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By Gunborg O. Janzon


In recent years a good few zoomorphic clay figurines have been found in Swedish Neolithic material. Similar figurines are also known from Finland, Estonia and Latvia.

This paper presents new finds and reviews the discussion of the subject. The author's special aim is however to perform a functional analysis of the role of the figurines in the prehistoric cultural patterns.

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Initial finds
Ever since the beginning of this century, zoomorphic clay figurines and 'beads' have been observed in Swedish Stone Age material. They were first noticed in the investigations of Uppland dwelling sites. In 1906 Oscar Almgren published an account of two figurines, Fig. 2: 1—2, discovered in Aloppe and interpreted them as depictions of elk. His article — “Uppland Stone Age Settlements” — was followed by a special study entitled “Nordic Stone Age Sculptures” (1907), where he discussed the small clay figures in relation to what was then known about round sculptures of various materials from Swedish territory, viz. the bone comb from Gullrum in the parish of Näs, Gotland, with its human and animal heads, slate knives with shafts in the form of animal heads, and a small face mask of amber from the parish of Asarp in the Province of Västergötland. Almgren observes that “...these remarkable small sculptures of Neolithic date” are only to be found in the northeastern part of Northern Europe (1907, pp. 123 et seq.).

Clay figurines from Gotland
After these initial finds in Uppland, the next figurines were discovered in material from Ire in the parish of Hangvar, northwest Gotland. Examining material from this site, John Nihlén discovered two small “animal heads” and a round bead of burnt clay (1925, pp. 215—217).

The excavations at the Ire site between 1957 and 1960 under the leadership of Greta Arwidsson yielded a great deal of pottery, some 615 kg in all. Several figurines and fragments of figurines have been discovered during the classification and analysis of this material, viz. a seal (square 100 N4), fragments of what may have been a seal (square 84 N2), and a concave-convex figurine (square 64 N10); see Fig. 1: 1—5.

A comparison with similar fragments of burned clay strips from the Västerbärs site on the eastern side of Gotland makes it likely that figurine specimens exist from here as well. M. Stenberger suggested that one of these fragments was a horn of a bovine figure (Stenberger 1943, pp. 104—105, Pl. 42:4).
Clay figurines from the Swedish mainland
Zoomorphic figurines and clay beads have been found in most of the known sites of eastern Sweden, a few examples of which will be cited here.

In their 1939 publication concerning a Stone Age site at Siretorp in Blekinge, Axel Bagge and Knut Kjellmark described a number of sherds which are probably fragments of both anthropomorphic and zoomorphic figurines. One particularly interesting feature in the Siretorp material is the so-called clay spoons, the shafts of which more or less resemble swans’ necks. The concave recess suggested by one of the fragments may possibly have been spoon-shaped. It is not at all easy to reconstruct the rest of the fragment. Siretorp also yielded decorated and undecorated clay beads and “clay pulleys” (Bagge & Kjellmark 1939, pp. 97 et seq., Pl. 27—28).

The material from Fagervik on the shore of Bräviken, in the Province of Östergötland, examined by A. Bagge in 1935—1936 and 1950, included two small seal-like clay figurines; see Fig. 2: 3—4.

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Another animal figure, possibly representing a pig, comes from Äby in the parish of Kvilleinge, a site originally located at the innermost reaches of the Bråviken fjord. The nose of this figurine is blunt and snout-like; see Fig. 2: 5.

Another investigation in Östergötland, conducted by Catharina Nilsson at an Iron Age burial site near Äleby in the parish of Gistad in 1968, revealed a square stone-setting (?), with more than twenty fragments of small zoomorphic clay figures made from "tempered yellow-burned clay". Two of the frag-
ments may possibly originate from a "spoon-like object". The animal figurines, two of which resemble bears (?), measure only 1—2.6 cm. The dating of the find is uncertain, but the figurines may possibly be a good deal earlier than the Iron Age material from this site (Nilsson 1969, p. 11; 1977, p. 102); see Fig. 3.

In 1969 Stig Welinder investigated a site at Överåda, near Trosa in the Province of Södermanland and published four figurines from this site; they are taken to represent an elk’s head, a bull, a quadruped and a bird (Welinder 1971, pp. 75—76, 90—91); see Fig. 4: 1—4. These figurines are made of a porous ceramic material, which, according to Welinder, indicates that they date from the latter half of the settlement period (ibid. p. 78).

Perhaps the largest collection of zoomorphic figurines discovered so far comes from Älby in the parish of Ösmo, Södertörn, in the Province of Södermanland. Towards the end of the 1950’s, Birgitta von Heland headed a total excavation of a large burial site, dated to the Bronze Age and Iron Age but also incorporating Stone Age strata with pottery in the Säter III and IV styles. This material included a clay bead and a pottery “pendant”.

The about 80 fragments of zoomorphic figures from Älby were found in a damaged ceramic vessel (300 fragments approx.) superficially located in construction 14, which has been designated as a “stone-setting”. The figurines, measuring no more than about 2 cm, apparently represent animal heads and four-footed animals; cf. example in Fig. 5. Here as with the find from the parish of Gistad in Östergötland, the dating is uncertain (Tillväxten 1961, p. 51; von Heland 1962, p. 71). — Björn Ambrosiani observes that the northern part of the burial site — in which structure 14 forms part of a group comprising over 30 graves — is the oldest dated part of the burial site and belongs to the terminal phase of the Bronze Age (Ambrosiani 1964, p. 29; Figs. 10—11; 26—27).

