

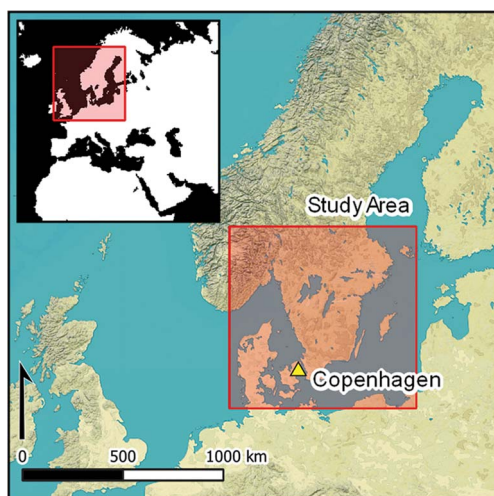


## Research Article

# Monumental farmhouses and powerful farmers in Late Neolithic Denmark

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During the Late Neolithic, a series of short-lived, monumental-scale farmhouses were constructed across southern Scandinavia. The size of these structures is often taken as a tangible manifestation of the elite status of the inhabitants. Here, the author explores the architecture and associated material culture of the six largest known examples, drawing attention to general parallels with smaller farmhouses in the region. The comparison highlights similarities in spatial organisation and function indicating that, despite their size, these monumental houses served the same roles as dwellings and centres of agricultural production. Attention to function rather than size emphasises the importance of food production and control of surpluses in the emergence of social elites at the end of the Neolithic.

Keywords: Scandinavia, Late Neolithic, Early Bronze Age, domestic architecture, subsistence practices, social elites

## Introduction

The Late Neolithic period of southern Scandinavia (2350–1700 BC) is best known for its elaborately knapped bifacial flint artefacts (Figure 1; Lomborg 1973) and the revival of metal import (Figure 2; Vandkilde 1996); but is also characterised by the construction of numerous two-aisled post-built houses (e.g. Sparrevohn *et al.* 2019) and the intensification of cereal cultivation (e.g. Andreasen 2009; Prescott 2012; Johannsen *in press*). With the increasing importance of metal, in particular, the Late Neolithic is often seen as a prelude to the Nordic Bronze Age. The latter is characterised by the construction of burial mounds and monumental houses, the creation of rich deposits of imported metal artefacts in hoards and graves, and marked variation in burial wealth (Nilsson 1994; Holst *et al.* 2013;

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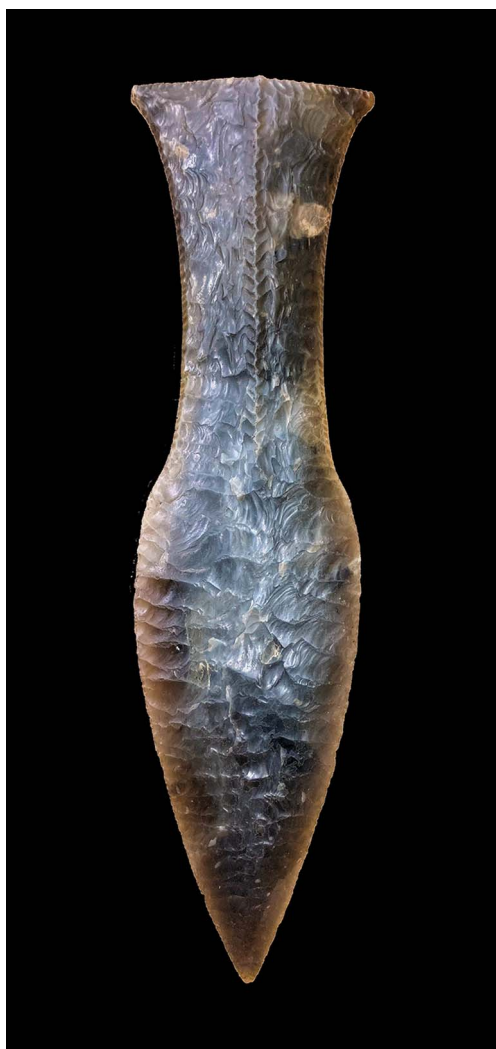


