposits

Pits containing rubbish in varying degrees of density are the fourth major feature of the Late Lengyel household cluster. Often these pits were originally excavated for some other purpose, and their function as rubbish deposits was their final use only. For instance, there were the storage pits described above, which were then filled with refuse when their use for storage was terminated. Often, rubbish pits appear to have been originally excavated as borrow-pits to obtain clay for house-plastering. These pits are very deep and steep-sided, but very irregular both in plan and section, with depressions and niches along their bottoms and sides. This irregular yet deep configuration suggests that the extractive activity of digging clay was the primary purpose behind the excavation of these pits, there being no other deliberate shaping of them for some future function. This contrasts with the storage pits described above, with their circular plans and bell-shaped sections.

The rubbish pits associated with the Late Lengyel III house at Brześć Kujawski occupy two distinct areas of the site. The first is immediately to the west of the house about ten metres away from it, between the entrance to the house and the storage pits mentioned above (fig. 3). This row of pits contained the densest concentration of refuse on site 3. Pit 773, for example, contained several hundred potsherds and close to a thousand fragments of mammal bone, plus many turtle, fish, and bird bones, mollusc shells, carbonized grains of wheat, flint tools and debitage, and even a small piece of amber. From figure 3, it can be seen that this pit was the nearest to the presumed entrance to house 42 at the south end of the structure. Pit 782, further north in this row of borrow-pits *cum* rubbish dumps, was slightly less dense in its artifact and bone content than pit 773, but none the less contained large quantities of these materials.

The second area of borrow-pits which were later filled with refuse is found north-northwest of house 42. This area was used for rubbish disposal considerably less than those closer to the entrance to the house. For instance, pit 801, which contained three of the burials mentioned above, yielded only a handful of potsherds and hardly any animal bone or other refuse, while having between two and three times the volume of pit 773. Pit 835 was similar, as were the

other features in this complex. Further to the northwest, pit 820 had a single dense concentration of animal bones in one part, but these all related to a single activity (see below) and do *not constitute bona-fide* consumption refuse. Besides these bones, only a small quantity of potsherds was found in this feature.

The contents of these rubbish deposits provide clues to the range of on-site activities carried out by the inhabitants of house 42. These can be divided into manufacturing activities and food-processing activities. Large quantities of debitage of the locally-occurring Baltic erratic flint occurred in pit 773 adjacent to the entrance of the house, whereas little of this material was found in the pits further away to the north-northwest, suggesting that flint working was done close to the house. Ground stone tools were also manufactured on the site itself, rather than arriving as finished products. This is indicated by the discovery of a truncated cone of coarse-grained stone identical to that from which the ground stone tools on site 3 were made. This cone is the by-product of the drilling of a shaft-hole in one of these ground-stone tools.

The presence of broken bone awls, most of them made from the metapodia of roe deer, attests to the use of these implements in domestic activities. It seems not unreasonable to assume that they were also manufactured domestically, given the amount of roe deer comsumption refuse in the rubbish deposits. The production of antler axes was also a major on-site activity, indicated by the finds of the waste products of this process. These occur in the form of detached tines and antler bases severed from the beam by cutting or sawing through the beam halfway and then snapping it off from the base. Although these waste products of antler-axe manufacture were found within the household cluster, the finished axes were not. In fact, within the large settlement complex on site 4 at Brześć Kujawski, antler axes were found in only a few graves when they were found at all. We believe that this is the result of the fact that these axes were primarily intended for off-site activity, such as tree felling. Partial confirmation of this comes from our find of a cache of 6 axes (5 stone, 1 antler) at a small Late Lengyel satellite site at Kuczyna, about 6 kilometres from the settlement complex at Brześć Kujawski 3 and 4. The deposit at Kuczyna was probably formed as the result of tree-felling activity, either for agricultural fields or for lumber for house construction.

An on-site activity which did not always take place in the immediate area of the house was the removal of pelts from beaver carcasses. In pit 820, located over 30 metres from the nearest house wall, the remains of five beavers were found in a dense concentration of bone, with no other species present. These skeletal materials were disarticulated, but virtually every bone of these five animals could be found in this concentration, indicating that *none* (or hardly any) of the meat-bearing bones were carried away for cooking. Moreover, although the bones were disarticulated, none of them bore the butchering marks or marrow fracturing which might have indicated a desire for maximum meat removal from the carcass. Finally, there are clear signs that the pelts were removed from these animals: the first being the lack of third phalanges, which usually stay with pelts when they are removed from the underlying tissue, the second being the finding of a blunt pointed tool, made from a red deer metapodial, which arguably served for separating the pelt from the muscle without damaging the skin.