Excavations conducted by the Stockholm City Museum in the Vårby area, to the south of Stockholm, yielded a figure which presumably represents an elk’s head, together with at least two fragments of other indeterminate figurines.

**Discussions about the origin of the clay figurines**

The clay figurines in Sweden have been discussed mainly in terms of cultural identity, chronological dating and the animal species possibly depicted. They have been described as an alien feature found in the Pitted Ware Culture, otherwise known as the Eastern Swedish Dwelling Site Culture. Generally speaking, the archaeological context in which the objects have been discovered has not been analysed very closely, with interest being focused on the objects themselves.

O. Almgren once made the following assertion concerning the origins of the figurines. “On the other hand, small anthropomorphic and zoomorphic images of clay, stone and bone from the period in question are found in Austria-Hungary, Bosnia, Serbia and Romania, and from the figures found in those countries it is but a short step to the primitive figures discovered in the deeper strata of Troy and in other early finds in the Eastern Mediterranean.”

Thus in Almgren’s opinion, “East Nordic sculptural art in the Neolithic period” was due to cultural influence from the southeast of Europe (Almgren 1907, pp. 123 et seq.).

In his paper on the Överåda site, Stig Welinder mainly concurs with Almgren regarding the figurines. He also assumes that due to eastern influence, the people of the Pitted Ware Culture only made animals of the kind commonly produced in the original eastern area associated with comb-ornamented pottery. In other words, the people on the western shore of the Baltic did not aspire to motifs of their own creation (Welinder 1971, pp. 90—91).

The Tromsø Nordic Archaeology Congress included discussions of the Pitted Ware Culture, Stig Welinder and Mats P. Malmer being among the speakers. Welinder argued that “... the practice of depicting animals was so directly adopted from eastern Europe,
Fig. 4. Zoomorphic figurines from Överåda, Trosa parish, Södermanland (SHM inv. nr. 30097), 1:1. Drawings from photo by B. Händel. — Zoomorfa småfigurer från Överåda, Trosa sn, Södermanland.

Fig. 5. Examples of zoomorphic figurines from Älby, Ösmo parish, Södermanland (SHM inv. nr. 26771:14), 1:1. Drawings by B. Händel. — Zoomorfa småfigurer från Älby, Ösmo sn, Södermanland.

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that people continued depicting the main species which had been hunted there, such as the elk” (Welinder 1973, p. 58). His view was endorsed by Malmer, who remarked: “The carriers of the Pitted Ware Culture display an unparallelled receptiveness and no desire at all to resist impulses from other cultures. Stig Welinder has aptly and lucidly remarked concerning Överråda that whereas the seal is overwhelming predominant among the animal bones, the clay sculptures depict forest game, the reason being that this art form derived from the Comb-Ornamented culture.” (Malmer 1973, p. 60.) This, at present, would therefore seem to be the general opinion of researchers in Sweden.

Clay figurines in Finland
In Finland the subject has most recently been discussed by Torsten Edgren. In Finskt museum 1966 he published an article entitled “Einige neue Funde von kammkeramischen Vogelbildern und Tierskulpturen aus Ton”. Just as Welinder in Sweden mainly adopted Almgren’s opinion, Edgren relies on his predecessor Arne Äyräpää (1941; 1953) concerning the Finnish material. Judging by the published findings, however, zoomorphic figurines of clay are rather uncommon in Finnish territory. Edgren’s article adds three new finds to the two which were known previously, viz. sculpture from Västra Jansmyra in the parish of Saltvik, Åland (Dreijer 1940, Abb. 37, pp. 51 et seq.), and another from Väntsi in the parish of Johannes, South Carelia, both of which depict quadrupeds, Fig. 6: 1.

Two of the new finds are from Hietaniemi in the parish of Luopionen, Tavastland. Edgren takes one of these to be a depiction of a snake. It is made of a strip of clay 1.1—1.5 cm thick, bent into a ring 4.0—3.2 cm in diameter. The head of the figurine is inclined upwards, rising 2.8 cm above the lower surface of the body. The eyes and mouth are marked on the head. The tail is the widest part of the sculpture, which is incongruous considering that it is the narrowest part of a snake’s body. The illustration of the figure in Edgren’s article does not show a particularly snake-like head, and studying this figurine one might also be reminded of other animals with an elongated body, such as the otter. It is above all the shape and angle of the head that speak in favour of such a likeness. The coiling of the body may have been done to make it possible to fix the figurine to a small rod or perhaps carry it as a pendant. Fig. 6: 3.

The second figure which Edgren describes is 3.6 cm long but damaged at the back. It has a comparatively wide head with two erect ears. The eyes are indicated by two small pits and the mouth by a bowshaped line, so that when viewed head on, the animal appears to be smiling. Edgren prefers to leave the question open as to which species is depicted (Edgren 1966, pp. 20—21). Fig. 6: 4.

The third figurine is depiction of a beaver from Pohtio III in the parish of Kangasala. The figurine has a hole underneath so it could be placed on a stick (Edgren 1966, pp. 18, 24).

