SETTLEMENT CHANGE ACROSS MEDIEVAL EUROPE

OLD PARADIGMS AND NEW VISTAS

edited by NIALL BRADY & CLAUDIA THEUNE

RURALIA XII

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Contents

Land-organisational changes in rural Denmark from AD 200-1200

*Jesper Hansen**

Summary

'How was the settlement structure on King Godfred's time (ca. AD 800)? And how far is this structure, which is likely to represent the basis of the present, back in time?' These questions were formulated by the historian Aksel E. Christensen in 1969 as the 'crucial issue in Danish settlement history' with implicit reference to the fact that the settlement history forms the foundation for research and theory building in relation to prehistoric societies. This paper focuses on fundamental land-organisational changes in rural Denmark considered in a longue durée perspective from the Roman Iron Age to the Middle Ages. The study is based on the author's doctoral research carried out from 2013 to 2015 as an interdisciplinary regional study based primarily on archaeological data from the island of Funen in central Denmark, as well as place names, cadastral maps, and written sources. The paper presents some of the main results from the research, including a new organisational model that describes the basic settlement-historical development in Iron Age 'Denmark' with special focus on the essential changes in the late 6th century. The paper sketches a generalisation and does not account for the variations and exceptions that do occur.

Keywords: *South Scandinavia, Iron Age, Viking Age, Middle Ages, land organisation, settlement structure, fiscal obligations, village.*

Résumé

Les changements dans l'organisation des terres du Danemark rural entre 200 et 1200 après J.-C.

'Comment était la structure d'habitat au temps du roi Godfred (env. 800 après J.-C.)? Et à quelle distance se trouve cet habitat, qui est susceptible de représenter la base du présent, dans le passé?' Cette question fut formulée en 1969 par l'historien Aksel E. Christensen comme la 'question cruciale dans l'histoire de l'habitat danois' avec une référence implicite au fait que l'histoire de l'habitat forme la base de la recherche et de la construction théorique dans les sociétés préhistoriques. Cet article se concentre sur les changements fondamentaux dans l'organisation des terres du Danemark rural, dans une perspective de longue durée, depuis l'Âge du fer romain jusqu'au Moyen-Âge. Cette étude s'appuie sur mes recherches doctorales réalisées entre 2013 et 2015, étude interdisciplinaire régionale fondée principalement sur les données archéologiques

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de l'île de Fyn dans le Danemark central ainsi que sur les noms de localités (Toponymes), des cartes cadastrales et des sources écrites. Cet article présentera quelques résultats de mon travail et inclura notamment un nouveau modèle d'organisation qui décrit les bases historiques du développement de l'habitat dans le "Danemark" de l'Âge du fer avec une attention particulière sur les changements essentiels qui ont lieu au VIème siècle. Je voudrais insister sur le fait que la présentation qui suit dessine un portrait général et ne prend pas en compte les variations et exceptions qui peuvent avoir eu lieu.

Mots clés: *Scandinavie du Sud, Âge du fer, Âge des Vikings, Moyen-Âge, organisation de la terre, structure de l'habitat, obligations fiscales, village.*

Zusammenfassung

Umgestaltungen der Landorganisation im ländlichen Dänemark 200-1200 n.Chr.
'Wie sah die Besiedlungsstruktur zurzeit König Göttriks aus (ca. 800 n.Chr.)? Und wie weit in die Vergangenheit kann diese Besiedlung, die wahrscheinlich die Basis der gegenwärtigen repräsentiert, zurückdatiert werden?' Diese Frage wurde 1969 vom Historiker Aksel E. Christensen als die '… entscheidende Frage der dänischen Besiedlungsgeschichte…' aufgeworfen, bei der die indirekte Anspielung auf die Tatsache mitschwingt, dass die Geschichte der Besiedlung die Grundlage der Forschung und die Bildung von Theorien zu prähistorischen Gesellschaften darstellt. In diesem Beitrag wird das Hauptaugenmerk auf den grundlegenden Umgestaltungen der Landorganisation im ländlichen Dänemark, in einer *longue durée* Perspektive von der Römischen Kaiserzeit bis in das Mittelalter, gelegt. Die Studie basiert auf meinen Forschungen, die 2013-2015 als eine interdisziplinäre regionale Studie vorgenommen wurden, die hauptsächlich auf archäologischen Daten von der Insel Fünen im zentralen Dänemark beruht, wie auch auf Ortsnamen, Katasterplänen und schriftlichen Quellen. Der Beitrag präsentiert einige der Hauptresultate der Arbeit, einschließlich eines neuen Organisationsmodells, welches die grundlegende siedlungsgeschichtliche Entwicklung im eisenzeitlichen 'Dänemark' mit speziellem Augenmerk auf wesentliche Veränderungen im späten 6. Jh. beschreibt. Es sollte zudem angemerkt werden, dass die folgende Präsentation einen Überblickscharakter hat und auftretende Variationen und Ausnahmen nicht berücksichtigt.