Figure 1. Dagger of Lomborg Type IV. The dagger, which is approximately 200mm long, is part of a hoard containing eight other daggers and a sickle. The hoard was found during fieldwork in Betarp, Burseryd parish, Småland, in the south-western part of Sweden (see Johannsen *in press*) (photograph by author).

of the social power and its ability to organise labour (e.g. Earle 1997: 156–58; Bradley 2021). Similarities between these southern Scandinavian monumental houses and those of the contemporaneous Early Bronze Age Central European Únětice culture are often cited to support this interpretation; again, based on their size, the latter have been suggested to be elite residences (Nielsen 1999: 159–63; Poulsen 2009: 164; Johannsen 2017; Küßner & Wechler 2019; Nielsen *et al.* 2022: 256). Thus, the interpretation of the monumental houses focuses almost exclusively on their size, while discussion of the actual function or functions is generally neglected.

Bergerbrant 2017), which are interpreted as evidence for the development of a steep social hierarchy during the Bronze Age (1700–1100 BC).

There has been much discussion about the degree to which social hierarchy had already begun to emerge during the Late Neolithic of this region (see Table 1). The lack of consensus around this question may, in part, be explained by the equivocal nature of some of the archaeological features typically associated with elite groups, such as elaborate graves and material culture, that are documented for the southern Scandinavian Late Neolithic.

The emergence of monumental houses around 2000 BC is one of the key points of reference in these discussions (Figure 3). These houses are suggested to represent the presence of ‘big men’, leaders or chieftains (Nielsen 1999: 162, 2019: 29; Kristiansen 2006: 184; Artursson 2009: 192) and are sometimes even referred to as ‘halls’ (Poulsen 2009: 162–63; Iversen 2017: 368), implying the combined role of elite residence, feasting hall and temple similar to the halls of the Late Iron Age or Viking period (Herschend 1993; Bradley 2021: 183).

The interpretation of these houses as halls is based on their large size—sometimes above 45m in length. Although rarely explicitly stated, the underlying logic is that such monumental structures were built to impress, serving as tangible and permanently visible manifestations



Figure 2. Four bronze axes found at the edge of a bog at Havholmgård on the outskirts of Skibby in northern Zealand, Denmark. The three smallest axes were produced in Scandinavia, while the largest is probably from Bohemia in Czechia. The axes are typologically dated to the last phase of the Late Neolithic/Early Bronze Age I (photograph by Kristian Grøndahl/ROMU).

The present article moves beyond the focus on size by turning to the function of these monumental houses to examine the implications for their interpretation and their significance within Late Neolithic society. Evidence from the six largest known Late Neolithic houses in southern Scandinavia is reviewed; these are selected as the clearest examples of potential elite residences, following the reasoning above. The function of these houses is reinterpreted from their internal organisation and associated finds, and conclusions are placed within the wider cultural and economic context of the Late Neolithic of southern Scandinavia.

## The largest Late Neolithic houses of southern Scandinavia

The six largest Late Neolithic houses excavated to date in Scandinavia are located at five different sites, all in Denmark: Vinge, Sydvej 2, Stuvehøj Mark, Hemmed Plantation and Limebjerg (Figure 4).

*Vinge*: Eight Late Neolithic houses have been excavated at Vinge, near Frederikssund in northern Zealand. The largest, measuring  $45.5 \times 7.2\text{m}$ , covers an area of approximately  $320\text{m}^2$ , twice the size of the second largest house at the same site (Figure 3). The house is divided into two aisles by the central postholes, with smaller postholes positioned close to the walls indicating subdivisions (Johannsen 2017: 17–18). Three rooms—one large and two smaller—and a narrow entrance room can thus be distinguished in the western part of the house. Together, the largest room and the smaller room to the east correspond to the layout of the smaller, so-called Fosie-type houses, found throughout southern Scandinavia during the Late Neolithic and first identified at the eponymous settlement of Fosie in southern Sweden (Figure 5; Björhem & Säfvestad 1989; Johannsen *et al.* in press a). Charred material, including grain, was recovered from the postholes of the largest room in the Vinge house, indicating the location of a fireplace and the use of the room for food preparation. Based on its size and the evidence for heating and food preparation, this room is interpreted as the main living quarters. The eastern end of the house had a sunken floor and appears to have been a large, open room. Only a few flint tools, some flint debitage and a small number of pottery sherds were recovered from this room, providing limited information about its function. The identification of the western end of the house as the main living quarters makes it likely that the large eastern room had a different function, possibly for stalling of livestock and/or grain and winter fodder storage. The house is radiocarbon