Edgren remarks that clay zoomorphic figures do not seem to occur in the eastern Comb Ornament area. Instead, moving further east, one finds animal figures made from bone, horn, wood and flint.

A. Äyräpää describes (1941) a type of clay figurine bent upwards at both ends (concave-convex), but evidently flattened underneath so as to have a surface to stand on. He mentions two complete specimens and a third, fragmentary one from Riukjärvi in Kaukola, and there is also a complete specimen decorated with a line of dots on the convex side, which is judged to be the rear side. The decorated figure comes from the Pääskylahti site in Sääminki, and its narrowed-down end is thought to resemble an animal head. Finnish scholars have called these concave-convex figurines “clay cocks”, and they are dated to the typical Comb Ornament period (Äyräpää 1941, pp. 98—99). It has also been suggested that these figures are phallic symbols or stylized anthropomorphic figures in seated posture (“idols”).
Clay figurines from Estonia and Latvia

Clay animal sculptures from the Baltic States also appear to be comparatively rare in the archaeological material. Edgren mentions two figurines from Estonia, one of which comes from Lommi near Narva and the other from Naakamäe on the island of Ösel. Both seem to depict quadrupeds of some kind (Edgren 1966, pp. 21 et seq.).

From Latvia we have a number of figurines described in literature published during the 1970's. L. Vankina presents in her Sarmaties purva apmetne (Die Torfmoorsiedlung von Särnate) a clay figurine which can possibly be termed concave-convex (1970, Pl. XXXVI: 1). It was found in "House 5" together with comb-ornamented and pitted pottery. This material has been dated to the middle or second half of the third millennium B.C. (Vankina 1970, pp. 167, 170), see Fig. 7:1.

The finds illustrated in "Late Neolithic and Early Bronze Age of the Lubana Lowland" by I. Loze (1979) include a small ursine (?) figure. This sculpture, measuring about 3 cm, shows the animal's head with a protracted snout, markings for the ears, stumpy front legs and part of the torso. Judging by the illustration, the rear of the figurine is not damaged but rounded off (Loze 1979, Pl. LI: 5, p. 192). Fig. 7:2.

Another clay fragment may be part of an indeterminate animal figure. This fragment appears to have incised longitudinal and transverse markings (Loze 1979, Pl. LI: 12, p. 191).

Zoomorphic figures of other materials besides clay, e.g. bone, horn, flint, amber and wood, are abundantly represented in material from the Baltic States, as can be seen not least from Vankina's and Loze's most recent publications. Serpentine and ornithological motifs are particularly in evidence. Spoonlike wooden objects are finished off with carved heads of birds (duck, goose, swan). (Vankina 1970, Pl. XXXVIII, XXXIX; Loze 1979, Pl. LII.)

Clay figurines from Denmark

From Stengade, an early Neolithic farming settlement with two houses, are several zoomorphic figurines known. In "house I" were nine small figures, all fragmented. Six of them seem to be zoomorphic and two are particularly recognizable. One of those is probably a quadruped with three short stumpy legs left, length ca 0.2—0.4 cm. The other figurine looks like a head of a bovine with two fragmented horns.

From "house II" there are eleven fragments. Three of them seem to be compact animal torsos, length ca 2.8—3.6 cm, with four stumpy legs. J. Skaarup thinks that they may be depictions of cattle. One fragment, length ca 4.2 cm, is possibly a bird figurine (Skaarup 1975, pp. 89—90, 157, 202, Abb. 36:1—3, 68:1—8).

Analysis of the clay figurines from Ire

It is not by any means the purpose of this paper to attempt a catalogue of the clay figurines in the peribaltic area, but a certain survey is necessary for the analyses of the finds from Ire. It would seem from the published material already quoted that these figurines are quite few on the eastern side of the Baltic Sea. Nor does the "forest game" previously referred to appear to be a particularly dominant motif of clay figurines. This type of motif can only be claimed by including a number of other sculpted objects in our discussion.

So far little progress has been made by treating the problem exclusively as one of chronology and possible cultural influence in one direction or another. The problem to be solved is above all related to the rôle which these small figures were meant to play. A functional analysis should be attempted. What made these figurines important in the society of the time and in the geographical area with which we associate them? What common denominator in this quite extensive area may conceivably have prompted their fabrication? What direct find data do we have concerning them?

One striking feature of these figurines is that they are so very small. I assume that
this is meaningful, that it bears within itself part of their raison d'être. The figures from Ire, it should be recalled, vary in size between 2.5 and 5 cm.

The maker of the figurine has greatly simplified the subject. The difficulties very often involved in identifying the modelled animal are a result of this. We may presume that this simplification was deliberate and that the depiction was intended to emphasize selected characteristics.

The small figurine from Ire, which I interpret as a seal, depicts the animal full length, Fig. 1: 3. The seal is modelled from a strip of clay roughly 1 cm thick. Anatomically it shows only the spool-shaped body, the tapered head with a rather pointed nose, and the tail turned slightly to one side. A slight incision on one side of the head may represent an eye. The other side and the top of the head were damaged a very long time ago. The nostrils, mouth and extremities are not shown. On the other hand, the person who made this figure clearly intended to depict a specific movement. The seal is holding its head and the upper part of its body high; it is alert and listening. The figurine has been somewhat flattened underneath so that it can be stood in this posture.