Schlagwörter: *Südskandinavien, Eisenzeit, Wikingerzeit, Mittelalter, Landorganisation, Siedlungsstruktur, Fiskalische Verpflichtung, Dorf.*

Research history

During the past three to four decades, settlement-organisational research on the period in question has largely been apportioned within one general theory that broadly links stationary villages with the end of the Viking Age, and frequently also with the establishment of the church system after the turn of the 1st millennium AD. This theory, which during the 1980s came to function as a settlement-historical paradigm, was initially developed on the basis of a research project undertaken on Funen in the 1970s led by two historians, Torben Grøngaard Jeppesen and Erland Porsmose (*Grøngaard Jeppesen 1981*; *Porsmose 1981*; *1987*; *Riddersporre 1995,* 11). The theory was later considered to be proved by a series of excavations, in particular those in a project led by the archaeologist Steen Hvass in and around the village of Vorbasse in central Jutland (*Hvass 1983*; *1987*). Since the late 1980s, Vorbasse has played a dominant role as a South Scandinavian settlement par excellence and has been implemented and published as such in the vast majority of southern Scandinavian settlement-historical models (*e.g. Elsøe Jensen 2010,* 200; *Fabech – Ringtved 2009*; *Holst 2010*; *Hvass 1988*; *1989*; *1993*; *Jensen 2004*; *2013*; *Kaldal Mikkelsen 1999*; *Poulsen – Sindbæk 2011*).

The model established on the basis of the Vorbasse findings outlines successive village relocations throughout the 1st millennium AD, peaking in the late 11th century with a final restructuring and relocation that matches equivalent to the present village organisation observable on cadastral maps from ca. 1800 (*e.g. Porsmose 1993*). This has hitherto left a general impression of relative organisational coherency throughout the 1st millennium, though with major typological, technological, and economic changes occurring around AD 200 and 700 (*Bradshaw et al. 2005*; *Fabech – Ringtved 2009*; *Hvass 1989*; *Näsman – Roesdahl 1993*, 183; *Robinson et al. 2009*).

My question is, however, whether this settlement-historical model reflects a general development, or whether it stands out as an abnormality in a broad South Scandinavian or even a specific Danish or Funen context.

Data and statistical significance

The primary archaeological data incorporated into this study, as representative of actual settlements, are limited to sites comprising at least one agrarian longhouse dated to the millennium in question. This is a natural consequence of the analysed object being village- and

settlement organisation – primarily understood as the family homes. Sites comprised solely of pits, wells, pit houses, and stray finds, etc., but with no definite agrarian longhouses, are therefore excluded, as these features can represent various types of structures with no direct spatial relation to a contemporary agrarian settlement. Given the scale of my data set (see below), this is a qualitative selection that improves the clarity of the results relative to previous studies, where such a qualitative selection would have caused prohibitive statistical problems (*e.g. Jeppesen 1981*).

This study is based on data collected up until March 2015 and incorporates all 1547 agrarian longhouses excavated on Funen and the surrounding islands. Furthermore, it includes 1466 ^{14}C date determinations from the specific sites, in addition to a large contextualising archaeological and historical data set from the South Scandinavian area in general. As such, the analyses were undertaken according to a quantitative methodological approach. While we cannot, in my opinion, talk of actual 'big data' in archaeology, it would be correct to characterise this study as 'Large Data Set Archaeology'. The data potentially involved are continuously being augmented and the data set appears rather large when compared to previous studies and traditions, which were often based on one or a few 'super sites'. The total accumulated trial-trenched or fully excavated area on Funen is 2860 ha, constituting ca. 1.15% of the island (*Hansen 2011*; *2015a*, 70). In this respect, it is the most comprehensive study of its kind yet carried out in Denmark.