**Table 1. Different interpretations of Late Neolithic social structure. Partly after Vandkilde (1996: fig. 278).**

Interpretation of the social structure in Late Neolithic southern Scandinavia	Reference
The social differences which emerged with the immigration of the Corded Ware people were levelled out.	Broholm 1944: 265
The preconditions for the socially stratified Bronze Age society were established.	Brøndsted 1957: 338
The lack of evidence for social stratification in the grave material shows that there was no permanent control over the production and exchange of metal.	Rasmussen 1990
The emergence of monumental houses reflects the existence of particular successful social groups.	Vandkilde 1996: 285–286
The advanced production scheme and direct exchange of flint daggers indicate chiefdoms.	Apel 2001: 328
It is uncertain whether the monumental houses belonged to large kinship groups or were manifestations of the social position of individuals.	Jensen 2002: 25
The minimal changes in the material culture throughout the period reflect a conservative tribal society where power was in the hands of old men.	Ebbesen 2004: 104
The monumental houses represent differences in status and wealth.	Kristiansen & Larsson 2005: 277–79
Differences in the quality of daggers reflect a moderately ranked society.	Sarauw 2007: 78–79
Upcoming chiefs monopolised the bronze exchange, which led to the formation of self-perpetuating elites.	Iversen 2017: 370
Differences in house size reflect social differences, but both collective and individual strategies were important in the formation of hierarchical societies.	Brink 2013: 433
The Late Neolithic was characterised by a non-hierarchical but highly competitive social system.	Simonsen 2017: 408–10

dated to the years immediately after 2000 BC (see [Figure 6](#); [Johannsen 2017](#); [Johannsen et al. in press a](#)).

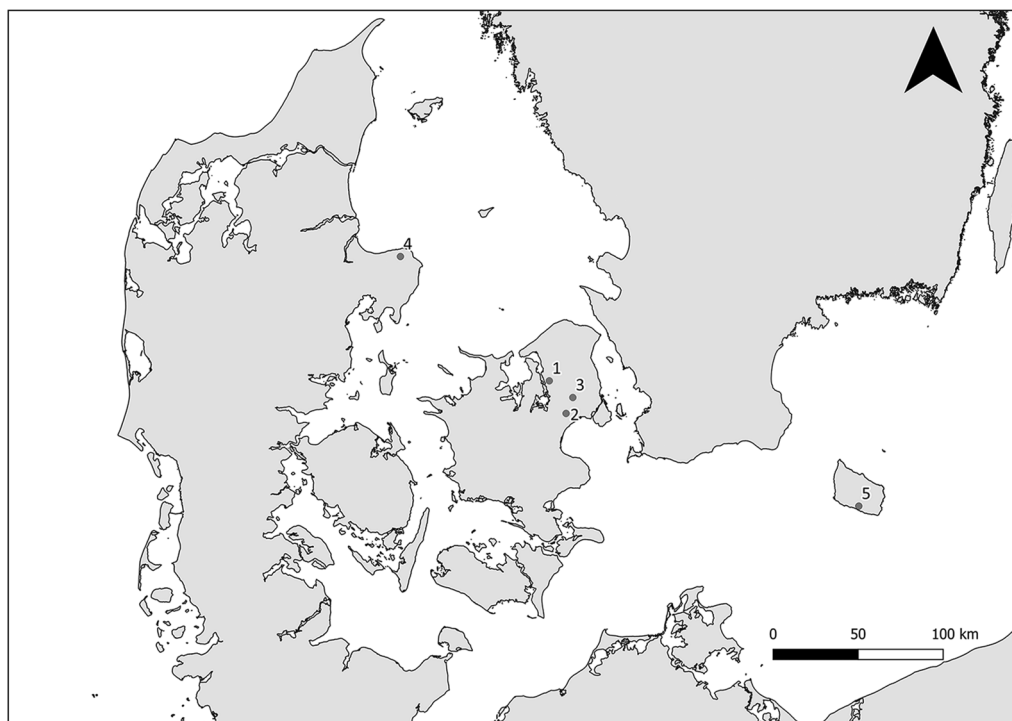
*Sydvej 2*: The settlement of Sydvej 2, located between Roskilde and Copenhagen, featured a 44m × 7.5m two-aisled house. As at Vinge, the house included a large room in the western end with a smaller room to the east. Finds from the house include a small quantity of pottery, flint debitage and a fragment of a shaft-hole axe, as well as charred wheat and barley grains. A single radiocarbon analysis broadly dates the house to the centuries around 2000 BC (see [Figure 6](#); [Sparrevohn et al. 2019](#): cat. no. 45).

