

L. K A E L A S

THE MEGALITHIC TOMBS IN SOUTH SCANDINAVIA- MIGRATION OR CULTURAL INFLUENCE?¹

(Figs. 1-7; Pl. I-II)

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INTRODUCTION

In Scandinavia the term 'megalithic tombs' denotes those orthostatic chambered tombs built during the Neolithic. They are divided into three main types: dolmens, passage graves and gallery graves, this being also a chronological sequence as regards their first occurrence in the area in question.

Dolmens and passage graves are types of tombs built by the Funnel Beaker Culture in South Scandinavia and adjoining parts of North Germany. The first-mentioned began at the end of the Early Neolithic (EN), but continued in the early Middle Neolithic (MN); the latter were constructed only during the Middle Neolithic, though they were not used by all South Scandinavian and adjoining groups. The gallery graves belong to the Late Neolithic (LN). In South Scandinavia there are in our opinion and contrary to older conceptions, no instances of chambered tombs which suggest a contact between the older tradition of passage graves and

the younger one of gallery graves. At the time when gallery graves were being built, the building of passage graves had long since ceased. This is clearly shown in the grave finds. According to the evidence given by the pottery finds both in Sweden and Denmark, the building of passage graves seems to have ended before the middle of MN². There is at present no evidence of any building of passage graves after MN: III. In some regional groups, for example in Northern Jutland (the Limfjord area in particular) and in the archipelago and coastal areas of Bohuslän, the period of their construction was most likely very limited, covering mainly MN: Ib. However, it must be pointed out that the Funnel Beaker Culture continued using the chambered tombs long after the building of them had ceased. In Denmark their use lasted in some areas, although sporadically, until the very end of MN (*i.e.* MN: V); in Sweden (in Scania) there are assured proofs at least from MN: IV. On the other hand secondary burials³ occur both in older and in younger megalithic tombs sporadically into the Iron Age.

Within South Scandinavia and the adjoining parts of North Germany there are c. 7,000 dolmens and passage graves, of which Denmark has 4–5,000 dolmens and c. 700 passage graves. In Germany there are altogether c. 1,000 megalithic tombs, of which only five have been proved to be passage graves of Scandinavian type, the remaining dolmens (the so-called *Grossdolmens* included, *i.e.* dolmens with an inner length exceeding 2 m and a breadth of more than 1.4 m)⁴. Sweden has c. 70 dolmens and 380 passage graves.⁵ Of the Scandinavian countries, Sweden heads the list as regards gallery graves; in Denmark there are about a score according to the literature (Forssander, 1936, fig. 22), though probably the number is somewhat greater, whilst in Sweden there are several hundred. It must be emphasized that this is the picture we have to-day, as the number of destroyed tombs must be tremendous. During the last hundred years alone the number of megalithic tombs has decreased considerably.

We presuppose that the types of graves in question are sufficiently well-known through the literature not to have to be described any further than is necessary to illustrate their origin as seen against the European background. When discussing the various types of graves and their distribution, we will only consider the graves themselves.

That side of the culture which is represented by artefacts (pottery, tools, weapons *etc.*) is completely left aside, as the artefact-material is *quite different* in Scandinavia from that in the various megalithic tomb areas in Western Europe; and there is nothing whatever upon which to base any discussion of movement of people. On the other hand, the monuments themselves show such far-reaching similarity that they force us to consider the question of migration or cultural influence. We must here disregard the occurrence of certain classes of chambered tombs in Central and East Europe because of their deviating type and/or technique of building.

Further, we will discuss certain burial rites, taking South Scandinavia as the point of reference. We are quite aware of the dangers of this narrow way of looking at things, and we will try not to disregard these dangers, but investigate what may be obtained from the graves themselves and their distribution.

DOLMENS AND PASSAGE GRAVES

Burial Rites

The term 'burial rites' covers most of that which is directly or indirectly connected with the interment and the care of the dead.

As is the case in the various areas of megalithic tombs in Western Europe, older excavations in South Scandinavia usually comprise only the burial chamber itself, and sufficiently careful excavations are not very numerous. But the more recently investigated monuments, completely excavated according to modern archaeological field methods, are also few in number. The most reliable observations can be provided by tombs found intact or only with minor disturbances, but these are extremely rare. Therefore we will here refer not only to these, but also to such traits and observations as occur in a large number of excavation reports, and can thus be considered to be part of a more or less regularly occurring burial ritual.

It has often been observed in South Scandinavian dolmens and passage graves that the floor of the burial chamber was completely or partially covered with a layer of burnt, crushed flint, or that the trodden mud floor had been subjected to strong heat before the first interment. We can only guess at the ideas behind this – consecration or purification rites – we cannot, however, prove anything. Traces of fire have also been found in front of the graves (by passage graves), but the connection with the burial is less clear in this case. These observations have also been made in connection with West European graves of passage grave class, and had most likely the same purpose as in Scandinavia.

In Sweden and Denmark burnt and/or scorched bones have not seldom been found, mainly in passage graves. It should be pointed out that human burnt bones are found not only in the tombs but also outside, deposited in front of the entrance area and in the mound or cairn. The quantity of burnt bones found outside the tombs is *usually* small in every individual spot. On the other hand, there is always more than one finding spot, now and then in association with artefacts belonging to Funnel Beaker Culture. As to the finds of burnt and/or scorched bones in the burial chambers, it is often impossible to decide whether they belong to the period of the primary use of the grave or to later secondary burials. In a passage grave in Scania (Gillhög, Barsebäck parish) burnt bones were, however, found in such a position that they could be considered to belong to the primary interment period.

Whether the burnt bones should be interpreted as signs of human sacrifice, as some archaeologists do, or as early sporadic examples of cremation, cannot be decided on the material available at present. In some places in Western Europe cremation occurs sporadically in tombs of passage grave class (and is dominant in Camster-type chambers in Caithness, and in Ireland within the Boyne culture) but on the whole burial by inhumation dominates. However, it ought to be pointed out that published excavation reports do not give any definite observations indicating human sacrifice in megalithic tombs in Western Europe.

Another thing that has often been observed in excavations of dolmens and passage graves, is that the burial chamber (and in passage graves the inner part of the passage too) has been partly or completely filled with earth or earth and stones, or sometimes with sand. This has usually been explained as a secondary phenomenon, for instance as earth oozing in from the mound. This deposit of earth, or at least the upper layer of it, is of course secondary in badly damaged graves, but with well-preserved graves this interpretation is not satisfactory. An intact megalithic tomb, and especially a passage grave, is an almost hermetically closed chamber (Fig. 1–2). If such a grave is filled with earth it is not accidental. In support of this conclusion we can mention, that both in Sweden and in Germany there are tombs filled by a material different from that of the mound (Kaelas, 1956, p. 22 f. and cited lit.).

If we consider the circumstances of the finds, both skeletal remains and grave gifts, in South Scandinavian passage graves, they often seem rather chaotic (Fig. 3). As regards horizontal stratigraphy nothing has been noted which is of any value in forming an opinion about the usual assemblage of grave-gifts given by the tomb-builders at any one burial. As regards vertical stratigraphy, there are, fortunately, some observations of particular interest in a few cases. There are some cases of Funnel Beaker finds in the bottom layer of the graves, sometimes even covered by a layer of pebbles or small flat stones, and on top of this the filling material of the chamber. The finds in the upper layers seldom belong to the Funnel Beaker Culture, but often to the Swedish Battle-Axe, or Danish Single-Grave Culture respectively and/or to the LN Dagger-Culture. These finds seem to indicate that the filling of the grave is not a primary trait in the burial customs of the megalith builders. There are, however, many cases recorded where the find-layer was covered by one or more layers of stone (sometimes there also occurs a covering layer of clay and flint)⁶ and finds from secondary burials are made at the same level as those from primary interments, *i.e.* in the bottom layer of the grave (Nordman, 1918, fig. 12, 77, 97). In these cases there are very often LN daggers or other distinctive artefacts among the finds. Thus the custom of covering burial layers in the above-mentioned way seems to belong predominantly to the practices that came into use in LN, according to the observations made.

Outside Scandinavia there are a number of examples of intentional filling in

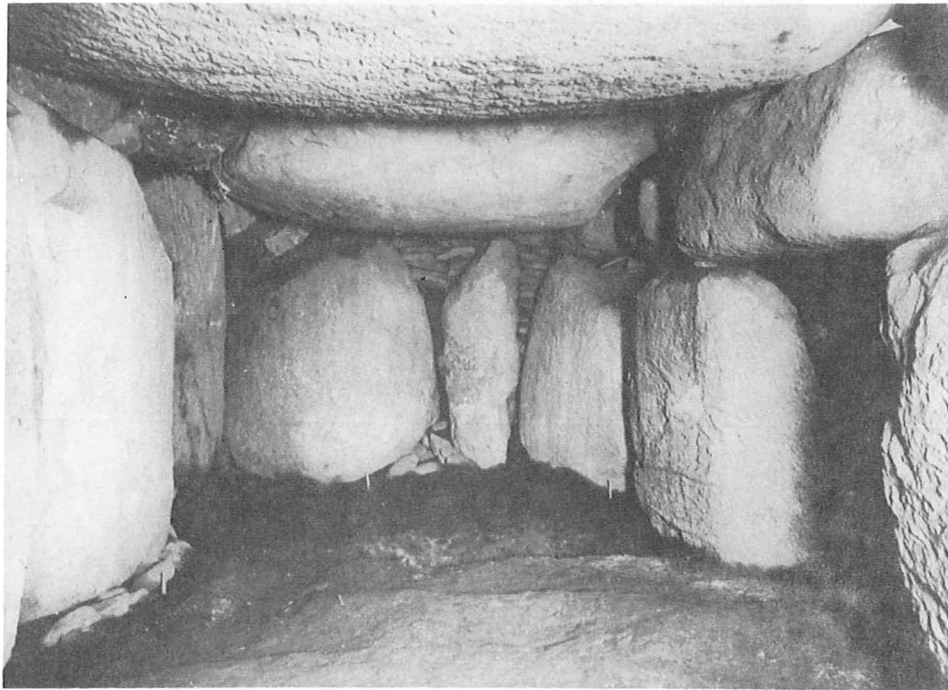


Fig. 1 Passage grave 'Gillhög' in Barsebäck, Scania, Sweden.
The interior of the chamber. Foto ATA.

graves, in the Iberian peninsula, Ireland, Scotland, England and France. The West European examples show that in the areas mentioned the intentional filling up of graves is far from uncommon, though not predominant. Judging from the finds in graves with intentional filling, these graves also seem to have been filled after the period of primary use.⁷ However, the finds are often so few and indefinable that we cannot draw any chronological conclusions in this respect.