One of the figures published by Nihlén depicts the head and front body of an animal. Nihlén describes the head as having clumsy, pointedly elongated ears sticking straight out. The neck is wide and thick and heavily arched between the ears. The snout has a rounded section, tapering towards the point, and it is defective as a result of ancient damage (Nihlén 1925, p. 216), Fig. 1: 1.

The appearance of the animal varies considerably depending on which of the two angles it is viewed from. Viewed from the side, as in Fig. 1: 1, it resembles the head and front part of a quadruped, and it can be placed, leaning slightly backwards, in this position. Viewed head-on, the features which from the side gave the impression of an ear and a front leg become two protruding ears. Nihlén felt that, viewed from the front, the figure resembled a sheep. It may possibly have been designed to be viewed from two different angles and in this way to depict two different animal species.

The other figure, Fig. 1: 2, probably represents an animal head. An incision for the mouth and eye has been made on the flattest side, which also has a longitudinal recess. The opposite side is slightly arched and quite plain. One interesting detail is the impression left in the clay by a thin, plaited cord which was once coiled round the head. This impression is most distinct between the snout and eye, and it is also faintly discernible on the opposite side (Nihlén 1925, p. 216). The cord was probably coiled round the figure before it was fired. The head is very worn, which suggests that it was assiduously used.

Could the coiling with the cord possibly have a symbolic meaning? Does it allude to an animal which has been captured and tied up? In my view, this sculpture resembles the head of a horse, and it is worth noting that the bone material from the Ire site includes...
the cranium of a horse (Ekman 1974, p. 218) and one of the tail bones of a horse (square 68 N 40, stratum 20—40; analytical report by R. Larje 1979), which indicates that there were horses on this site. The above mentioned figurine from Väntsi in Southern Careria, Finland, has also been taken to depict a horse (Edgren 1966, p. 17), see Fig. 6: 2.

By way of comparison here, we may recall the modeled horse’s head from the Saint-Michel d’Arudy cave in France, which is 4.5 m long and dated to the late Paleolithic. This head is thought to have been shown with a type of bridle. Similar small sculptures of horses’ heads have also been found in the Mas d’Azil cave (Bahn 1978, p. 186, see Fig. 1, p. 187).

A small concave-convex figurine in Ire (square 64 N10), see Fig. 1: 5, is made from a strip of clay 0.9—1.4 cm thick. This figurine comprises three fragments stuck together and one end has long since been damaged. The end which has survived intact is finished off with a rounded, smooth surface, and at this point the figure is 2.9 cm high. The underside is a level standing surface. This figure appears to be so extremely simplified that it is hard to discern any immediate likeness. The form may possibly be symbolic. The broken end may have been finished off with an animal or, possibly, human head (cf. Äyräpää 1941, pp. 98—99).

Each individual figurine mentioned above could be analysed in this way, but my principal aim is to incorporate this material in a constructive discussion. The review of the Ire material in itself affords a foundation for certain hypotheses.

I presume the zoomorphic clay figurines to have the following distinctive features:

1. Small format, 2—5 cm approx.
2. Depiction (a) full length, (b) of the front extremities and part of the torso, (c) of the head only.
3. Highly schematic depiction, but sometimes with a heightening of particular features, e.g. big ears, prominent eyes, very short legs, and a movement indicative of listening and/or watchfulness.
4. Most of the figurines are designed to be placed in a standing posture.

We may further presume that the damage to the figurines can have resulted from deliberate destruction. It is sometimes hard to distinguish between natural disintegration and deliberate damage. Most of the breaks are ancient. The destruction of the figurine could be an act to symbolize killing the animal, in which case it is of course interesting to regard them as depictions of desirable game.

Ella Kivikoski has broached the idea of destruction regarding the anthropomorphic figures (“idols”) in the Finnish material, which she believes to have been deliberately damaged because they consistently survive in fragments only. She argues that the anthropomorphic figure could have represented “... an enemy whom one sought to injure by smashing his image. This form of magic is common among primitive peoples in our own age and also occurs at higher levels of civilization.” (Kivikoski 1964, p. 65.)

Clay figurines as depictions of game

The idea of the figurines as depictions of game has previously been put forward by both Welinder and Malmer, though they have found it odd that the seal, which usually dominates animal bone material in these sites, should not have been depicted (Welinder 1970, p. 58; Malmer 1970, p. 60). This conclusion, however, is contradicted by Welinder’s own observation of a seal figurine in the Fagervik material (Welinder 1969—70, p. 91). Probably both the figurines from Fagervik depict seals, see Fig. 2: 3—4. Since we may now presume that the seal is actually represented among the zoomorphic figurines from several sites, this is no longer an objection. Another idea is that the availability of animal species can vary according to the equipment and hunting methods in use. Was it perhaps the larger and/or more elusive animals whose capture required the aid of special rites?