*Stuvehøj Mark*: This settlement, located near the town of Ballerup in north-eastern Zealand, consisted of two two-aisled houses, of which House 32 is estimated to be 47 × 7m. A bifacial crescent-shaped sickle was recovered from one of the central postholes ([Figure 7](#)). The house





*Figure 3. The monumental house from Vinge (photograph by Martin Hamberg/ROMU).*



*Figure 4. Distribution map of monumental Late Neolithic houses discussed in the text. 1) Vinge; 2) Sydvej 2; 3) Stuvehøj Mark; 4) Hemmed Plantation; 5) Limensgård (figure by author).*

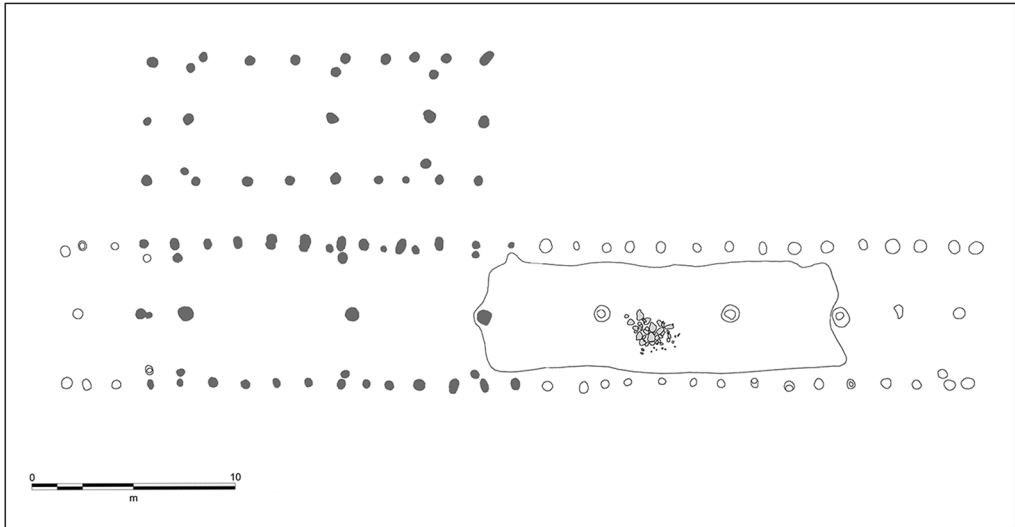


Figure 5. Alignment of central posts with posts recessed from the side walls is interpreted as evidence for internal walls in Fosie-type houses. Similar room division can be found in five of the six houses discussed in this article and is exemplified here by comparison between a house from the eponymous site of Fosie (above, after Björhem & Säfvestad 1989) and the monumental house from Vinge (below, elements corresponding to the smaller house marked in grey, after Johannsen 2017).

is typologically dated to the Late Neolithic II (1950–1700 BC) or Early Bronze Age I (1700–1500 BC; Sparrevohn *et al.* 2019: cat. no. 21).

*Hemmed Plantation:* The two-aisled House I from the settlement of Hemmed Plantation in eastern Jutland was  $45 \times 8\text{m}$ , covering  $360\text{m}^2$  and making it the largest documented Late Neolithic house in Scandinavia. Again, the house has a large room in the western end with a smaller room to the east, resembling the layout of a Fosie-type house. The remains of a fireplace were identified in the largest room, and the possible remains of another fireplace at the east end of the house. Finds include the hilt of a Type IV dagger, flint debitage, pottery sherds, the bones of oxen and the charred remains of acorns, hazelnuts and cereal grains. The house is dated to the Late Neolithic II by finds and radiocarbon analyses (see Figure 6; Boas 1991: 130–31, 2017: 249–50).