In Western Europe finds in passage graves also occur, usually lacking internal order. Thus it seems to be a characteristic of the megalithic burial customs not to have had any particular respect for earlier interments when a new burial took place.⁸ A certain amount of disorder can and has been caused, of course, by secondary burials. Furthermore, we have to take into account possible grave-plundering even in pre-historic times, not to mention later ones, as a contributory cause to the chaotic circumstances of the finds. From all this it is clear that it is not usually possible to judge in what position the bodies were buried. As regards South Scandinavia, it is believed that the dead were placed in contracted position in small dolmen chambers and in extended position in passage graves. We stress that these assumptions are mainly founded on the size of the burial chambers and not on assured primary

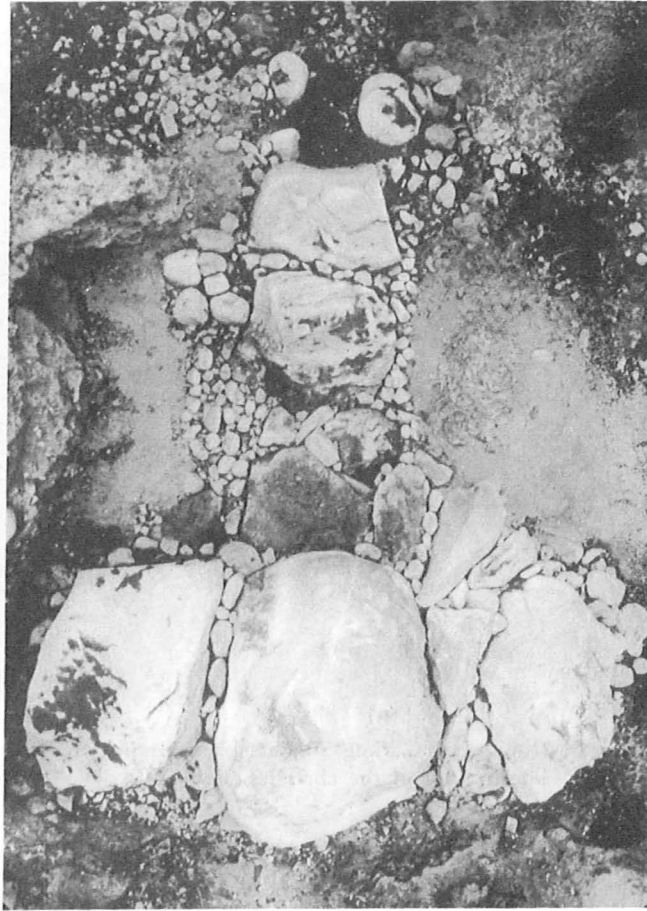


Fig. 2. Passage grave 'Gillhög' in Barsebäck, Scania, Sweden. Foto ATA. Note that the exterior has been made tight by dry masonry.

finds. On the other hand, taking into consideration that the average height for men in Denmark during MN was 165,4 cm and for women 151 cm, according to K. Bröste (1956, p. 101), then the considerably large number of dolmen chambers less than 1.4 m long strongly favours the idea of contracted burial, even allowing for a high death rate for children (if dolmen-chambers erected for interments of children were shorter).⁹ It must also be borne in mind that with regard to the small passage grave chambers (with a diameter or length of 2 m) there is not enough room for an extended burial of more than one or two grown-up persons at a time. In any case, we do not know whether the extended position was a regular custom among passage grave builders. The few extended skeletons found in Danish passage graves stem from the last interments and cannot be used as a basis for general conclusions.

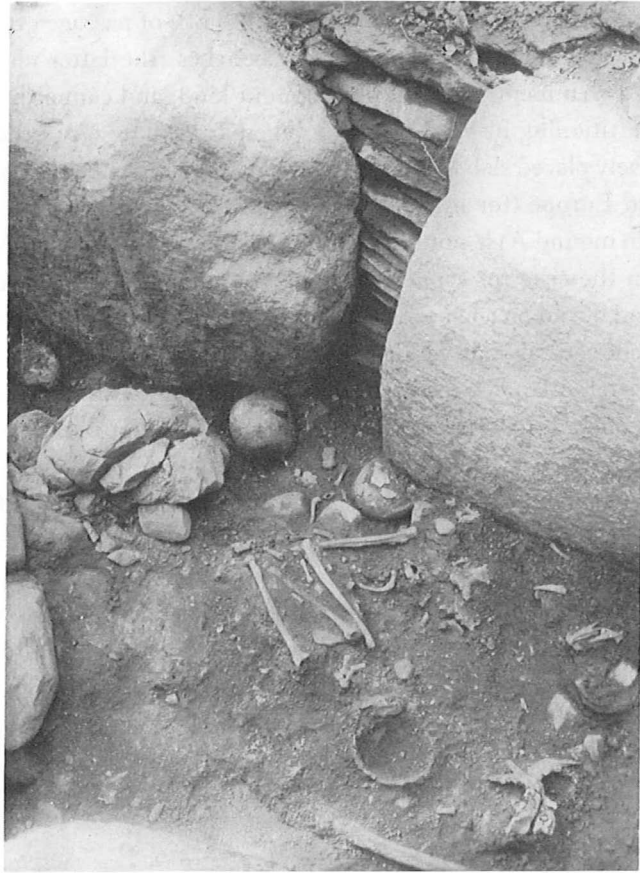


Fig. 3. Finds in the passage of the passage grave 'Gillhög' in Barsebäck, Scania, Sweden.
Foto E. Grothén.

However, observations have been recorded of an entirely different burial custom in a local group in Sweden (Västergötland).

The passage graves of Västergötland have, over and above their more consistently north-south position (passage to the east), another characteristic as distinguished from the conditions pertaining in South Scandinavian passage graves. This consists of partitioning walls of low, upright slabs, transversely placed along the chamber walls (Fig. 4), giving these graves as a group a unique place in relation to the passage grave areas of both Scandinavia and Western Europe. The partitions vary in number, but can sometimes be as many as eighteen. There are a few instances of similar partitioning walls in West European passage graves, the best example of this being the well-known passage grave at Mont Ubé on Jersey, but they are exceptional. The

septalization that often occurs in West European tombs of passage grave class, with niches or stalled chambers with shelves and benches (the latter characteristic of Orcadian stalled chambers) is of a quite different kind, and cannot be placed on a par with the partitioning in Västergötland. The partitioning off of the chamber by a long transversely placed slab that occurs now and then in the Danish passage graves and in Western Europe (for example in Central Western France, in Bougon, the passage grave in mound A) is not fully comparable to the examples in Västergötland either. Nor can the cists for separate burials that commonly occur in the passage graves in Jutland be put on a par with the partitioning walls of Västergötland. Nevertheless this architectural trait cannot be considered as an invention of the tomb-builders of Västergötland, but is probably a local "translation" of passage graves with compartments of the type Kerleven in South Finistère, Bretagne, and coming ultimately from South Iberia. According to information given in older literature (often repeated in later publications) there have been finds in graves with partitioning walls indicating burial in sitting position (Sahlström, 1939, p. 11, figs. 4, 7 and cited lit.). Such observations have not been confirmed by later excavations. They could quite likely have been burials in contracted position with knees pulled up rather high. However, judging from the photoplan of a recently excavated passage grave of Västergötland (Fig. 4), it is obvious that the partitions are of variable size, the smallest ones measuring 50 (and less) \times 100 cm. Thus the size probably corresponded to the size of the deceased individuals. The excavation revealed a picture of find circumstances that coincides with similar observations elsewhere; broken



Fig. 4. Passage grave with partitioning walls of low, upright slabs. Rössberga, Valltorp parish, Västergötland. Foto J. E. Sjöberg.

skeleton fragments without any order, even at different depths, and thus not giving the faintest hint as to the position of the dead. As the osteological examination has not yet been carried out, it is not known how many individuals each compartment contained. The provisional information concerning the number of burials in the tomb is 40, the number of compartments 17.

Judging from the number of primary finds in the graves, the oldest rectangular dolmens were originally built as single graves. The same seems to be valid for the earliest polygonal dolmens (also from EN), but the finds are too scarce for a general conclusion. According to the finds, all passage graves were built for several burials. The number of interments in them varies, and is not related to the size of the chamber. The fact that some of the small rectangular dolmens, as well as the large ones, have been used by the Funnel Beaker people for repeated interments is – as far as it can be judged from the known material – a secondary trait and might be connected with the new burial customs introduced either already with the polygonal dolmens or with the passage graves. However, during a certain period both dolmens of various types and passage graves were built. But we do not know whether dolmens continued to be built as single graves after the custom of collective tombs was introduced. Nor can we answer the question as to when the building of dolmens definitely came to an end.

In the South Scandinavian passage graves, finds are made not only in the burial chamber but also outside it. In cases of well-preserved tombs it has several times been noticed that the outer part of the passage has been blocked, *i.e.* filled with a mass of stones mixed with earth, which continued outside the passage and on both sides of the entrance along that part of the kerb of the monument, which has the form of a “facade” and faces the forecourt area (but is almost always covered by the mound (Fig. 5). When removing the earth which covered the filling it was found that among the uppermost finds there are quite often some of LN character, while the mass of finds in the filling itself almost entirely belongs to MN and the Funnel Beaker Culture.

In contrast to what has been maintained earlier, we have to-day clear evidence that finds of the above type also occur in Västergötland (Cullberg, 1963, fig. 2). Notwithstanding the absence of systematic investigation of the area outside passage graves in Bohuslän, it is quite clear from older excavation reports that finds have occurred in front of the passage even there. Comparable finds are also recorded outside dolmens, though usually in small quantities (but exceptions occur). However, the finds of this type in front of dolmens are usually from MN, more seldom from EN, and in that case usually as single finds.