One final aspect of the Late Lengyel household cluster at Brześć Kujawski 3 which is indicated by the contents of the rubbish deposits is that dogs were frequently, if not constantly, present within it. The action of dogs is attested by a number of dog-gnawed specimens in the mammal bone assemblage, and their presence is confirmed by the finding of several dog bones among the mammal bones, as well as a complete dog skeleton in pit 782. Much rarer than

dog-gnawed bones, in fact hardly ever appearing, are rodent-gnawed bones, suggesting that there was probably a certain amount of cleaning practised around the Brześć Kujawski 3 house.

Household clusters at other sites in the Polish lowlands

Four elements have been shown to be major components of the Late Lengyel household cluster at Brześć Kujawski 3. These are 1) the house itself, 2) storage pits, 3) human burials, and 4) rubbish deposits. If the concept of the household cluster is to be effective as an analytical tool, it is necessary to look at other similar Late Lengyel sites, preferably those with single longhouses (as opposed to complex settlements with many longhouses) to see if a similar configuration of archaeological remains occurs.

Unfortunately, the majority of the recently-excavated single-longhouse Late Lengyel sites in the Polish lowlands which have been hitherto published, have seen a concentration on the recovery of the house plan itself. Areas wide enough to have revealed the associated graves, rubbish deposits, and storage pits have not been excavated. Excavations have generally been extended along the long axis of the house, rather than laterally where the most important features of the Late Lengyel household cluster at Brześć Kujawski were situated.

One site where the excavated area was extended laterally out from the house was Biskupin 15a (Maciejewski 1956:26-33). Although the excavated area was only expanded to the east side of the trapezoidal longhouse, two, and possibly all three, of the components of the Brześć Kujawski household cluster (besides the longhouse itself) occur in roughly the same general locations relative to the house as they do at Brześć Kujawski. The two definitely identifiable components of the Biskupin household cluster are the rubbish pits which occur near the south end of the house (fig. 5) at much the same distance from the side of the structure as they do at Brześć Kujawski, and the graves (three in the case of Biskupin 15a) which are found towards the north end of the house, again at the same distance from it as at Brześć Kujawski. The circular pit at the south end of the house was deep and cylindrical, in contrast to the irregular pits some distance away. This arguably could have served some storage function, even though it lacks the characteristic bell-shaped profile of the pits at Brześć Kujawski. The excavation of an area of similar size to the west of the structure at Biskupin 15a would probably have yielded more features of the household cluster.

It might be expected that similar household clusters could be found on other Late Lengyel sites and at other contemporary sites in central Europe such as those of the Rössen culture. We have already noted that the same longhouse form occurs on at least nine other sites in the Polish lowlands and at several others in the loess uplands of southern Poland. Further west, a similar house form occurs in the Rössen culture. Given this homogeneity in one component of the household cluster seen at Brześć Kujawski across a wide area, other elements, especially the rubbish pits and the graves, should occur in similar proximity to houses across this area. Many graves and rubbish pits are known from large Late Lengyel settlements such as those at Brześć Kujawski 4 and Krusza Zamkowa 3 (Czerniak 1977, Bednarczyk, Kośko, and Krause 1979), but here there were the problems discussed earlier concerned with associating them with specific houses. Storage pits are more difficult to identify, but they should occur at sites where there is a marked upturn in the use of lacustrine resources like that found during Late Lengyel phase III at Brześć Kujawski 3.