*Limensgård:* The Limensgård site on the island of Bornholm is unique in that it contains several houses of considerable size dating to the Late Neolithic. The two largest houses are interpreted as measuring respectively  $40 \times 7.15\text{--}7.70\text{m}$  (House S) and  $43.5 \times 7.5\text{--}8.8\text{m}$  (House AB). Both structures have ground plans reminiscent of Fosie-type houses, though the layouts are less distinct here, possibly because houses from several different phases overlap (Nielsen *et al.* 2022: figs. 1.5, 4.7 & 4.18). Finds from Houses AB and S include pottery sherds, a few flint tools, flint debitage, grinding stones, fragments of shaft-hole axes and burnt animal

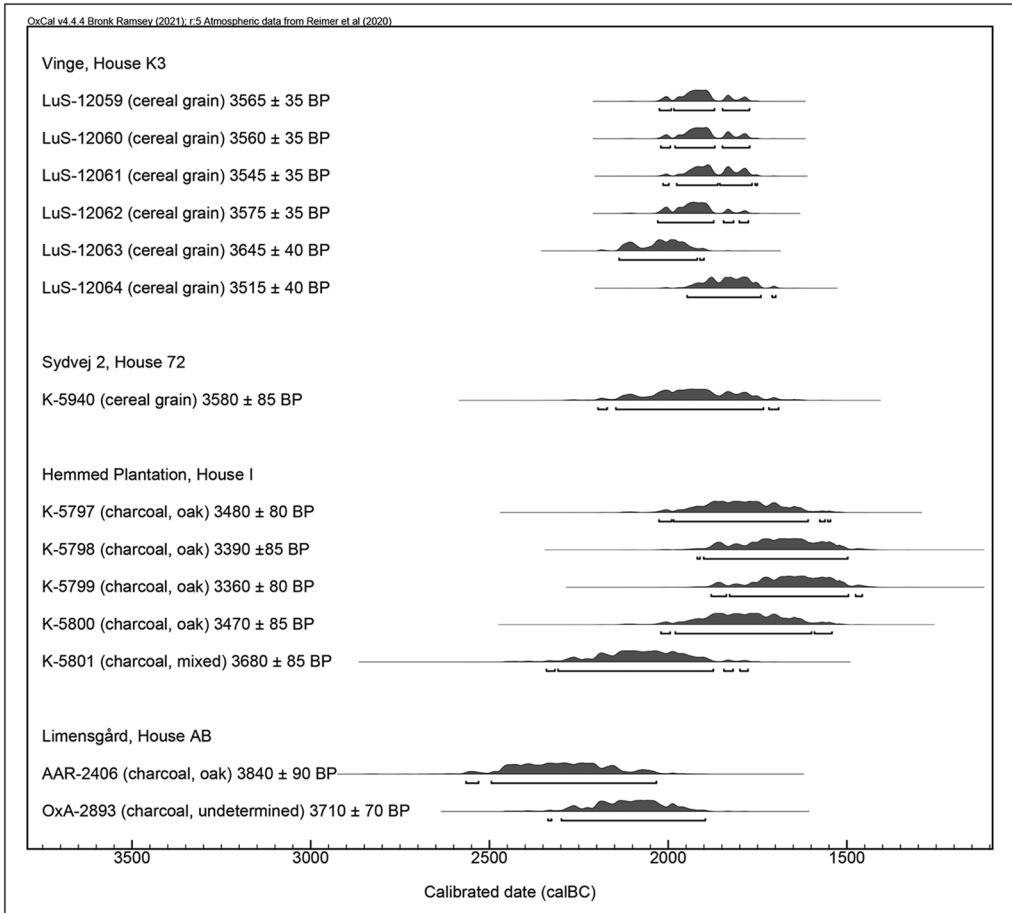


Figure 6. Available radiocarbon dates from monumental Late Neolithic houses in Denmark (figure by Emil Winther Struve/ROMU).