Finds in the above-mentioned fillings are mainly characterized by being nearly always damaged objects. Arrowheads, beads of amber and some flint blades are the only exceptions. The number of potsherds varies from place to place, but it is not



Fig. 5. Passage grave 'Jordhøj' at Katbjerg, Jutland. The so-called 'facade' (the front part of the kerb around the monument) and one 'shelf' slab (x) *in situ*: before the excavation the facade is always covered by the mound. Foto Kjaerum.

unusual to find tens of thousands of them, from something like a thousand or more different pots (Bagge-Kaelas, 1950, p. 72). Nowhere, however, have such large amounts of finds outside passage graves been found as in Scania. Outside South Scandinavia, finds have sporadically occurred outside graves belonging to continental Funnel Beaker groups that were megalith builders, but only in relatively small amounts (Wegewitz, 1956, p. 56 ff).

The same obtains for the areas of megalithic tombs in Western Europe. There are also occasionally, among different culture groups, a few finds outside the burial chamber, set in a way indicating that they were originally placed there for a special purpose. Otherwise the circumstances of the finds are not comparable to those in Northern Europe.

The finds outside passage graves in Scania and Denmark have long been noted. The interpretation of these and the circumstances of the finds have given rise to a great deal of discussion. To-day most archaeologists would agree that *most* of the finds outside graves were deposited there as offerings and were never inside the

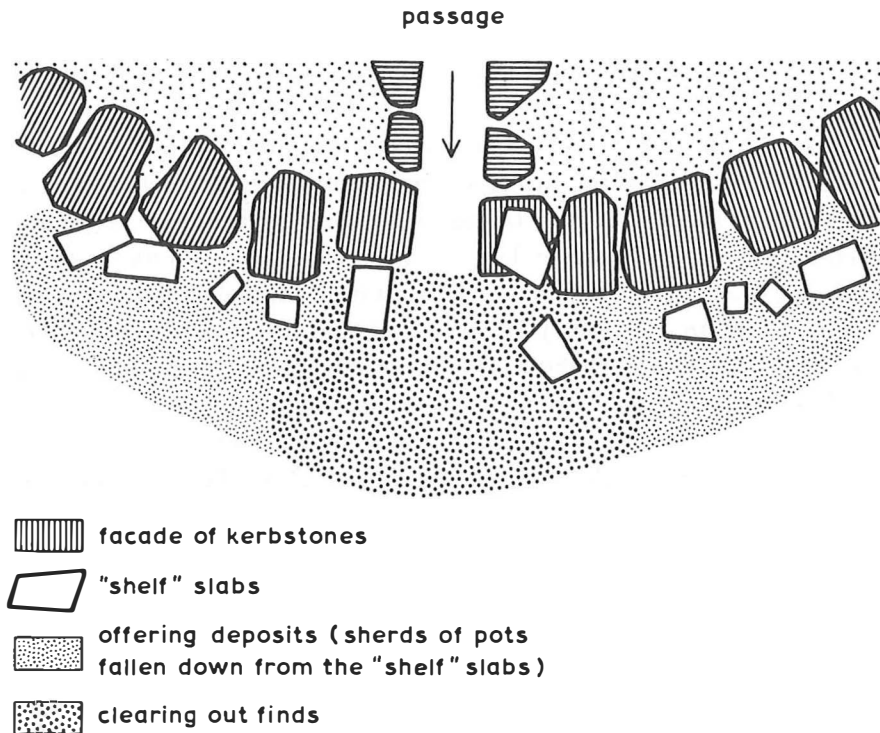


Fig. 6. Find circumstances in front of the passage and facade stones. After Kjaerum.

chamber. There are two passage graves where the find circumstances confirm this clearly. One is the passage grave "Jordhøj" near Katbjerg south of the Mariager Fjord in Jutland. When excavating the area in front of the outer entrance of the passage and along the high kerbstones, the so-called "facade", finds were made. According to the excavator, the find layer was dark and fat in front of the passage (Kjaerum, 1965, p. 4 ff.) and contained stone, burnt flint, flint-axes, arrow-heads, amber ornaments and pottery sherds. This layer was found upon a layer of gravel mixed with stone and flint. Underneath the latter, a new find layer occurred – much richer than the uppermost layer. These finds seem to have consisted only of pottery. Between the pottery sherds and the facade there were heavy dressed slabs, some of which were leaning against the kerbstones in an almost vertical position; one slab lay horizontally like a shelf upon a kerbstone, presumably in its original place (Fig. 5–6). It is hardly to be doubted that even the slabs found in front of the facade were originally placed in the same way.

The lowest layer of potsherds is therefore constituted by what remains of pots

that were placed upon this shelf and fell down, owing to the movement of stone and earth in the mound. According to the find circumstances the slabs must have fallen down afterwards.

Observations implying the same state of affairs were made in front of a Scanian passage grave excavated by the author at Örenäs in the parish of Glumslöv. Apart from the pottery finds in front of the passage and along the facade, a few sherds were found in a couple of spots in the mound very close behind the tops of the kerbstones/facade stones (which before the investigation of the monument were covered by the mound and thus invisible). In one case fragments of pots were found also between the facade stones, slightly above the ground level. On the other hand, no “shelf-slabs” of comparable size to those of “Jordhøj” were present. Behind one or possibly two kerbstones, there was a tiny thin slab; similar flat stones were present also among the finds (here, too, mainly potsherds). However, they did not occur in stratified positions comparable to those of “Jordhøj” and do not allow any conclusions. The finds outside the tomb occurred between several layers of head-size and smaller or larger stones (the top layer of the “cairn” being practically sterile and covered by a humus layer). Apart from the exceptionally numerous stone “layers” in the cairn (normally there are one or two layers of stone) the find circumstances were characteristic for South Scandinavian passage graves.

The upper layer of “Jordhøj” finds in front of the passage mouth were interpreted by the excavator as grave deposits cleared out in the Late Neolithic (Kjaerum, 1965, p. 7). It seems indeed that the alternative, that some of the earlier grave-goods were cleared out, cannot be excluded, as we have tried to prove earlier. Incidentally, nobody has ever found potsherds from one and the same pot both inside a burial chamber and outside it, even with this possibility in mind when going through the material. Furthermore, we have no definite observations as to who practised this clearing out – the tomb-builders or other culture groups making secondary use of the tombs, or possibly both of them.

As to the offering deposits discussed above, it must be borne in mind that there is no equivalent to this custom in Western Europe. In view of the fact that right from the beginning the Funnel Beaker Culture practised depositing sacrifices in bogs (especially pottery – naturally not empty pots – but also axes and amber beads), it is possible that the sacrifices outside passage graves are another aspect of a basically similar belief.

The Origin of Dolmens (Pl. I)

No satisfactory solution to the problems concerning the origin of dolmens has been reached in spite of many interpretations. As regards the long barrows with rectangular chambers, there are nowhere within the West European megalithic tomb areas graves that agree with the Scandinavian and North German types sufficiently to be regarded as their prototype. The West European long barrows without stone-built chambers (in Western France and along the English Channel) have instead been considered by West European archaeologists to have their origin in the Continental Funnel Beaker Culture's similar long barrows without stone-built chambers. This is why there has hitherto been no evidence against the theory that the chambered long barrows of Nordic type have their origin, in a broad sense, within the Funnel Beaker Culture.

In contrast to the chambered long barrows, there exists an equivalent to the polygonal dolmens with or without a short passage of a pair or two of stones, in round barrows or cairns, outside our area.¹⁰ These can not, in our opinion, be seen as a native South Scandinavian development from the rectangular dolmens (or under the influence of West European tombs of passage grave class) although this has been the prevalent opinion among most Scandinavian and German archaeologists. If the polygonal dolmens had developed under the influence of passage graves, it would imply the following – if our relative chronology is correct. There is first a cultural influence resulting in polygonal dolmens (EN: C), and sometime later (MN: Ib) we get the passage graves proper.¹¹ The very distribution of the polygonal dolmens within the Funnel Beaker Culture contradicts this theory of development. This is the only type of dolmen in Bohuslän, where it occurs practically only in round barrows; in Denmark these dolmens have a pronounced eastern distribution (Pl. I) with two *main* concentrations; they occur in round as well as in long barrows, but the former type of barrow is far more numerous: on the Djursland peninsula in Jutland and in northwestern Zealand.¹² Besides these, there is a considerable accumulation in the area between Limfjord and Mariagerfjord. It is also noteworthy that the small closed rectangular chambers do not occur within the main distribution areas of the polygonal type in Jutland (Aner, 1963, fig. 3 and 6). In addition, the polygonal dolmens are small in number in Scania and North Germany¹³ and practically non-existent in East Germany. The main centres of the rectangular dolmens (both in long and round barrows; long barrows occur in greater number) are on Zealand (in the north-east and in the middle west respectively) with considerable accumulations on the islands Lolland-Falster-Møn and Langeland, southern Fyn, and in the coastal regions of southeastern Jutland.¹⁴ This distribution pattern seems to confirm our theory that the polygonal dolmens have a different origin from the rectangular ones and that they reached the above-mentioned areas of South

Scandinavia – *i.e.* the coastal regions of Kattegat and the Western Baltic – only by the western sea-route and through Limfjord.

The circumstance, that within their South Scandinavian distribution area polygonal dolmen chambers quite often occur in long barrows; that rectangular chambers also come in round barrows (these latter are particularly abundant on Zealand); and that there are forms that are obviously a mixture of the two main types, indicates a fusion of the two main traditions within South Scandinavia, rather than a development of one type out of the other.

The fact that exactly the same types of polygonal dolmen chambers are found in Western Europe also speaks against an indigenous development in Sweden. In the British Isles they are best represented in North-west Ireland where there are some small groups, for instance at Carrowmore, near Sligo.¹⁵ It is here interesting to note that in the Boyne valley, one of the most important districts of passage graves in Eastern Ireland, there are no dolmens, and also that they are rare in England, where the few that exist are almost exclusively in the West.