The sites included in the study are distributed across Funen's three historical-cultural landscape types: coast, forest, and plain (*Grau Møller – Porsmose 1997*; *Hansen 2015a*; *2017*, 170). The results presented here are, therefore, not to be seen as bound to specific types of historical-cultural landscapes but have proved to transcend variations in the natural and technological resources and to be statistically significant (*Hansen 2015a*, 78).

Results

A bar chart showing the number of settlement sites found, grouped roughly by century, clearly demonstrates a distinct decrease in the number of recorded sites in the Late (Scandinavian) Iron Age (Fig. 1). This must be explained, and it raises the fundamental question of whether the basic settlement-organisational system characterising the period in question, in the form of so-called 'wandering farmsteads', actually remained largely unchanged until the Late Viking Age, around the 11th century (*e.g. Hvass 1989*; *Porsmose 1993*; *Poulsen – Sindbæk 2011*).

During the last couple of decades, scholars have theorised on the possibility of direct causal links between the decrease in the number of archaeological finds and societal changes evident in the mid-1st millennium AD, and specific triggering catastrophic natural events

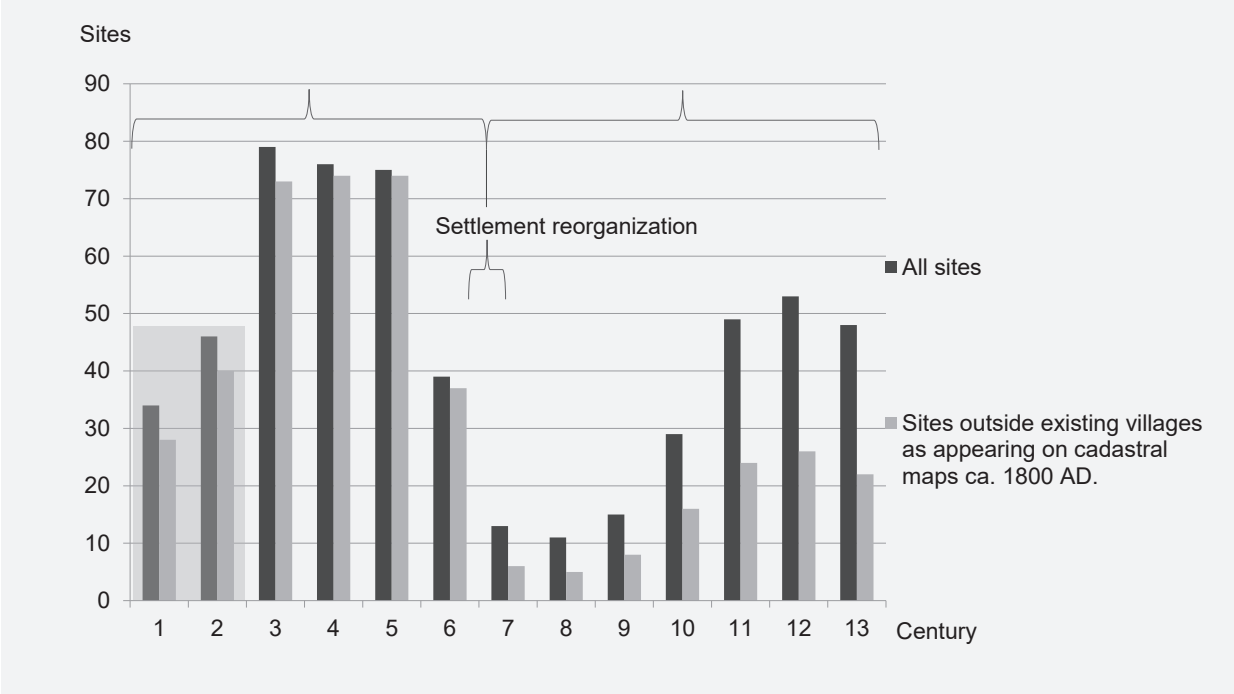

Fig. 1: Chart showing fluctuations in the number of excavated agrarian sites (y-axis) dating from the 1st-13th centuries AD (x-axis). The data from the 1st and 2nd centuries are incomplete and only cover sites with continuity into the following period (© Jesper Hansen).