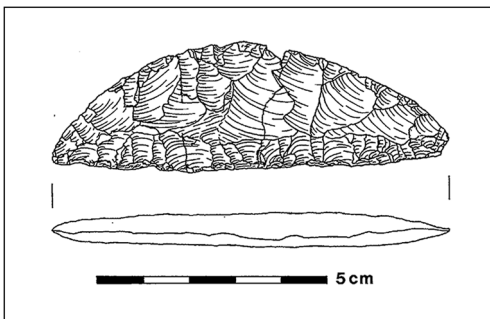


Figure 7. Crescent-shaped bifacial sickle found in one of the central posts of the large house from Stuvehøj Mark (drawing by Kenneth Paulmann/Kroppedal Museum).

bone. Both houses are broadly dated to the Late Neolithic (see Figure 6; Nielsen *et al.* 2022: 165–72, 184–91).

In five of these six monumental houses, therefore, the same internal division of space as in the smaller contemporaneous houses of the Fosie-type is found (Figure 5). The remains of fireplaces in the largest room in the western ends of the Vinge and Hemmed Plantation houses suggests these were heated areas and served as main living quarters. This interpretation is supported by the

presence of charred grain, possibly deriving from food preparation. Again, the interpretation of these larger rooms located at the western ends of houses as the living quarters corresponds with interpretations of the largest room in Fosie-type houses, where indications of heating have also been recognised (Johannsen 2017: 18; Johannsen *et al.* [in press a](#)). The discovery of sickles ([Figure 7](#)), carbonised grain, grinding stones and animal bones all suggest that, besides being dwellings, these monumental structures were also farmhouses.

Given the similarities in room division and material culture, it is therefore suggested that the functions of these monumental houses were essentially the same as those of the smaller Fosie-type houses: they were a combined place of dwelling and a base for the agricultural production of a household, here defined as a group of people collectively engaging in activities essential for their sustenance, encompassing both material and social requirements (Wilk & Rathje 1982: 620–21). In other words, it is argued that these houses were simply grandiose versions of typical, but much smaller, Late Neolithic farmhouses. Furthermore, it may, with some caution, be concluded that the phenomenon of monumental, two-aisled houses emerged around 2000 BC and continued into the Early Bronze Age I (see [Figure 6](#)). As such, these monumental Late Neolithic houses can be seen as the predecessors of the monumental three-aisled houses, which were constructed from the Early Bronze Age II (1500–1300 BC) and beyond (Nilsson 1994; Ethelberg *et al.* 2000).

## **The reneolithisation of southern Scandinavia**

After a diminution in the importance of agropastoralism, the so-called deneolithisation of southern Scandinavia in the Middle Neolithic B (2800–2350 BC, e.g. Iversen 2013; Nielsen *et al.* 2019), the Late Neolithic is characterised by a process of reneolithisation. The monumental farmhouses described above are one of several indications of this agricultural intensification. The bifacial crescent-shaped sickle ([Figures 7 & 8](#)), which was primarily used for harvesting cereals, was developed in the earliest part of the Late Neolithic and remained the most common tool type into the Early Bronze Age (1700–1100 BC, Johannsen [in press a](#)). Soil sampling at Late Neolithic houses demonstrates that spelt was introduced during this period and that a wide range of wheat and barley varieties were cultivated at each settlement (Andreasen 2009); ard marks further show that fields were routinely worked as part of the Late Neolithic cultivation cycle (Johannsen *et al.* [in press a](#): tab. 5). Agriculture favours sedentism, and the contrast between the limited evidence of two-aisled houses from the Middle Neolithic B and the numerous remains of sturdy, permanent houses dated to the Late Neolithic (Brink 2013; Sparrevohn *et al.* 2019) is thus an indirect but strong indication of the increased importance of agriculture and the (re)introduction of the farmhouse as the hub of food production (Johannsen 2023: 4).