According to French archaeologists, there are also a number of simple dolmens in round barrows in France, mainly in the interior. In our experience there are, however, also small rectangular chambers with open gables comparable to South Scandinavian rectangular dolmens, open in a similar way. There is, however, no work summarizing the distribution and cultural and chronological background of the French tombs of dolmen class. The only region about which we are better informed is Brittany. A group of about fifteen polygonal dolmens, without passages and in round barrows, is found in the extreme west, on the peninsula of Crozon (Finistère), where they are the only type of megalithic tomb (except for two disturbed gallery graves of uncertain type).¹⁶ Another group of about ten graves that can be classed as polygonal dolmens with short passages consisting of a pair of stones is found in the Carnac district. Otherwise the Iberian peninsula is richest in dolmens in Western Europe. The main area covers Portugal and adjoining parts of Spain. In the South of Spain we find similar graves in Granada. According to the literature¹⁷ dolmens without passages are not so common in Alentejo (otherwise the province of megalithic tombs); the numbers increase in Beira Alta, but the main area lies north of the river Douro in the Trás-os-Montes province, especially in the northern part and adjoining districts. In this connection we must mention that in this area dolmens sporadically occur with two adjoining wall stones hewn obliquely so that they together form an oblong entrance opening¹⁸, in principle comparable to some portholes in Breton gallery graves with lateral entrances. We also find this kind of entrance opening in a small number of dolmens in Bohuslän, which we have earlier misinterpreted as a secondary trait in them (Kaelas, 1961, p. 17 ff.). When the polygonal dolmens with a short passage of a pair of stones are included, the density for the whole of the Iberian area will be considerably higher, especially in Central

Alentejo, than shown by the Leisner's distribution map (Leisner, 1956. Taf. 71). The Iberian dolmen types mentioned here are remarkably like the South Scandinavian, the Irish and the Breton dolmens. However, dolmens that are rhombic in plan do not occur in Brittany. It is interesting that in Iberia dolmens occur side by side with both small and large passage graves.

As in Ireland, in Brittany and France, the polygonal dolmens on the Iberian peninsula present difficult problems concerning their chronological position within the respective area's grave typology. Neither has it been possible to decide whether the differences in their construction and size in relation to the passage graves can be due to social differences or to something else.

With this background in mind in addition to the distribution pattern in South Scandinavia, it seems to us inevitable that the two Scandinavian dolmen types must be considered to have different origins.¹⁹

The Origin of Passage Graves. (Pl. II)

In contrast to the dolmens, the passage graves of Scandinavian type occur almost only in Scandinavia proper. The river Eider in Schleswig forms their southern boundary. To-day all archaeologists agree that the passage graves (or at least those with polygonal, rhombic, square and small oval chambers) have their roots in Western Europe. But it cannot as yet be decided whether the regular T-shaped graves, and in particular the large rectangular chambers, are an indigenous Scandinavian development from the small oval chambers or if the impulse came from outside. Opinions also vary concerning the age of the different forms of chamber.

Since Montelius, the small chambers of above-mentioned types are usually taken to be typologically the oldest, and the large oval and rectangular chambers, especially those in Västergötland, are considered to belong to the final phase of the development. This typology of the chambers is, however, sometimes contradicted by the finds (the pottery), which indicate that some of the T-shaped graves were built during early MN (*e.g.* the passage grave at Tustrup, Jutland, see also p. 323). On the other hand, it is noteworthy that among the 200 passage graves in Jutland only *a few* have a regular T-shape, and none are strictly speaking rectangular. According to P. Kjaerum (1966, p. 332) the construction of the excavated Jutland graves is with few exceptions dated to MN: *Ib*, *i.e.* the initial building period of South Scandinavian passage graves. As regards Västergötland it is too soon to reach any conclusion from the only recent excavation of a passage grave with a large rectangular chamber (9 × 2 meters). However, we would like to mention that according to the pottery (Cullberg, 1963, fig. 12–20) – which completely fits the picture we have obtained when investigating Scanian passage grave finds – the grave seems to have been constructed in

the beginning of MN: II, *i.e.* just after the initial phase of building had started.

Opinions vary greatly regarding the more limited area of origin of passage graves. Formerly it was considered that the Breton and English/Scottish passage graves were the models for the South Scandinavian ones, taking into consideration the distances involved. During the last decade a small group of about ten graves, the Clava group at Moray Firth, has been specially mentioned in this connection (Piggott, 1954, p. 260). Also considered are the Irish passage-grave groups, mainly the Boyne valley group. When looking at the Irish and Scottish groups as a possible model, certain details are particularly referred to, such as the occurrence of lateral chambers, kerbstones and in particular the part of the kerb adjacent to the mouth of the passage more or less in a straight or slightly outward curving line, thus making a 'facade' of larger stones facing the forecourt (Fig. 5-6). Both these architectural traits are not so limited but occur within other West European groups as well. It is noteworthy that in the case of well-preserved monuments, both in South Scandinavia and elsewhere, this 'facade' is as a rule almost entirely covered by the mound, and thus invisible before excavation. Furthermore the presence of a stone decorated with incised ornament at the mouth of the passage (this has been found only once in South Scandinavia, at Bigum, Jutland) and, in some cases, the large and impressive barrow are referred to.

Most of the comparisons made between these and South Scandinavian graves are based on general similarities in the lay-out, without regard to the differences in essential structural and technical details of the building, for example the presence of round chambers (dry-walled or with orthostatic base) with corbel-roofing, which is characteristic of tholos-type passage graves and their derivatives, or of peristaliths (a circle of monoliths at a certain distance from the limit of the mound; the best type examples are a group of Clava tombs: Balnuran of Clava – centre, NE and SW – and New Grange in Boyne Valley). With the exception of a small number in North-west Ireland (near Sligo), most of the Irish and Scottish passage graves are types that deviate from the Scandinavian ones, both as regards plan and building technique, especially those in Caithness, the Orkneys and Shetlands (O'Riordain, 1953, fig. 5, 52-54, 63; Henshall, 1963, fig. 106-145). Here we can also bear in mind the custom of cremation burial in eastern Ireland and in Caithness.

The only areas where we seriously think there are a large number of tombs similar to our Scandinavian passage graves are large tracts of the western part of the Iberian peninsula and in Brittany. In the latter region, however, the number of these tombs is limited.

If we examine what types there are among the thousand chambered tombs in Brittany, we find that about 50% of them²⁰ are passage graves, though most of them are of fairly advanced forms (*e.g.* with cruciform or transepted plan). Of these five hundred passage graves (of which about 300 still exist) only thirty to forty be-

long to the simple type²¹ with small, polygonal, round or almost square²² megalithic chambers (*i.e.* without entire dry-walling structures behind the orthostatic building which is characteristic for the construction of the so-called classical type of West European passage graves) similar to South Scandinavian tombs. It should also be mentioned that both areas – Brittany and the Iberian peninsula – contain some V-shaped passage graves of which there are only a few in South Scandinavia, in Denmark. Brittany lacks, however, the rhombic and markedly oval chambers, the latter being very common in South Scandinavia. The same is practically valid for rectangular chambers, of which there are only few recorded in Brittany.

If we now look at the megalithic tombs in Portugal and adjoining parts of Spain, north of the province Algarve, we find that the orthostatic (*i.e.* the megalithic) passage graves are by far the dominating type. There are no particulars of numbers here (the inventory is not yet finished), but judging from the published material, there seems to be a greater number of passage graves than in South Scandinavia. The *main area* lies *inland* in the province Alentejo and the adjoining provinces Badajoz, Cáceres, Beira Alta and Trás-os-Montes. The two largest concentrations in Atlantic Europe of orthostatic passage graves of the typologically oldest simple type lie in middle Alentejo and in Beira Alta. In some ways we find there also the greatest unity as regards the plan and construction of the graves. Over and above those chamber types mentioned in connection with Brittany, there are also passage graves with rhombic, trapeziumshaped and oval chambers. However, the two last-mentioned chamber forms cannot compete in numbers with the more or less rounded or pearshaped polygonal chambers which are the leading type. The rectangular chamber also occurs within both areas, but is rare. The above-mentioned “facade” formed of kerbstones on both sides of the outer passage entrance, which is so characteristic of the South Scandinavian passage graves, occurs also in the Iberian peninsula. However, like elsewhere when both tholostype graves and orthostatic passage graves occur, this particular construction detail (which is functional as well) also appears in connection with both of them. Whether this is common or not amongst the Iberian orthostatic passage graves, particularly among the small tombs, we do not know. Most excavations have only dealt with the burial chamber and not with the surrounding barrow.

Both in Portugal and Spain it is rare to have more than *one* stone chamber in a barrow and there is as yet no known example of more than one orthostatic passage grave of the above-mentioned types in one barrow. Round barrows containing two passages graves with parallel passages occur in Brittany (they are quite numerous in the coastal area of Morbihan) and Normandy – though structures of the Fontenay-le-Marmion and Barnenez type have a different character and cannot be placed on a par with the Scandinavian barrows, which with only one exception (containing three tombs) do not contain more than two passage graves. In South Scandinavia, with

one exception in Denmark, these two graves are always placed in the same side of the barrow. However, Denmark, with its 57 barrows, is the richest area for barrows with two passage graves. Their distribution is concentrated characteristically enough in Zealand and North Jutland. On Zealand there are two centres, in the northwest especially around Kalundborg and in the northeast on Isefjord and Roskildefjord. In North Jutland they lie concentrated east of the eastern tributary of Limfjord (between the eastern shore of Lovns Bredning and Hobro).

As evidenced by the finds, these double passage grave barrows start about the same time as the barrows with one tomb. It is therefore significant that their distribution on Zealand coincides with that of the oldest ordinary passage grave barrows. (Brøndsted, 1957, p. 234, 236; distribution maps). As a rule the double passage graves are in a round barrow, though they occur in long barrows of the same type as dolmens as well. In the latter case it is always a question of small polygonal chambers (usually covered with one capstone).

Dolmens and passage graves in Brittany have earlier been considered by Scandinavian archaeologists to be the probable model for the Scandinavian passage graves (Nordman, 1935, p. 111). Considering firstly that the earliest passage graves in both the British Isles and Brittany can scarcely be explained convincingly without postulating direct contact with the Iberian peninsula (the diffusion most probably involving only a few people), and secondly that the types that concern South Scandinavia are relatively few (small polygonal or slightly oval chambers of simple type) or practically non-existent (rhombic chambers) in Brittany but abundant in the western parts of the Iberian peninsula, it does not seem improbable that the first Scandinavian megalith builders also had direct contacts with Iberia.