An important observation was made during the 1970 Tromsø Congress by C.-A. Moberg, who took the view that “... selection for totemistic reasons could be considered as an
alternative to the influence of alien eastern hunting magic when attempting to explain limitations, according to Welinder, in the repertoire of motifs in eastern Swedish Pitted Ware sculpture" (Moberg 1973, p. 83). We may also ask to what extent the figurines depict new domesticated species, e.g. cattle, the horse, the sheep, the goat and the pig.

The idea of the sculptures depicting game in certain cases may be corroborated by the emphasis on attributes reflecting, for example, watchfulness and listening. And why, for example, are the extremities in the elk from Äloppe so sketchily depicted? Is this also symbolic, indicating that the animal should not be able to escape? (Cf. Fig. 2:1.)

A comparison with small amber sculptures from the Mesolithic in Western European material yields examples of similar schematization. Thus the amber figurines mainly depict the head and front portion of the torso, while the extremities are short and stumpy (Brøndsted 1977).

Finding contexts of the clay figurines

Unfortunately the contexts in which the figurines have come to light tell us little as far as the zoomorphic figurines from Ire are concerned. The first two, described by Nihlén (1925), were found among material mainly comprising surface finds from the site (SHM inv. nr 15505).

The seal figurine was found in material from square 100 N4, which is close to Grave 10 (square 102 N2) with a fragmentary skeleton, excavated in 1959 by G. Arwidsson (Janzon 1974, p. 290). The pottery inventory which it has now been possible to start has shown that the area N. of the grave contains a wealth of pottery. Here, too, a posthole was found in the squares northward (98 N2—4), and east of this something was found which a field note describes as a "clay bed" surrounded by stones. From square 100 N6 we have one half of a decorated clay bead (which was thus found immediately east of the square where the seal figurine was found).

The small figure of the seal was overlooked during the actual excavation and only came to light when the ceramic material was sorted and documented under my direction between 1976 and 1979. Consequently the excavation report contains no special remarks concerning the figurine. A clay fragment probably comprising the rear portion of a seal figurine, see Fig. 1:4, was also found during the documentation of pottery from the area adjoining Grave 7.

The concave-convex figurine comes from square 64 N10, which according to a field note (G. Arwidsson) also contained a stripped stratum. Two "pits", a "concentration of pottery" and a "post hole" are recorded in adjoining squares, in strata which were evidently not damaged by the stripping off.

There are some noteworthy observations from Överåda concerning the context in which the figurines were found. A full-length animal, interpreted as depicting a bull was found in square 285/609. The same square is recorded as containing a pit, 1.9 X 1.7 m in diameter, filled with culture soil and humus-mingled sand to a depth of 0.4 m. "In the centre of the pit 0.25 m above the bottom there was a 0.05 m thick clay plate 0.5 m in width." Above it there were two potbottoms (Welinder 1969—70, p. 16).

Square 291/607 in Överåda contained a "Fragment of a quadruped animal with one pair of legs. Length 2.8 cm, breadth 1.4 cm." The same square is also reported as containing a pit in which the culture soil was streaked with red ochre (Welinder 1971, p. 75, Fig. 23, p. 16).

Welinder discusses the occurrence of red ochre and of these "clay plates", which were evidently quite untouched by fire, in a section headed "Thought-world". Unfortunately the text does not make it clear whether the "clay plate" in square 285/609 was found in a pit or under a hearth. (Reference is made on page 16 to a "pit", while on page 88 we read that the "clay plate" "... lies under a hearth (pit 285/609)"; Welinder 1971, pp. 16, 88.)

Welinder assumes that there may be a connection between "red ochre/clay plate/hearth". Perhaps this assumption should be enlarged to include the clay figurines as well?
And is there also a connection with the structure or structures which the post holes in the vicinity are taken to represent?

The "clay bed" near the point where the seal figurine was found at the Ire site is interesting in this connection. As mentioned above a pit and a post hole were recorded in the same area.

**Preservation and ceramic technique**

The fragmentation of the pottery is due to the quality and composition of the clay used, the firing of the clay, the storage conditions at the site and the original treatment of the clay objects. These small sculptures may well have been far more numerous than can be documented from current analyses of the ceramic material. At the Gotland sites, where the calcareous clays of the island were the only ones available, fragmentation is in fact greater, according to B. Hulthén, than at sites where pottery was made from non-calcareous clays.

Hulthén makes the following observations concerning the ceramic technique used in making the figurines: "These objects are made of the raw clay commonly used in pottery manufacture, which has been tempered with about 10% fine crushed limestone. The firing temperature did not exceed 600°C, and the firing took place in an oxidating atmosphere." (Hulthén 1979, unpublished analytical report.)

The tradition of modelling small animal figures in clay can be traced back to the late Paleolithic in continental finds, e.g. those from Dolní Věstonice in Czechoslovakia. One of the interesting points about the "lumps of clay" and zoomorphic figures found there is that they also appear to be the earliest instances of ceramic manufacture. In some cases the clay used has clearly been mixed with crushed stone and bone material ("... zerkleinerte Bruchstücke festerer Bestandteile, am häufigsten Knochenspäne und feine Steinchen", Klima 1963, p. 271). If this is a deliberate tempering of the clay, the objects must be designated the oldest pottery in Europe.

An osteological analysis of the bone material in the fired clay, if feasible, might possibly establish whether there is a link between animal depictions and the use of crushed bone. If there is such a relationship, the inclusion of bone might possibly be interpreted as a form of revivification of the animal concerned.