Preservation of animal bones from the southern Scandinavian Late Neolithic is poor, but the importance of animal husbandry is reflected in pollen analyses (Johannsen *et al.* [in press a](#)) and further emphasised by the ability of Late Neolithic farmers to cultivate nutrient-hungry crops on the same lean soils across generations, implying extensive manuring (Poulsen 2017: 205; Johannsen & Mandrup [in press](#)). Although hunting, fishing gathering to some extent also contributed to the Late Neolithic subsistence (Andersen 1996; Johannsen 2021; Johannsen *et al.* [in press a](#)) it is thus reasonable to assume that Late Neolithic society was





Figure 8. The Gilbjerghoved hoard from the northern part of Zealand, Denmark contains 26 sickles, 86 sickle preforms, one spearhead and one dagger preform (Type Ix) and is the largest Late Neolithic hoard from southern Scandinavia (photograph by author).

largely based on farming. This process of agricultural intensification and the consequent increase in food production must be understood as the foundation for a boom in population across southern Scandinavia during the Late Neolithic (Nielsen *et al.* 2019; Bunbury *et al.* 2023; Friman & Lagerås 2023; Johannsen *et al.* *in press b*).

## Subsistence and power

It is generally accepted that surplus food production is required to free up labour for other non-subsistence tasks and thus this surplus is ultimately a prerequisite for a social hierarchy (e.g. Childe 1954: 30–31; Sahlins 1972: 86, 185–91). The labour freed up by surplus food production can be transformed into, for example, monumental construction, elaborate tombs, specialised production and organised armies—all of which archaeologists typically associate with social elites. As Svend Hansen (2021: 63) has stated, these are all “surplus products which were only possible because their producers were fed by people who produced more than was necessary for biological survival”. It has also been pointed out, however, that there are always potential surpluses available, and it is the ability of institutions to exploit these surpluses, and not the surplus itself, that drives social evolution (Pearson 1957: 339;



D'Altroy *et al.* 1985: 187). A productive farming economy, capable of supplying a society with plentiful food, is thus not a source of power in its own right, but rather a resource that can be potentially mobilised by aspiring leaders.

In Late Neolithic/Early Bronze Age Scandinavia, it is assumed that the rising demand for bronze became the means by which power centralised into fewer hands. In short, access to metals came to be controlled by leaders who used its redistribution to extract tribute in the form of food and labour, which could in turn be used to extend social control (e.g. Vandkilde 1996: 285; Kristiansen 2006: 189; Earle & Spriggs 2015; Iversen 2017: 370; Hayden & Earle 2022). One example is the construction of large seagoing boats, the existence of which in the Late Neolithic is evidenced by direct contact across the Skagerrak—the strait that runs between the Jutland, the east coast of Norway and the west coast of Sweden (Østmo 2012). The construction of these boats demanded the mobilisation of large and skilled workforces over long periods. An underlying prerequisite for their construction was thus an agricultural surplus to support the required labour. This surplus was thereby transformed into large, seagoing boats, that could be used for raiding and, perhaps more importantly, trade expeditions, further consolidating the power of the individuals who organised the boats' construction (Ling *et al.* 2018).

However, although a food surplus-generating subsistence base as described above is implicitly recognised as an underlying prerequisite for the emergence of social elites, sustained analysis of subsistence as a key element in the rise of a socio-economic elite within Late Neolithic Scandinavia is, with few exceptions (Kristiansen 2006: 184), still largely lacking. It is argued here that it was the agricultural intensification at the beginning of the Late Neolithic which prepared the ground for the increasingly hierarchical organisation of society that accelerated as metal import increased around 2000 BC.

## Status among farmers

Humans are inherently socially hierarchical, comparing individual and group status across a range of measures. Status is often signalled by size (Høgh-Olesen 2019: 86–88). Who is biggest, strongest or richest? Who has the largest, most expensive car, TV set, house or ice cream? In societies where subsistence is almost exclusively based on agriculture, and hence food production is a prerequisite for the centralisation of power, status may be signalled by the scale of agricultural traits. One example is the fashion for idealised paintings and prints of extraordinarily large cows, pigs and sheep in nineteenth-century Britain (Quinn 1993); these oversized animals were proof of their owners' skills as animal breeders and thereby acted as status symbols, which were perpetuated (and exaggerated) in artistic representations (Figure 9). Another example is the relationship between large numbers of livestock and large quantities of manure, sometimes expressed through the somewhat peculiar tradition in historic rural Denmark of locating the dunghill in the most visible part on the farm—in the middle of the courtyard or directly facing the road—as a subtle display of wealth (Schmidt 1939: 724–28).