GALLERY GRAVES (Fig. 7)

As we have already mentioned, Sweden is the Scandinavian country richest in gallery graves, *i.e.* those primarily intended as communal tombs. In the past several attempts have been made to divide these gallery graves into types. For our purpose it is sufficient to divide them into two main groups based on the disposition of the burial chamber:

1. gallery graves split into gallery (*i.e.* burial chamber which sometimes is divided into two or three compartments by transverse slabs), and antechamber (built of one or more pairs of slabs and measuring at least 1 m in length) or entrance porch (of a pair *narrow* slabs) approximately in a north-south (northwest-southeast) or east-west *etc.* position, and
2. gallery graves consisting of one chamber approximately in a north-south *etc.* or east-west position, enclosed or open at the south or east end.²³

The first-mentioned gallery graves in Sweden are usually called several-roomed gallery graves, although the most common type within this group has one undivided chamber. Within this group, altogether 150–200 graves, about 70 are provided with a porthole in the transversal wall separating the antechamber or porch from the burial chamber. This group occurs in a belt from North Halland and Bohuslän across Dalsland and Västergötland into Östergötland and Närke; they reach their largest concentration between the lakes Vänern and Vättern. One grave with such a ground plan has recently been made known also from Småland.²⁴ Within this area the one-roomed gallery graves are also well represented. On the other hand they are the only type of gallery grave that is found in the south of Sweden. In the southernmost province of Sweden, in Scania, they are quite few but they are numerous in inland areas north of Scania. Both classes of gallery graves are surrounded by a mound or cairn, as a rule slightly oval in shape. However, the mound or cairn does not always cover the tomb entirely. Besides this there also exist gallery graves where the mound is so low that the greatest part of the burial chamber has always been visible. (In a few instances there occurs a broad brim of stones around the cairn).

Burial Rites

In gallery graves, as in older megalithic tombs, an intentional filling of earth and stones sometimes occurs. It has sometimes been observed that the layer that covers the primary grave-goods consists of sand or gravel with a stone packing laid upon it. Often the remains of skeletons, in the few areas where there are any preserved, and the grave-goods are disordered and spread out all over the chamber. However, the circumstances of the finds are usually not quite as chaotic as they are in the older chambered tombs. This is the case both in the several- and one-roomed gallery graves. Both in West and South Sweden there are cases of skeletons in extended position from the primary period of the use of the grave. In some older literature we read that in Västergötland the remains of skeletons have been found in a position indicating burial in a sitting posture (as in some passage graves in this province). Here we make the same reservation as we did in connection with passage graves. In gallery graves, too, traces of fire and scorched bones have in a few cases been found in such a position that they can be considered to stem from the time of primary use of the tomb. As a rule finds are made only inside gallery graves, but in the case of several-roomed graves exceptionally in the antechamber as well. Hitherto there have been no observations made as regards deposits of offerings outside the tombs. Thus this tradition of the users of the older tombs has not been continued, although the bearers of the South Scandinavian Dagger Culture gave ceremonial

offerings (numerous votive finds, *e.g.* daggers, sickles, spearheads, knives, pots). The late neolithic artefacts that have been found in the mound or cairn (and cannot be considered to have got there in connection with grave-plundering) seem in most cases to have got there accidentally (with earth from a nearby dwelling-site).

The Origin of Gallery Graves

Among the gallery graves, one group of the several-roomed type has attracted special attention, namely those with portholes. The majority of them is found in the interior of Västergötland.

The several-roomed gallery graves have earlier been regarded as a homogenous group and their origin sought in the SOM-culture's gallery graves in the Paris basin. The similarity to the gallery graves of the Seine valley is indisputable in the case of those graves that are sunk into the ground and consist of a long chamber (that occasionally can be divided into compartments by transverse slabs) and an antechamber as broad as the chamber. In the classical SOM-area this is the prevailing type, with only a few exceptions (Bailloud, 1964, p. 155 ff). The tendency to place these graves on slopes also stresses the similarity. Neither in West Sweden nor in the SOM-area were there traditional rules for the orientation of gallery graves. The several-roomed gallery graves in West Sweden are, however, not all of the so-called SOM-type. There are a number of gallery graves that are built above the ground, *i.e.* whose walls were originally seen above the ground, whether set in a low cairn or mound or not. It is characteristic of these graves that the floor-level consists of or rests on what was then the ground surface. Some of these are also surrounded by a kind of peristaltic of tall uprights, rectangular or oval in shape. In certain cases this reminds us of the kerbstones of the long barrows of dolmens, but as a rule it is placed nearer to the gallery graves than it is in the case of dolmens. For chronological reasons it is, however, not possible to look for a connection with the kerbstones of the dolmens. Portholes occur also in gallery graves built above ground. It must, however, be stressed that the portholes in the SOM-type graves are either cut out in one transverse slab, or a pair of slabs have pieces hollowed out forming a porthole, the latter being more common. In SOM-tombs we find both these types of porthole too. However, the portholes in the gallery graves built above ground are never cut out in one slab only. This difference in cutting portholes is most probably caused by technical difficulties connected with the stone material.

It seems obvious that the differences in construction mentioned cannot be due to chance or be merely a native reshaping of a foreign grave-form (even if the odd grave might be). Consequently we have in Sweden two main groups of several-

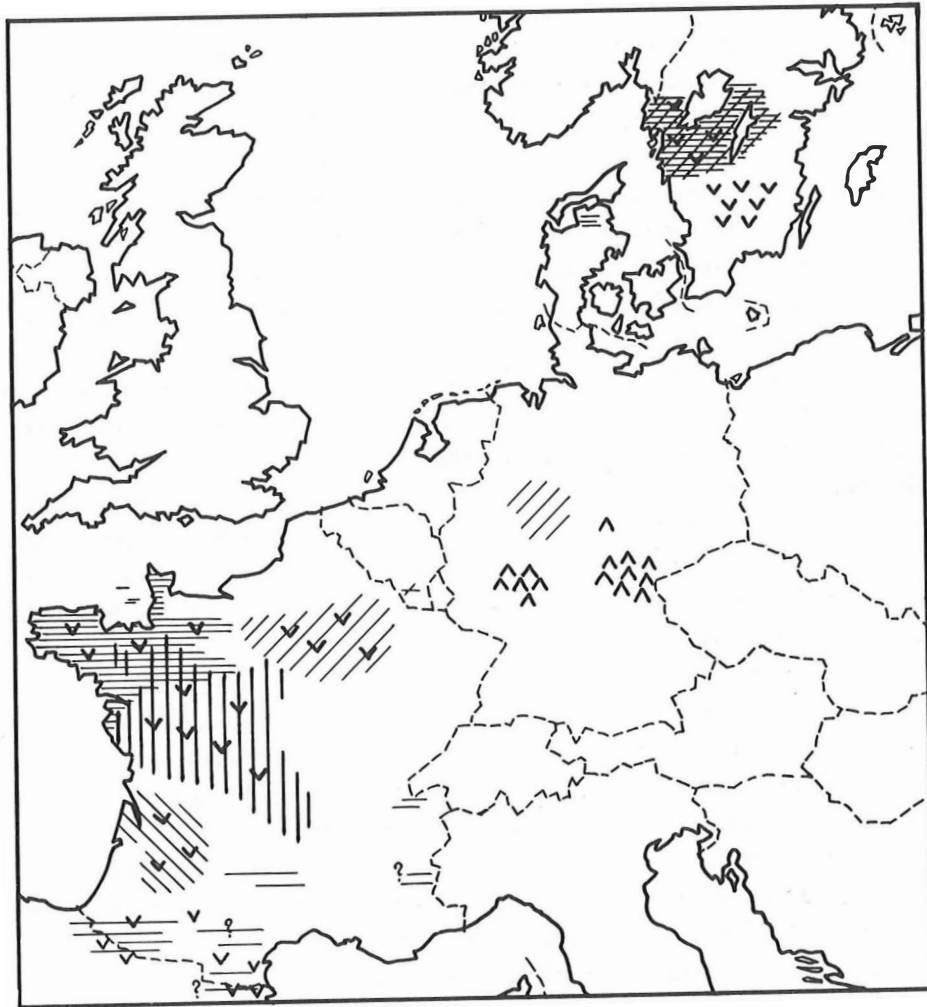








Fig. 7. Distribution map of certain types of gallery graves. Only areas of occurrence (*i.e.* with considerable number of tombs) are shown, not the density.

-  Gallery graves of so-called classic or Breton type.
-  Gallery graves of Loire-type.
-  Gallery graves of Gironde-region.
-  Gallery graves of SOM-type.
-  Large one-roomed gallery graves.
-  Different types of gallery graves and cists sunk in the ground.

roomed gallery graves to take into account; a) those sunk into the ground, and b) those built above the ground.

Only the several-roomed gallery graves built above the ground have a wide distribution. France is the country in Western Europe where they are most abundant and where the closest counter-parts to the Swedish graves in question can be found. They are found in the North and in the whole of the West of France. Nevertheless they do not belong to the same type entirely throughout the area of distribution. Several regional groups, each with its own characteristics, have been distinguished, *e.g.* the classic or Breton type, Loire galleries *etc.* Unfortunately these groups have not always been defined or illustrated clearly enough. Consequently differences in interpretation and use of nomenclature in the sense of morphological classification have been unavoidable. It is not our task here to discuss the variable contents and use of terminology of French gallery graves by different authors. For us the only groups of interest are in North and West France. Therefore we will restrict ourselves to defining some of the terms we use for these groups.

We define the term gallery grave of the so-called classic type to be the same as the Armorican and Breton type and reserve it for graves with a ground-plan similar to those of the SOM-group but built above the ground. They occur mainly in Brittany (Fig. 7). Graves with a similar ground-plan but a lower antechamber are regarded as a variant.

With gallery graves of the Loire type we mean graves consisting of a long chamber and a porch that is narrower and as a rule lower than the chamber. Besides the difference in the antechamber (that in the Loire type is so short – built of two narrow slabs – that the name porch would be more adequate) the Loire galleries are considerably larger than the other types,²⁵ in particular the proportion of width to length is as a rule larger than it is with other gallery graves. Their distribution area consists principally of the Loire valley and its tributaries (*i.e.* the provinces Touraine, Anjou, Vendée). In the North they penetrate into eastern Brittany and in the Northeast reach the southern fringe of the SOM-galleries (Pl. II).

In the southwest of France, in the departments of the Gironde, the Dordogne and the Lot-et-Garonne, there is a group called the gallery graves of Gironde. This name has a purely geographical significance.²⁶ The group contains different types of galleries (amongst others the Armorican type), but is as a whole not sufficiently studied. Owing to this it is not possible with the help of the literature to define the types, nor the predominating tomb-plan. Consequently we cannot consider the group within the scope of this paper.