In terms of ceramic technique, the possibility of a continuous tradition of adding crushed bone, to temper the clay is very interesting. Recent analyses have established...
bone tempering in pottery, for example from Norway dated to the Neolithic period. The “porous” pottery from Norway has been found to have originally been tempered with crushed bone, which with the passing of time has been leached away to produce the distinctive porous appearance of the pottery (Hulthén 1981, in press; personal communication).

Clay beads
At the same time as the zoomorphic figurines were observed in the Ire material, it was established that another type of round sculpture existed in the shape of clay “beads”. The same is true of most of the mainland sites, from Aloppe in Uppland to Siretorp in Blekinge. The round or double-tapered bead is really also a sculpture, and its form is based on movement. Altogether seven beads and fragments of beads have been found at Ire so far, see Fig. 8. Further finds may result from the continuing examination of pottery remains.

Nihlén mentions three of these beads, two of them double-tapered, which were found in the material supplied in 1915 (Nihlén 1927, p. 74). From square 64 S4 there are fragments of another double-tapered, undecorated bead, diameter 2.5 cm. As mentioned above, there is a fragment of a decorated round bead, diameter 2 cm approx., from square 100 N6, in a stratum 30—40 cm below the ground surface. The decoration comprises vertical nail impressions in a line, partly in a double line, Fig. 8: 2.

A fragment of an undecorated (?) round bead Fig. 8: 3 has been found in previously unknown material from square 82 N4. According to a note together with the fragment, it was located in “the stratum closest to the skeleton”, which probably means skeleton C in Grave 7, a man aged between 50 and 60. The skeleton was damaged and its cranium was missing (Janzon 1974, pp. 282 et seq.).

Three of the bead fragments may originally have belonged to the grave goods in Graves 6, 7 and 9 respectively. This being so, what was their function? Were they ornaments or can they have served a practical purpose?

As mentioned previously, beads of this kind exist from most sites in Gotland and on the mainland of Sweden. The largest number of un-decorated and decorated beads of various shapes, sizes and patterns appears to occur in the Siretorp material from the Province of Blekinge. Unfortunately these objects are not described in their archaeological context. In an inventory of the data that does
Fig. 10. Examples of artefacts from "field F" at Siretorp, 1:1; after Bagge-Kjellmark 1940. — Exempel på artefakter från "fält F", Siretorp. (1—2) Double-edged miniature axes of clay. — Dubbeleggade miniatyryxor av bränd lera. (3) Fragment of amber, axe (?). — Bärnstensfragment, yxa (?). (4) Fragmented clay figurine, quadruped (?). — Fragmentarisk småfigur, fyrfotadjur (?). (5—7) Clay-strips, fragmented figurines? — Lerstrimlor, fragmentariska småfigurer (?). (8—10) Small lens-shaped beads. — Små "linsformade lergodspärlor". (11—12) Fragments of clay beads (?). — Fragment av lerpär­lor (?).
 exist concerning the conditions in which the finds were made we may note that the excavation area called “Field F” included traces of lines of stones, several post holes and fire remains. Probably this was a building of some kind. This area yielded several fragments of “clay strips”, a fragmentary sculpture of a four-footed animal, fragments of two small “two-edges axes” made of clay, including three which were “lens-shaped”, and a piece of a larger, round bead(?) (Bagge & Kjellmark 1940, pp. 28 et seq., Pl. 27—28). Some of these artefacts are shown in Fig 10.

Finds recorded from “Burial Field B”, which clearly contained two graves, include a decorated, concave, double-tapered bead and another fragment of a decorated, round (?) bead, plus a decorated bead fragment (?), see Fig. 10.

Without pushing the material too far, it is clear that both figurine fragments and clay ‘beads’ have occurred in specific archaeological contexts at Siretorp, and there may well be various similarities between these archaeological conditions and those at e.g. Överåda and Ire.

Clay figurines from the late Paleolithic period in East Europe

The presumptive antiquity of the traditions associated with phenomena of this kind is illustrated by finds such as that at Sungir, about 200 km east of Moscow. This find, dated to the late Paleolithic, c. 23,000 b.c., includes red ochre and zoomorphic figurines, representing the horse among other animals, which can be presumed to symbolize the close relationship between man and the animal kingdom. The graves also contained small round ivory discs, perforated and decorated with dots, which are perhaps comparable to the clay “beads” of the flat, decorated type found, for example, in the Siretorp material (Bader 1975, pp. 2 et seq.).

The late Paleolithic finds from the mammoth hunting station at Dolní Věstonice in what is now Czechoslovakia, already referred to, are also very interesting in this connection. A large number of zoomorphic clay figurines, in various degrees of fragmentation, are known from this site and are taken to depict the mammoth, rhinoceros, horse, lion, bear, wolf, fox etc. Most of them range in size from 2 to 10 cm. Both animal and human figures occur here, and some have been carved in mammoth ivory, stone and bone. (Illustrations: see J. Jelinek 1975.)