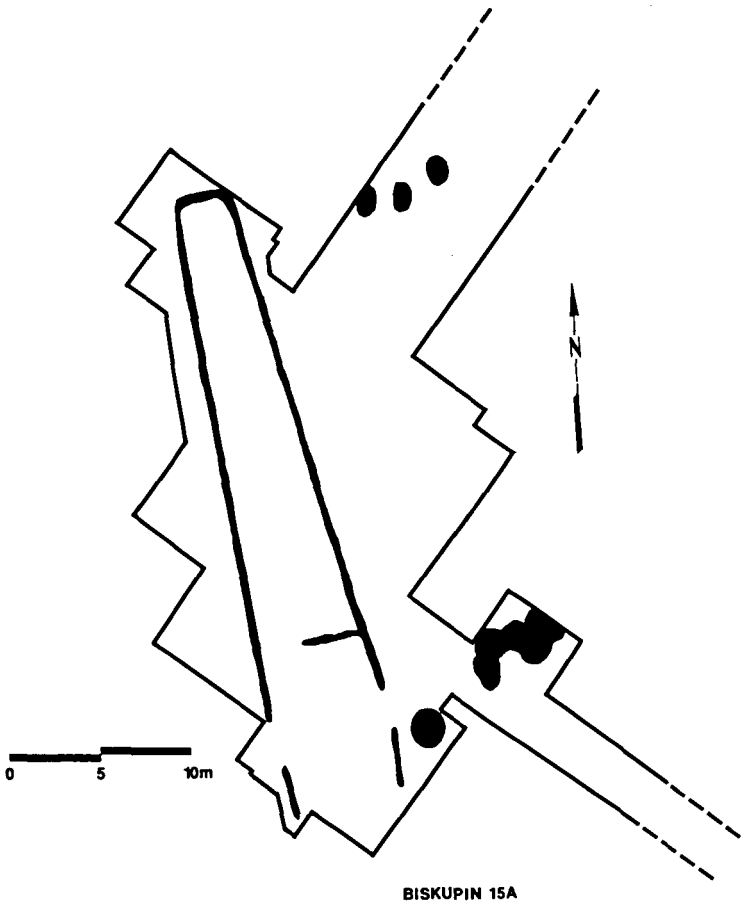

Figure 5 Biskupin 15a (after Maciejewski 1956)

Summary

The position has been reiterated here that it should be 'easier to perceive correlations among specific configurations of archaeological remains and the behaviour that produced them at small settlements than it is at complex sites' (Moseley and Mackey 1972:76). In pursuit of this goal, the concept of the 'household cluster', introduced by Winter (1976) for early Mesoamerican village sites, was applied to the Late Lengyel remains at Brześć Kujawski 3. At this discrete locus of settlement, almost completely excavated, only one longhouse was standing at any single time, so it is relatively easy to perceive which features are contemporary with the structure and thus arguably the products of the activities of the people who lived in that structure. Four separate components of the Late Lengyel household cluster were identified. These included the house, storage pits, rubbish deposits (usually in former borrow-pits for house clay or in former storage pits), and graves. The graves occurred both in former storage pits and in rubbish pits. These features occupied specific relationships to the house, with the densest concentration of refuse (not unexpectedly) nearest to the presumed entrance to the house and the graves occurring in less densely-filled rubbish pits to the north of the structure.

Although most other Late Lengyel sites which have been published up to now, on which single longhouses have been found, have not had large enough areas excavated, which might have revealed similar features if they had occupied the same relationship to the house as at Brześć Kujawski 3, the pattern of pits and graves at Biskupin 15a does bear more than a superficial resemblance to that at Brześć Kujawski. We would argue that if more small single-household sites were excavated to a distance of at least ten metres from the structure on all sides, similar configurations of features should appear regularly.

This has significance beyond the early Neolithic of east-central Europe. Features associated with the activity of particular households should not necessarily be expected immediately adjacent to structures but can occur some distance away, as we have demonstrated at Brześć Kujawski 3. If more investigators were to plan their excavations accordingly, we feel that the 'household cluster' would have utility as an analytical unit for the study of prehistoric behaviour patterns in the region.

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Abstract

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The household cluster at Brześć Kujawski 3: small-site methodology in the Polish lowlands

Attempts to examine the organization of human behaviour on large, multi-phase Neolithic sites in central Europe have often been frustrated by the difficulty of associating features with specific structures and thus seeing the positioning of storage, burial, and refuse facilities relative to particular houses. Under the proposition that it should be easier to see such relationships on smaller, less-complicated sites, data from the completely-excavated locus of Late

Lengyel settlement (3300–3100 bc) at Brześć Kujawski 3, Poland, are examined to determine the range and spatial patterning of on-site behaviour. An attempt to see if regularities in the pattern found at Brześć Kujawski 3 can be observed at other Late Lengyel sites was only partially successful due to the limited areas of excavation on most other small sites in this area.