The Swedish gallery graves built above ground come as to their ground-plan, with a few exceptions, closest to the Breton type. The latter are as a rule very long (up to nearly 25 m; the majority falls between 10 and 15 m; L'Helgouach, 1965, p. 273) and narrow (1.20–2.00 m). On the other hand it must be emphasized that gal-

lery graves that reach a length of more than 8 m are rare in Sweden. The usual length varies between 5–7 m (the antechamber or porch included), the width between 1.2–1.8 m.

In Brittany we also find gallery graves surrounded by fairly large kerbstones (reminiscent of those in western Sweden).²⁷ Recent excavations have, however, revealed that such a kerb is the remaining part of a kerbwall, *i.e.* that originally there was dry-walling between the orthostats of the kerb.²⁸ Whether this is the rule or not only future excavations can confirm. Whether the kerbstones around a number of Swedish gallery graves are also the remains of a similar kerbwall cannot be decided without new excavations.

In the Breton tombs portholes also occasionally occur. These are either formed by two hollowed-out slabs or by one notched slab, and are never a round hole made in one slab.²⁹ As a matter of fact the latter type of porthole also occurs sporadically in Swedish galleries as an original feature. Besides these above-mentioned parallels there are some other constructional details that occur in a few West of Sweden gallery graves that are also found in Brittany, *e.g.* galleries with a small terminal chamber (*cellule terminale* of L'Helgouach, 1965, p. 275, fig. 106) attached to the narrow end of the burial chamber; entrance openings both at the end and in one of the sides (in Sweden, however, never in the form of a lateral passage as in a newly recognized and defined type of gallery grave in Brittany).³⁰

Apart from graves of types that morphologically come closest to the Breton ones, there are only few that, referring to the definition given above, can be classified as Loire-type. In contrast to what is the case in France, both types of the several-roomed gallery graves, *i.e.* both those sunk in trenches cut in the ground or on slopes and those built above ground, seem to have roughly the same areas of distribution in Sweden. According to the finds they seem to be archaeologically contemporaneous. In our opinion the above-mentioned constructional details, not least the three different types of portholes, the peristalith-like kerb, the small terminal chamber and a few graves of Loire-type, seem to indicate that it is not only in the SOM-area but also in other parts of France that we must look for affinities to our West of Sweden gallery graves.

The several-roomed gallery graves in our area have also been thought to be somehow connected with the large North Jutland gallery graves of the same ground-plan (*cf.* the Bøstrup cist). In our opinion this is contradicted not only by the chronological facts (they were built, at least the oldest of them, at the time of the Jutland Late Single-grave Culture) but also by the fact that, apart from a couple of possible exceptions, they are not sunk in the ground.³¹ Neither are there any graves with portholes and kerbstones of tall uprights. If the North Jutland gallery graves are of West European origin then they reflect contacts with other West European areas than those mentioned in connection with the Swedish gallery graves.

MIGRATION OR CULTURAL INFLUENCE?

As in most parts of Western Europe the above-discussed types of chambered tombs appear in South Scandinavia as a sudden and confident architectural achievement and as the most outstanding material evidence of the religious beliefs of certain neolithic societies. Everybody agrees that the appearance of these tombs here is the result of culture contacts. But the debate continues on the mechanism of their spread, *i.e.* the nature of the culture contact.

Are the tombs due to cultural influence or do we have to reckon with migrations to certain 'bridge-heads' in the area concerned? In Scandinavian archaeology the building of megalithic tombs has been predominantly interpreted as an expression of the ideas of a new religion in the process of diffusion. The older view of migration of one race or people was based on inadequate data and has been entirely given up. The first interpretation is based on the fact that except for the tombs and burial customs the migration-theory has no support in the artefact-material. Nevertheless, according to us the following contradicts the hypothesis of the spread of ideas. If the grave-form spread only through cultural influence, *i.e.* without any lasting settling of the area, how can we then explain all the different chamber types in South Scandinavia, types that reflect the variations also found in the supposed areas of origin? How is it possible to explain, without direct contact with Western Europe, that there are in Denmark passage graves with lateral chambers (altogether eighteen, of which thirteen are on the sea-route in the Limfjord district), which with few exceptions are placed behind the main chamber in the same way as in Western Europe? This agglomeration cannot be explained convincingly as due to extensive settlement and a need of larger tombs. Djursland and parts of Zealand were also extensively settled. Nevertheless they each have only two passage graves with lateral chambers. The prevalence of tombs with lateral chambers in the Limfjord area is, according to our theory, connected with foreign settlement, bringing this new mode in tomb architecture. For some reason or other this mode did not spread outside the area of introduction. It is appropriate to mention here once more the existence of the 57 mounds (mostly round ones) in Denmark and 3 in Sweden (exclusively in Scania) with two passage graves in each. For constructional reasons there seems to be little doubt that each such monument was constructed in one go and thus the second chamber was not added later. This theory is occasionally also supported, but never contradicted by the finds. A similar state of affairs that concerns the cairns with double passage graves (the total of which is eleven) occurs also in Brittany, the main area for monuments of this kind in Western Europe. It does not seem very convincing to us that the structure as well as the building technique, as *e.g.* in passage graves the filling up of cracks in the walls by dry-walling, the roof construction, occasionally in connection with corbelling, the shaping of door arrangements and

the kerb of closely placed upright stones, often with traces of dry-walling preserved, leaning outwards in a special way from the mouth of the passage and forming a facade *etc.*, could have been transmitted in details only by cultural contacts, and that the first of these tombs (which right from the beginning were technically quite elaborate constructions, in particular passage graves) could have been erected by native builders who had only seen similar tombs in Western Europe.

The hypothesis that the origin of several-roomed gallery graves is by immigration has had more followers than in the case of older megalithic tombs. As supporting evidence for this the following traits have been cited: trepanning, a special kind of pottery – the undecorated splay-footed and flat-bottomed pots as well as the large barrel-shaped vessels that sometimes have horizontal ridges and a broad grooved band below the rim –, the arrow-heads with hollowed base and the flint technique.

However, none of these can with any certainty be linked with the introduction of the grave-form. The artefacts mentioned also occur in Southern Sweden and in Denmark and can have reached Western Sweden that way.

In spite of the arguments that can be raised against the introduction of gallery graves by people who settled down here, it is all the same difficult to explain it without movement of people but only by the successive spreading of ideas. How can we, for example, by the latter alternative explain the distribution being dominantly limited to Western Sweden? The fact that we in our area can distinguish between two main types of several-roomed gallery graves and different types of portholes, whose areas of distribution outside Scandinavia lie next to each other, also speaks strongly in favour of an infiltration, probably in small groups. Taking into consideration the fact that the West German group (in Westfalen-Hessen) and the Mid-German one both consist only of gallery graves in east-west position and sunk into the ground (Knöll, 1961, p. 22, 25; Sprockhoff, 1938, p. 60), it seems to us most likely that models for West Swedish gallery graves must be looked for in North and West France, particularly the Seine Valley and Brittany (where there are gallery graves both of Breton- and Loire-type), rather than in any other part of Western Europe. If our hypothesis of the origin of Swedish several-roomed gallery graves is correct, the following is then worthy of attention. As mentioned above there exists in Brittany a group of gallery graves with lateral passages, but not a single tomb of this type is known in Sweden. Perhaps their absence here is chronologically significant for these tombs in Brittany.

The distance from our district in West Sweden, to those parts of the Continent where the same types of gallery graves occur, also makes the supposed successive spreading of ideas unrealistic because this type of grave is not found in the intermediate areas. The Central German group of gallery graves in Thuringen, which has been discussed earlier in this connection, consists only of small cists the length of a man (Nordman, 1935, p. 111 ff.).

The large one-roomed gallery grave in the South of Sweden has earlier been interpreted as a simplified version of the North Jutland so-called Bøstrup cist (Forssander, 1936, p. 118 ff.). When considering that large one-roomed gallery graves have a wide distribution in Western Europe and that they occur within the same districts as the several-roomed gallery graves (in France, *e.g.* in Brittany where the chambers often lack an end-slab, in the Paris basin, Loire valley *etc.*³²) then it is difficult to apply the above-mentioned interpretation generally. Neither do the finds give us any reason to suppose the one-roomed gallery grave to be definitely younger as a type than the several-roomed one. Whether the one-roomed gallery graves arrived first in South Sweden and thence spread to the west and central parts, or whether they came here directly from Western Europe and thus arrived more or less at the same time as the several-roomed ones from Western France, cannot be decided at present. What must first be determined is their chronological position within the different Swedish distribution areas, taking other forms of tombs and burial customs into account.

Notwithstanding the arguments that we have put forward in favour of the spread of the tombs in South Scandinavia as an expression of displacement of people, we cannot preclude culture contact situations of other kinds. For those remote periods, however, the concept of cultural influence implies first of all commercial relations, direct or indirect. Although we lack the evidence of finds for it, we cannot exclude the possibility of a trade in organic materials of some kind. Anyhow, peoples' beliefs and burial customs do not migrate separately, isolated from their social milieu, following the trade routes as for example trade objects (raw material and manufactured objects) do. If the change in beliefs and burial customs is due to traders, their activity must have had some organized form in Scandinavia. Taking into consideration the distances between the areas and the periods concerned, such an assumption seems far more unrealistic than that of immigration/infiltration of small groups of people³³, though these ethnic movements may have been exceedingly complex. In addition it cannot be stressed strongly enough that there exists tremendous geographical gaps between South Scandinavia and these West European areas where the models for our megalithic tombs of various classes can be found. In the intermediate areas there are either tombs of different types or no megalithic tombs at all. Thus the culture contacts or displacements of people involved must in all instances have been maritime.

On the other hand, we are quite aware of the limited possibilities of drawing conclusions for or against migrations on archaeological grounds. As regards such remote periods as we are dealing with, we can scarcely ever get further than postulating hypotheses based on archaeological data. This is so even if the cultural remains furnish us with many more clues than do the cases we are discussing. We know too little about human behaviour patterns in prehistoric times to be able to postulate

migrations with certainty. In some ways ethnographical research can supply some help in the interpretation of comparable or parallel culture situations. There are examples of movements of people from one cultural area to another without more supporting evidence than one kind of artefact – pottery (Meggers & Evans 1958, p. 9 ff, *cf.* Collier p. 17 ff.). There are also examples of movements of people from one cultural area to another without leaving any supporting evidence of artefacts at all, as some ethnological instances seem to indicate.³⁴ It does not seem very hopeful in our case to find any positive support for such an eventuality by physical anthropology either. The number of skulls preserved, that can possibly be attributed to the primary burials in the tombs, is very small.