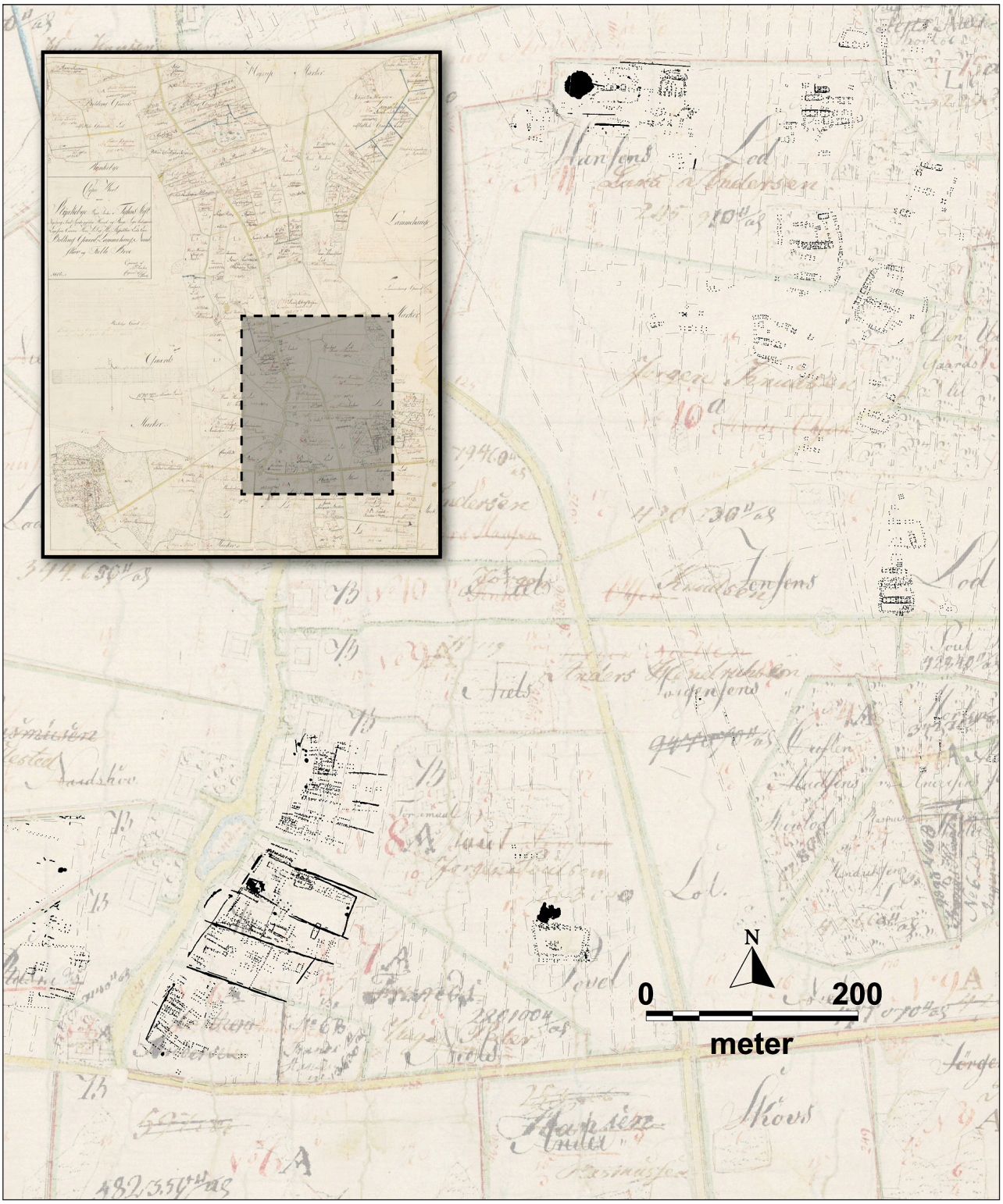

Fig. 2: Rynkeby. Excavated farms from the 1st-16th centuries (black) plotted on an early- 19th-century cadastral map. The 2nd-6th-century fenced farms are clustered in the north-east, while the farms from the 7th century onwards are concentrated in the south-east within the still-existing village. The later farms differ significantly from the previous ones, and they are located on regular 'tofts' (© Jesper Hansen and Danish Geodata Agency).

occurring around AD 536-546, for example the plague of Justinian, volcanic activity, etc. (*e.g. Axboe 1999*; *Löwenborg 2012*). Although I do not want to go into this ongoing academic debate in depth, I feel the need to make a few comments as my study supplies data relevant to the debate in general.