B. Klíma reports that the first hut excavated on the site yielded 231 figure fragments and small “lumps of clay”, but the second hut yielded no less than 2,649 pieces. Most of the figurine fragments in this hut, which was somewhat to one side of the rest of the settlement remains, were found in a furnace-like construction (“... besonders aus der Ausfüllung des backofenartigen Gebildes”). Klíma imagines their ritual use to have proceeded as follows:

Am Rande der Knochenanhäufung wurden magischen Zeremonien ausgeiibt, die mit dem Jagdkult verbunden waren, welche der Häuptling oder irgendein Vorgänger der späteren Schamanen leitete, dessen Wohnsitz sehr gut errichtet war und ausser Bereiche des Siedlungsbereiches lag. In das backofenartige Gebilde inmitten der Hütte warf er bei Ausübung der magischen Praktiken die zerbrochenen Tierfigürchen. (Klíma 1963, p. 276.)

Clay figurines from Neolithic and Chalcolithic eras in South East Europe

M. Gimbutas’ research into Neolithic and Chalcolithic anthropomorphic and zoomorphic figurines (c. 7000—3500 B.C.) in the southeastern European area is also of interest in this connexion. In “Gods and Goddesses of Old Europe” (1974), Gimbutas writes: “Excavation of Neolithic sites has yielded numerous ‘bumpy’ figurines, often little more than two centimetres long, which archaeologists classify only as indeterminate or ambiguous objects. Examined as isolated, individual pieces they remain enigmatic, their role unknown.” (1974, p. 37.)

The archaeological contexts reported there are particularly interesting. It is clear that the anthropomorphic and zoomorphic figurines have been found together with particular structures which served a social purpose on private and/or communal occasions. There
have been several finds of clay models (e.g. one from Popudnia in the western Ukraine, which has been dated to the mid-fourth millenium B.C.), while excavation has revealed full-scale shrines of this kind on many sites. In summary Gimbutas notes that: "Shrines whose actual remains have been found take the form of rectangular houses divided into two rooms, one of which was furnished with an oven, altar (dais) and sometimes a separate sacrificial area. These seem to be domestic shrines. The pillar shrine at Cacioarele, located in the middle of the village, was probably a communal sanctuary." (Gimbutas 1974, p. 88.)

When comparing this with Swedish material, we may note that the animals to which Gimbutas ascribes special symbolic status include, for example, the pig. Figurines representing pigs occur throughout southeastern Europe. Gimbutas believes that the pig must already have acquired the status of a sacred animal in these parts of the world by about 6000 B.C. Figurines of pigs are as numerous as those depicting dogs, bulls or he-goats (Gimbutas 1974, p. 211).

Gimbutas presupposes a link between the porcine figurine and "the Vegetation Goddess". There are, for example, fragments of pig-figurines from Luka Vrublevetskaya on the upper reaches of the Dniester which bear the impressions of grains of corn. These finds have been dated to the mid-fifth millenium B.C. (1974, p. 211).

Jaw-bones of pigs and hedgehogs in the Ire-graves

Although the Ire finds have not included any clay figurines of pigs, whereas the finds from Åby in Östergötland appear to do so (see Fig. 2:5), it is nonetheless clear that the pig (i.e. the wild boar) played an important role and possessed great symbolic value. This is particularly confirmed by the burial goods in Grave 7, which include 19 lower jaws of pigs, representing two adult pigs, two virtually adult ones and fourteen piglets. This grave was constructed for a younger man, an elderly man and a small child. Beneath the chin of the child, aged 2 or 3, was found an amber bead in the shape of a "double-axe" (Janzon 1974, pp. 282 et seq., Fig. 30; Ekman 1974, pp. 214 et seq.).

The hedgehog is another animal for which several representations occur in figurines from southeastern Europe. The special importance of this animal in our northern latitudes as well, is illustrated by the discovery of the
lower jaw of a hedgehog in Grave 3 at Ire. The woman, aged 25—30, who was buried in this grave had presumably worn the lower jaw of the hedgehog round her neck together with a round amber bead and the pierced eye tooth of a dog (Janzon 1974, p. 268).

Summary
The animal figurines in the Ire material from Gotland — an island located in the centre of what might be called the Baltic region — have provided the starting point of this study. The comparative examples mentioned make it clear, first of all, that these zoomorphic figurines have a very long tradition, starting in the late Paleolithic and probably continuing until metals begin to play a part in society.

Secondly, figurines of this kind geographically have a distribution over a large part of Europe.

Thirdly, the archaeological material shows with increasing clarity that these figurines were probably used in traditional rites performed in particular places which we may presume to have been specially constructed and equipped with special attributes, e.g. altar-like structures, vessels, hearths etc. In other words, a social structure begins to take shape in which objects of this kind have their allotted functions and ritual contexts.

Conclusions
Given this background, is it sufficient to regard the custom of fashioning figurines solely as the result of outside influence more or less passively accepted? In this case, the influence should have come from a more firmly organized social system which dominated the recipient group.

This problem can also be viewed from another angle. The custom of fashioning these figurines may be presumed to have emanated from myths and rites which originated in a struggle for survival in which collecting, hunting, fishing and, possibly, livestock farming played a necessary part. As long as this rather affluent economy exists, the ritual tradition based on it will survive.
It is also conceivable that the accepted tradition expanded to accommodate possible specialization in livestock farming and, for example, the use of domesticated animals as a source of energy. Figurines depicting various domesticated species such as pigs, sheep, bulls and horses may be examples of this kind (cf. Skaarup 1975, p. 202).