From this it does not, however, follow that all the megalithic tombs in South Scandinavia were built by immigrants. Most of them were probably erected by native builders who had learnt the art from foreign settlers. Perhaps this is also the explanation for the large number of large oval and rectangular chambers in the South Scandinavian passage graves, particularly in their eastern distribution area (Danish islands, Scania and Västergötland).

What were the factors influencing the outcome of the culture contact in the sense as discussed above? This is a question we can most probably never answer with certainty. It has sometimes been put forward that the older megalithic tombs could have been a missionary enterprise. This can neither be proved nor disproved. Neither are there any proofs that the emigrating megalith builders were prospectors, looking for certain kinds of material wealth, as has often been suggested. The emigration from their native parts could just as well have been caused by over-population and lack of food, in other words a need for arable land and pasture. Considering the traces we have of human activity in Western Europe, the population seems to have increased considerably in most areas after the introduction of agriculture. On the other hand, some agricultural methods quickly impoverish the soil, and it takes a long time before it is possible to use the same land again. Because of this, new land constantly had to be taken into use, and perhaps there was not sufficient land for neolithic man to till with his primitive methods and tools to meet his growing needs. Crops can have failed, live-stock hit by epizootics *etc.* We have also to reckon with natural catastrophes (*e.g.* earthquakes) of devastating character in prehistoric times. However, in our opinion the megalithic tomb-building in South Scandinavia cannot be explained *only* by cultural influence and without the hypothesis of long distance movement of small groups that settled here.

ABSOLUTE DATES

When this supposed infiltration of people, which in Scandinavia is evidenced by megalithic tombs of polygonal dolmen and passage grave class, might have taken place cannot at present be expressed in absolute dates. We have still too few C14 readings in South Scandinavia. The oldest neolithic settlement hitherto known is from EN: A (Muldbjerg in Aamosen, West Zealand) and has been given a C14 date of 2820 ± 80 B.C. (Troels-Smith, 1959, p. 597). It is thus earlier than the oldest Scandinavian dolmens, which are from EN: C. The two cult-buildings in Jutland – Tustrup and Ferslev – both of which, in our opinion, contained a grave [in the Tustrup house a single grave, 0.8×2 m and without any grave goods; in the Ferslev house with grave deposits, and to conclude from the size of the “hearth”, 1×4 m (Marseen, 1960, p. 39, 53, fig. 5), the grave probably was meant for more than one interment] have been C14 dated to 2440 ± 120 (charred wood), 2490 ± 120 (bark of charred wood) and 2480 ± 120 respectively (H. Tauber, 1966a, p. 166 f. – K 718, K 727; K 717). The mortuary house at Tustrup contained pottery belonging to the same restricted period as the pottery from the three megalithic tombs situated in a semi-circle around it (Kjaerum, 1955, figs. 16–18a). According to the established relative chronological scheme for MN, this pottery style belongs to period *Ib*, thus also dating the adjacent tombs – two polygonal dolmens, one with a short passage of two stones, the other without a passage but surrounded by a kerb of tall uprights (the height of a man and higher than the orthostats of the chamber) and a regular T-shaped passage grave (the biggest in East Jutland) with a lateral chamber and with an entrance opening formed by two adjoining wall-stones of the main chamber which were hewn obliquely (*i.e.* an entrance of a kind we find in some dolmens of Bohuslän) (Kjaerum, 1955, p. 28).

The date obtained for the Ferslev house concerns only the cult-building. That the construction is contemporary with the Tustrup house is confirmed by the oldest pottery finds – sherds of two decorated pedestalled bowls, like those represented in the finds from Tustrup – but also by other sherds of MN: *Ib* style. However, the Ferslev house had been used for some time. There were found in the house vessels and sherds of about 35 pots from MN: II (Marseen, 1960, fig. 11–15).

The C14 dates directly from megalithic tombs concerns a passage grave in Jutland (“Jordhøj” near Katbjerg) and a polygonal dolmen with a passage of a pair of stones in Sweden (Jörlanda, Bohuslän). The sample from the passage grave delivered to the laboratory in Copenhagen was bark found jammed in between stones in the dry-walling of the grave, which had remained untouched from the Stone age until the opening in 1890. The Carbon-14 reading gave 2540 ± 120 B.C. (H. Tauber, 1966b, p. 228 – K 978). The oldest datable finds – pottery – belong according to Kjaerum to MN: *Ib*.³⁵ The charcoal from the dolmen delivered to the C14 laboratory in Stockholm was recovered in a sand-layer of almost 20 cm thickness underlying the stone

pavement of the passage. The sand-layer rested on the ground surface. The sample is contemporary with the construction of the dolmen. The C14 reading gave 2550 ± 170 B.C. (I. Särilvik, 1965, p. 24). Thus the date agrees closely with those obtained for Tustrup and Ferslev cult-buildings and the Katbjerg passage grave. The archaeologically oldest find from the Jörlanda dolmen is a decorated, slender funnel beaker, found outside and against one of the kerbstones east of the passage entrance – most likely an offering deposit. According to the relative chronology for the pottery this beaker belongs to MN: 1b; this being thus the relative dating of the tomb, too. This is, however, not entirely certain. The filling of the chamber was different from that of the passage, and it was obvious that it had been stirred up: beside modern rubbish there were finds from an Iron Age burial in the chamber. Thus a “clearing out” of primary finds belonging to EN cannot be excluded, though no traces of it were observed outside the tomb.

When comparing these Scandinavian datings (which agree fairly well with that obtained for a megalithic grave in the Netherlands: Odoorn 2630 ± 80 ; Bakker, 1962, p. 223) with the high dates of Breton tombs (obtained directly from megalithic and megaxylic contacts, as *e.g.* Ile Carn – 3280 ± 75 ; Sept Iles 3055, 3215 and 3430; Kercado 3880, the central chamber of Mont St. Michel (c) 3760 ± 300 *etc.*, all B.C.) (Vogel & Waterbolk, 1963, p. 186 – GrN, 1968; Coursaget *c.s.* 1962, p. 139 ff., GsY, Sa 96) and on the other hand the obviously low dates of Portuguese and Spanish tombs (Praia das Macas – 2210 ± 110 ; 1700 ± 100 ; A-dos-Tassos – 1850 ± 200 ; Los Millares – 2345 ± 80 , all B.C.) (Leisner & Veiga Ferreira, 1963, p. 5ff.), we cannot free ourselves from the suspicion that not all of these dates are related to the construction period of the tombs. Probably no one would dispute that the West European tombs are parent-forms for the Nordic ones and not the contrary. From this standpoint it is quite natural that the first-mentioned should have a higher date. On the other hand it does not look convincing to us that there is a gap of five hundred to a thousand years between the earliest graves of the same type in Western and Northern Europe. This clearly shows not only that we need many more C14 datings from all areas with megalithic tombs but also that we must determine precisely what has been dated before any far-reaching conclusions can be drawn for the construction of an absolute chronology for the diffusion of megalithic tombs. However, this demand seems to be difficult to comply with as it is not so easy to find satisfactory test-material.

As regards the period of the first several- and one-roomed gallery graves in Sweden we have a slightly firmer basis. At the earliest they were built soon after the beginning of Scandinavian LN, which is still traditionally dated to c. 1800 B.C. It is interesting to point out that this date agrees fairly well with the C14 date (1850, GsY 114) of a recently excavated rock-cut tomb of SOM-Culture at Mournouards (Mesnel-sur-Oger, Marne) (Leroi-Gourhan *c.s.*, 1962, p. 133). New several-

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roomed gallery graves were not, however, according to the finds, built after the beginning of the Scandinavian Bronze Age at the latest, c. 1600 B.C., when we already had a native bronze manufacture. There are no several-roomed gallery graves with finds from Early Bronze Age as the oldest grave-goods.

[Revised September, 1966.]

POSTSCRIPT (1967)

Since this paper was written, new investigations have been carried out in North Germany. The following points may be noted.

1. The number of passage graves of Scandinavian type in North Germany given by Sprockhoff (1938, p. 28 ff.) is no longer valid. Recent investigations in the province of Mecklenburg (Kreis Rostock) have multiplied the number; see Schuldt (1966, p. 185).
2. As regards the find circumstances of the grave gifts and skeletal remains in the passage graves, the above-mentioned excavations have revealed that in North-eastern Germany, too, partitioning of passage grave chambers occurs. These compartments of low, upright slabs remind one of those in the Swedish tombs of Västergötland (see p. 293 f.). In both provinces it is clear that the compartments were not used for individual interments. Skeletal remains of more than one individual have been found not only within the different compartments but also covering the walls separating them. In discussing this and the incomplete nature of skeletons in the Mecklenburg passage graves the excavator (Schuldt), takes up anew the old ossuary theory, *i.e.* the bones deposited in the tombs had already been buried for a time elsewhere, and were subsequently dug up and re-buried permanently in chambered tombs. It is too soon to re-examine the ossuary theory, because the full excavation account is not yet published. However, it will be difficult in the light of this new assured evidence to find a simple and inclusive theory that would fit the confusingly diverse facts within the different megalithic provinces (*cf.* the recent re-examination of British finds by Piggott, 1962, p. 65 ff.). Nevertheless we have to reckon with the fact that within different areas some at least of the chambered tombs had been used as ossuaries. The question is, which culture groups did it – the original tomb-builders and their successors, or the secondary users of other culture groups?

NOTES

¹ This survey has been facilitated by the Archaeological Museum of Gothenburg. English text revised by Maja Jackson. F.K.

² According to the chronology used by Becker (1954, fig. 36), which is identical with the one applied by Bagge & Kaelas (1952), except that it is extended to include a fifth and final period.

³ The term secondary burial as used here coincides with the English usage and means later added burials by other culture groups.

⁴ The main area of the *Grossdolmen* is north-eastern Germany. See Sprockhoff (1938, p. 28 ff.).

⁵ There are in Västergötland alone about 290 within an area of about 500 sq. km. See Hellman (1963, p. 7).

⁶ Rosenberg (1929, p. 190 ff.). Here, however, no dagger finds were made in the burial chamber.