The monumental Late Neolithic farmhouse can be understood in a similar way. The farmhouse served several practical functions as a combined dwelling and agricultural base and was thus a symbol of the structure and organisation of society as a whole. The



Figure 9. *A pair of pigs, unknown artist, about 1850 (painting photographed by Jamie Woodley, licensed by Compton Verney).*

monumental farmhouse therefore signalled large-scale agricultural production and was a tangible and widely visible display of the wealth and power of the household. Although their agricultural function remained the same as that of smaller, contemporaneous farmhouses, their monumentality is the most explicit expression of the emergence of a farmer-elite in agricultural communities around 2000 BC. That said, in an increasingly hierarchical society, where subsistence goods were the primary means to advance power, the economic system may have been organised around a ‘staple finance’ model, whereby grain and livestock served as payments to leaders (D’Altroy *et al.* 1985). In this context, monumental houses might also have functioned as storage spaces for such tribute; in turn, the size of these storage facilities again acted as an explicit display of the wealth and power of the household.

During the Late Neolithic, metals were imported into Scandinavia from western and central Europe (Nørgaard *et al.* 2021). In particular, the metal production of the contemporaneous Únětice Culture of central Europe came to exert influence in Scandinavia in the second half of the Late Neolithic (Figure 2). Direct connections between the two areas are reflected in the unique metal objects from central Europe included in the Gallemose (three bronze rods) and Skeldal (beehive box) hoards deposited in Denmark (Vandkilde 1988; Randsborg 1992). The monumental scale of houses in southern Scandinavia and in central Europe have

also invited comparisons, with similarities in their two-aisled construction (Nielsen 1999: 159–63; Poulsen 2009: 164; Johannsen 2017; Küßner & Wechler 2019; Nielsen *et al.* 2022: 256). It is hardly a coincidence that monumental houses first appeared in southern Scandinavia at the same time as a boom in metal imports from other areas in Europe where monumental houses also existed. The Scandinavian farmers involved in the importation of metal must have known, and probably even seen, how the central European elite expressed their power with extravagant metal artefacts, huge burial mounds and monumental houses. It is reasonable to assume that this knowledge stimulated the construction of monumental houses in southern Scandinavia (Johannsen 2017: 21–22).

Variations in house size may reflect emerging hierarchies, as competition, and therefore the need for display, is particularly intense in the early stages of power centralisation (Earle 1997: 178–79). In Late Neolithic Scandinavia social hierarchy was not yet institutionalised; only the monumental farm of the Limensgård site seems to have had more than a single phase. Given that the wooden houses lasted only one or two generations, sometimes even less (Zimmermann 1998: 53–62), these early attempts at power consolidation seem to have been short-lived. This power seems to have dissolved quickly, possibly when the head of the household weakened or died, leaving only the monumental imprint of their former power consolidation behind.

## Conclusion

Around 2000 BC, monumental-scale farmhouses first appeared in southern Scandinavia. Similar in their basic functions to small farmhouses, their size signalled significant socio-economic developments. These monumental houses are the most tangible evidence for the rise of a powerful farmer elite who differentiated themselves from the rest of society through the adoption of an architectural form used by the hierarchical, metal-producing societies in central Europe. In this way, the elite signalled their close ties with Únětice societies and the latter's extravagant expressions of power.

Large houses, exotic objects and extensive exchange networks are typically taken to indicate the emergence of elites in prehistoric societies. By focusing on the function, rather than size, of monumental houses, this article has attempted to draw attention to the importance of agricultural production, as a fundamental element in the emergence of elites on the threshold of the Nordic Bronze Age. The expansion of agricultural production in the Late Neolithic formed the foundation for social economic hierarchy at the end of the Neolithic and in the Bronze Age. A productive farming economy, capable of providing sufficient or surplus food, was a prerequisite for mobilising the labour needed to construct monumental houses and large sea-going boats and to engage in the growing metal trade. Monumental houses thereby represented the accumulation of livestock, cereals and winter fodder, which were used in turn to express social power. That the existence of this elite is most clearly reflected by monumental farmhouses underscores the importance of agriculture in Late Neolithic society. The whole of society was involved in farming. Even the dagger-carrying, powerful heads of households—who lived in the monumental houses, had widespread social networks and who travelled long distances to access exotic metals—were first and foremost farmers.

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