From the economic point of view, the inhabitants of the western side of the Baltic region appear to have been able to base their subsistence on fishing and animal produce longer than those living in large areas of southern and western Sweden. The same natural conditions also appear to have prevailed in most areas on the eastern side of the Baltic.

This economic commitment may be reflected by the far greater incidence of animal figures in the rock carvings of eastern Sweden compared with those of southern and western Sweden (Burenhult 1974; Nordbladh 1974). There may be reason to ask whether there is a traditional and economic connection between, say, the pig-figurine from Åby and the nearby rock carvings of Himmelstalund, with depictions of several pigs.

The analysis of a society based on their economic resources confers a wider perspective than the conventional practice of division into 'cultures'. Areas which have economically similar resources may also be presumed to have had distinctive and essentially similar social structures. In addition there probably existed many locally evolved patterns of both social and economic organization. This becomes more and more apparent every time we analyse an archaeological site at the micro level.

To round off this study springing from the zoomorphic figurines and clay beads of the Ire material, it therefore seems reasonable to plead the necessity of greater emphasis on an economic approach to the problems of archaeology. The instruments which we have devised and used hitherto, for example in the form of a Funnel-necked Beaker Culture, a Battle Axe Culture, a Pitted Ware Culture etc., appear to be growing more and more insensitive and anachronistic. The archaeological material has to be analysed according to present-day frames of reference. Analyses of the material at the micro level must include an adequate study of the function. At the macro level the economic resources must be allotted a primary role.

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Zoomorphic clay figurines and beads

From the beginning of the 1900s have zoomorphic small figures and so-called beads of ceramic been included in the Swedish stone age material. After the first published finds, which were published by O. Almgren (1906 and 1907) and J. Nihlén (1925, 1927), several small figures and beads from material from Ire, Hangvar sn, Gotland (Nihlén 1925, sn. 215 ff.).

Later on, under Greta Arwidsson's investigations 1957—1960 on the Äleby-lot in the Gotland area, the small figures and beads were found in material from Ire, Hangvar sn, Gotland. (Nihlén 1925, sn. 215 ff.).

Small figures have been found in various localities on the Swedish mainland, e.g. Siretorp, Mjällby sn, Blekinge (Bagge & Kjellmark 1939, pp. 27—30); Fagervik, Krokek sn and Äby, Kvillinge sn on Gotland, and Äleby, Gisestad sn, in Östergötland; Överåda, Trosa sn (Welinder 1971) and Älby, Ösmo sn in Södermanland.

In this report, there are examples of zoomorphic small figures of ceramic material from Finland, Estonia and Latvia, and also, in some cases, fragments from Gotland, which may indicate that they were made from Gotland material.

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En analys av i första hand Ire-materialets
småfigurer ger följande gemensamma känne-
tecken:

1. Ett litet format, omkr. 2—5 cm i stor-
lek.

2. Figurerna framställs som a) helfigur, b) huvud, främre extremteter och en del av bålen, c) enbart huvud.

3. Avbildningen är starkt schematiserad
men med framhåvande av bestämda karak-
teristika, t. ex. stora öron; utstående ögon;
mycket korta ben; rörelse som utmärker lyss-
nande och/eller vaksamhet.

4. De flesta figurerna har utformats så att
de kan placeras stående.

Möjligen kan det antagas, att en del gamla
skador på figurerna kan vara resultatet av
medveten destruktion.

Angående avbildade djurarter är det av
intresse i vilken utsträckning — förutom jaktvilt — även olika husdjursarter, t. ex.
notkreatur, häst, svin, får avbildats.

Tyvärr ger dokumentationen av fyndsam-
manhagen ytterst knapphändiga upplys-
ningar. Vissa iakttagelser från Överåda, Sire-
torp och Ire ger dock en fingervisning om,
att både de zoomorfa småfigurerna och ler-
pärllorna förekommit i speciella strukturer,
där t. ex. rödockra, ”lerplatta”, härd, lerklärl, stolphål etc. syns förekomma.

Kronologiskt har de zoomorfa småfigurerna
en mycket lång tradition — från sen-
paleolitisk tid och fram i en tid då metaller
börjar påverka de ekonomiska samman-
hangen. Geografiskt förekommer de inom
större delen av det europeiska området. Bru-
ket att tillverka de zoomorfa småfigurerna
can antagas ha sin upprinnelse i myter och
riter, som äger samband med jakt, fiske och
eventuellt animalisk produktion. Så länge
denna försörjningsekonomi existerar, så länge
fortlever också den mytologiska föreställnings-
värld, som bygger på detta levnadsmönster. I
makt med en eventuellt specialiserad animal-
lieproduktion och t. ex. bruket av arbetsdjur
för ekonomins energiförsörjning, kan också
en utveckling av hävdvunnen tradition tän-
kas.

Syftet med denna uppsats är alltså inte,
att i första hand katalogisera de zoomorfa
småfigurerna i det peribaltiska området utan
att försöka göra en funktionsanalys av den
roll dylika figurer spelat med hänsyn till de
strukturer i vilka de förekommit.