⁷ See *e.g.* Carriazo (1961–62, p. 10); Piggott (1958, p. 241 ff.); Piggott (1962, p. 26 ff.). A complete survey of North-east Scotland is given by Henshall (1963).

⁸ Leaving the earlier interments *in situ* would have meant the need of a new tomb. In many tombs, however, the skulls were treated with care. They have been found together or separately placed along the walls of the chamber or in a far corner or in the passage (Fig. 3). Similar observations are familiar to students of West European tombs too. See *e.g.* L'Helgouach, (1965, p. 87 f.; see also the postscript).

⁹ Since this was written, Aner (1963, p. 9 ff.) has published a paper in which he arrives at a similar conclusion regarding the position of the body in rectangular dolmens, when discussing the high percentage of short chambers (p. 30).

¹⁰ The term polygonal dolmens includes not only the polygonal round but also the rhombic chambers.

¹¹ For the beginning of passage grave building in South Scandinavia see Kaelas (1951, p. 340 ff.); Berg (1951, p. 16 ff.).

¹² Our observations are confirmed by distribution maps for Danish dolmens, also by Aner (1963, p. 13, fig. 6). Of the more than 300 polygonal dolmens, Djursland and NW Zealand have 40 % each.

¹³ The best examples of polygonal dolmens in Northern Germany are found in Schleswig-Holstein, where they, however, occur only rarely in round barrows (Sprockhoff, 1938, p. 8; p. 12).

¹⁴ See also E. Aner, *op cit.* fig. 7.

¹⁵ It is to be noted, however, that in S.P. Ó. Riordáin and G. Daniel, New Grange, London 1964, 99 ff., where the megalithic tombs in the northwestern Ireland (*e.g.* cemeteries of Carrowmore and Carrowkeel) are discussed, dolmens are not mentioned but only passage graves. On the other hand there are plans of dolmens reproduced in older publications, *e.g.* W.C. Borlase, *The Dolmens of Ireland*, London 1897.

¹⁶ A recently discovered and as yet unpublished group, according to information kindly given me by Dr. J. L'Helgouach, Rennes.

¹⁷ Leisner (1956, p. 39, map Taf 71). During a field trip to this area I saw, however, far fewer definite dolmens *without* passage than I had expected from the literature. A large number of tombs specified were practically destroyed.

¹⁸ There is for example such a dolmen at Lanchas in the district of Cáceres in Spain. The other grave with a similar entrance opening at El Corchero, in the same district, is probably a ruined passage grave.

¹⁹ As regards the discussion of the origin of South Scandinavian dolmens see also Kaelas (1956, p. 9 ff.).

²⁰ According to information kindly given me by Prof. P.R. Giot and Dr. J. L'Helgouach, Rennes.

²¹ Our earlier estimation of their number (Kaelas, 1962, p. 32) was thus too large by half.

²² Square passage grave chambers are exceptional in South Scandinavia.

²³ By open gallery grave is meant that there is one end-slab lacking, though this does not imply that the grave was originally open. There are several instances of gallery graves showing that this end was closed by boulders and/or stone and earth filling instead of with an end-slab. A similar arrangement is the most usual one for gallery graves with porch.

²⁴ This grave is unique in Sweden in having a rectangular porthole instead of a round one (Arbman, 1963, p. 39).

²⁵ The term Loire type has been introduced in a broad sense by Daniel (1941). The same content is given to it by Daniel (1960). According to Daniel the basic type is the same, as regards the plan, in the Loire and in the Paris Basin, consisting of a chamber and an antechamber (= porch) having the same width and height. The type here defined as the Loire-type is considered by Daniel as a variant of the former (according to information kindly given me in a letter, August 1964). Our restricted use of the term coincides with that of Riquet (1955) and L'Helgouach (1956), who both use in a sense equivalent to *dolmen angevin à portique* (Gruet, 1956). According to G. Bailloud, Paris, (letter, May 1964) the term "Loire type" is in French usage synonymous with *dolmen angevin* and *dolmen à portique*.

²⁶ We use this grouping at the kind suggestion of G. Bailloud to emphasize the geographical isolation from the other groups in the Northwest.

²⁷ According to some authors there are kerbstones found in the south too, specially in Roussillon and in Catalonia (Spain). Arnal & Burnez (1956–57, p. 49, fig. 21 and 19); Arnal (1963, p. 49, fig. 10: 2). Daniel (1960, p. 175), while discussing the gallery graves of Roussillon, does not mention the occurrence of kerbstones.

²⁸ J. L'Helgouach, paper presented at the Second Atlantic Colloquium, April 1964 (*Palaeohistoria* XII, 1966, p. 261, and 1965, p. 225 ff.). As a matter of fact this kerbwall coincides in type and construction with kerbs or kerbwalls around the well-preserved passage grave mounds both in West Europe and South Scandinavia.

²⁹ According to information kindly given me by Dr. L'Helgouach, Rennes. As regards these portholes, see Giot (1960, fig. 27).

³⁰ *I.e.* galleries without an antechamber or porch but with a short lateral passage. See L'Helgouach, *op. cit.* 28.

³¹ This conclusion is based on information compiled from excavation reports, kindly supplied to me by Prof. C. J. Becker, København, in a letter of November 1963, concerning the relation between the level of the floor and ground respectively in the large Jutland gallery graves.

³² Cf. J. L'Helgouach, according to lecture given at Second Atlantic Colloquium, who, however, considers all Breton tombs originally without an antechamber or porch which formerly were regarded as one room galleries to belong to his new group with lateral passage or entrance. A discussion with G. Bailloud (letter from May 1964) confirms our theory that the one-roomed galleries (particularly those without an end-slab either in the south or east) are so numerous everywhere, that they cannot be dismissed as one particular type. All of them cannot be accidentally without an end-slab, and with a lateral entrance or passage (this only future excavations will reveal).

³³ By migration/infiltration the author understands a small scale of displacement and not an organized movement of large groups of people. This, however, does not exclude the possibility that the movements may have been very complex in nature. But a movement of people from one area to another is not necessarily documented in the material culture by imperishable tools. The study of megalithic graves in various West European groups often shows that besides a small group of primary types there is also a local development largely due to indigenous culture groups. But we cannot see any difference between the two classes of tombs as regards the finds. Another question is whether the infiltration of ethnically different people was numerically large enough in relation to the indigenous people to play any role as an anthropological component in the composition of the inhabitants of the country.

Megalithic Tombs in South Scandinavia

³⁴ I cannot here become involved in detailed discussions based on ethnographical and ethnological data and inferences, but as I have personally witnessed a migration (and actually also been a member of such a group), I would like to give here a report on my observations to demonstrate how difficult, if not to say hopeless, it is to draw conclusions from archaeological material.

About twenty years ago more than 22,000 Estonians immigrated to Sweden. They were of different ethnical origin to the Swedes, belonging in many respects to another cultural milieu. They had left their homes because of the political catastrophe that had hit their country. Most of them did not have anything with them except clothes. About 7,000 settled down in Stockholm, mostly in the southern suburbs (because of the housing situation pertaining in the capital).

The Estonians adapted themselves so well, at least superficially, that if their material equipment (excluding written matter) were to be studied much later and compared with that of their contemporary Swedes, it would hardly be possible to observe any distinct differences of importance, except for a few items. Estonians in their native country used to eat two kinds of bread: the one a dark, sour rye-bread, the other a white, refined sour-sweet rye-bread. The first type of bread is also eaten by the Finns, the closest neighbours to the Swedes in the east. The baking of both these types of bread was started also in Sweden, as the immigrants could not get used to the local bread. The eating of Estonian bread was slowly adopted also among the Swedes, perhaps not least because of the propaganda made for it by doctors and dentists as a healthy food. It must be mentioned that especially one of these types of bread was eaten also by a Latvian minority of about 3,000 people in Stockholm and by a number of other foreigners from Eastern or Central Europe living in Sweden. But it must be noted that the making of it in Sweden started with Estonian bakeries. If the bread had left archaeological traces in those layers of sites that could be dated to 1944–1964, the traces would have been found to be more concentrated in parts of Stockholm and here and there in some industrial towns, where Estonians and other foreigners had settled down. However, these traces would turn up sporadically also outside the habitation areas of Estonians (as traces left by those Swedes who had adopted eating this bread). In the remaining part of the country would be found mainly the traces of the local bread. Besides these there would also occur some other foreign bread specialities in large towns, but only sporadically and scattered. .

In the light of the above evidence, which could be supplemented by particulars and smaller details that I do not have space to discuss here, I believe that the following interpretation would not be rejected by most prehistorians. The traces, particularly the concentrations of the types of bread in question, would attract quite a lot of attention, but would most likely be considered as an expression of cultural influence, rather than as having been introduced by an immigrant group of different ethnic origin. Nevertheless this *one visible* cultural element is a sign of migration, although the remaining part of the finds would be of local origin.

Another example concerns only the women of the same immigrant group. During the years immediately before the Second World War it was fashionable in Estonia to wear a dark coat with a fur collar of silver fox. Silver fox was a luxury item and rather expensive, thus becoming a status symbol. More or less at the same time another status symbol was snakeskin shoes. Not every woman was able to afford such luxury. However, many probably dreamt of it and a number of them brought their dreams with them when they fled to Sweden in 1944. Here none of these articles were fashionable at that time but had been in the 1930's. During the first winter in Sweden, when walking about in the city of Stockholm, I occasionally noticed silver fox collars being worn by ladies, among whom I could recognize several as my compatriots. The next winter, however, the number seemed to have increased considerably. For some reason it amused me to find out whether or not they were Estonians realizing their pre-war dreams. As soon as I saw somebody with a silver fox collar I addressed her. In the majority of cases my query turned out to prove that my guesswork was correct – the wearers were mostly Estonians. In the same way I walked about in the summer of 1945 and 1946 with my eyes directed at the shoes of ladies and picked out Estonian ladies by their snakeskin shoes.

Also this guess-work was often followed by a query as in the case of the fur collars.

The men apparently had no comparable status symbol that was distinguishable.

If we found these two articles of clothing in culture layers dated on the one hand to the 1930's (the vast majority) and on the other hand to the 1940's (a comparatively very small amount), the evidence would most probably be explained as a retardation of a fashion (which it actually also is) or something like that. The interpretation that this retardation was *partly* introduced by a small number of women of an immigrant group, would be considered unsound. Nevertheless this was so.

³⁵ According to information kindly given me by Dr. P. Kjaerum, Aarhus.

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