When analysing the data from Funen, it becomes clear that a reasonably well-defined decline in the recorded settlements predates AD 536-546 by almost a century. Furthermore, if we turn to the graves, only 5 are recorded from Funen for the period ca. AD 450-800, compared with more than 5,000 graves from AD 175-450 (*Albrectsen 1951*; *Henriksen 2009*). In contrast, we find an abundance of metal objects scattered around the present-day villages (*e.g. Feveile 2016*). These objects are dated primarily to the late 6th to the 12th century and are found in particular around villages bearing classic Iron Age and Viking Age place names, *e.g.* -inge, -lev, -um/-hem, -sted, -løse, -by, and -torp. These observations indicate fundamental changes in the overall structure of society rather than the catastrophic impact of natural disasters.

Of course, this does not exclude the possibility of recordable societal impacts arising from natural and climatic events, long-term changes, or even catastrophes, but we must be very cautious about claimed causality on behalf of a coincidence of events (*Hansen 2015a*).

Let us instead refocus our attention on the archaeological record and, in particular, the village of Rynkeby (Fig. 2). Excavations and research undertaken over the last 15 years have revealed that this village displays a rather complete structure, representing a repetitive scheme of settlement development on Funen during the 1st millennium AD.

Rynkeby

The first archaeological traces of the settlement that eventually became Rynkeby comprise one or two labile farms dated to the late pre-Roman and early Roman Iron Ages. These farms 'wander' around what later became the resource area of the present village. In the late Roman and early Germanic Iron Ages, both the buildings and the individual farms increased in size. An area east of Rynkeby gave way to the formation of an actual village. Here, the fully fenced farms were demolished and moved as required in what still appears to have been a relatively autonomous structure, just as in the previous period. Movement of the individual farms occurred with the same varying intensity as before, but an overall underlying parcel structure emerged within the considerably larger settlements. Up to this point in time, developments directly paralleled the existing theories and models based on the excavations at Vorbasse, among others (*e.g. Holst 2010*; *Hvass 1987*). From the later part of the 6th century onwards, no further farms were (re)built in that area.

Turning our attention to the remains excavated in the extant village reveals what we would traditionally characterise as a typical village structure dated to the 10th or 11th century onwards. This is a village that differs fundamentally from the late Roman and Migration period settlement. The farms are organised into much larger and regular side-by-side tofts. These would or could be divided, probably as a consequence of inheritance, as has also been suggested for the contemporary site of Østergård in southern Jutland, or for the 2nd-6th century 'wandering farms' evident near present-day Nørre Snede and Vorbasse (*Hansen 2015a*; *Holst 2010*; *2014*; *Sørensen 2011*).

The fundamental question is, of course, when was this actual village founded? In seeking an answer, I turned to the ^{14}C daterminations, because, as is often the case, the artefacts were very few in number. The materials used for dating were selected according to a strict sampling strategy that focused not only on carbonised cereals originating from the impressive and well-defined houses, but also on those from the smaller and often irregular buildings (*Hansen 2011*; *2015a*). The ^{14}C dates clearly demonstrate that the structure that still characterises the village layout was formed in the late Germanic Iron Age. Seen in a wider perspective, the logical consequence of this appears to be that the hitherto missing settlements from the Late Migration period and Early Viking Age are, in general, to be found within the existing villages. As a result, there is reason to believe that the oft-referred-to agrarian settlement regression in the 7th-9th centuries is, to some extent, an expression of archaeological methodological difficulties rather than an actual historical crisis.

Researchers familiar with hypotheses relating to the settlement history of the internationally well-known site of Gudme, in south-east Funen, may notice a discrepancy between the general trends suggested by the author on the basis of the finds from Rynkeby, and what has been suggested on the basis of the Gudme finds (*Hansen 2011*; *2015a*; *Hedeager 2011*, 161, 185; *Jørgensen 2011*; *Sørensen 1994*; *2001*; *2010*). So far, metal-detector finds have been used as the main body of evidence for the definition of long-term developments at Gudme, as the excavated areas in the fields outside the modern village do not include actual settlement remains dating to the period after ca. 600 AD.

Based on the distribution of the metal-detector finds it has been suggested that the development of the settlement had three main phases (*Jørgensen 2011*, 82, Figs. 5, 8-10). The distribution of these finds, as well as the composition of them within the different areas, has been interpreted as proof that the village moved from the metal-rich areas (the finds generally dating to 3rd-6th centuries AD) east and south-east of the village, to the location of the present Gudme village around the Viking Age-medieval period transition (11th century AD). However, the maps show

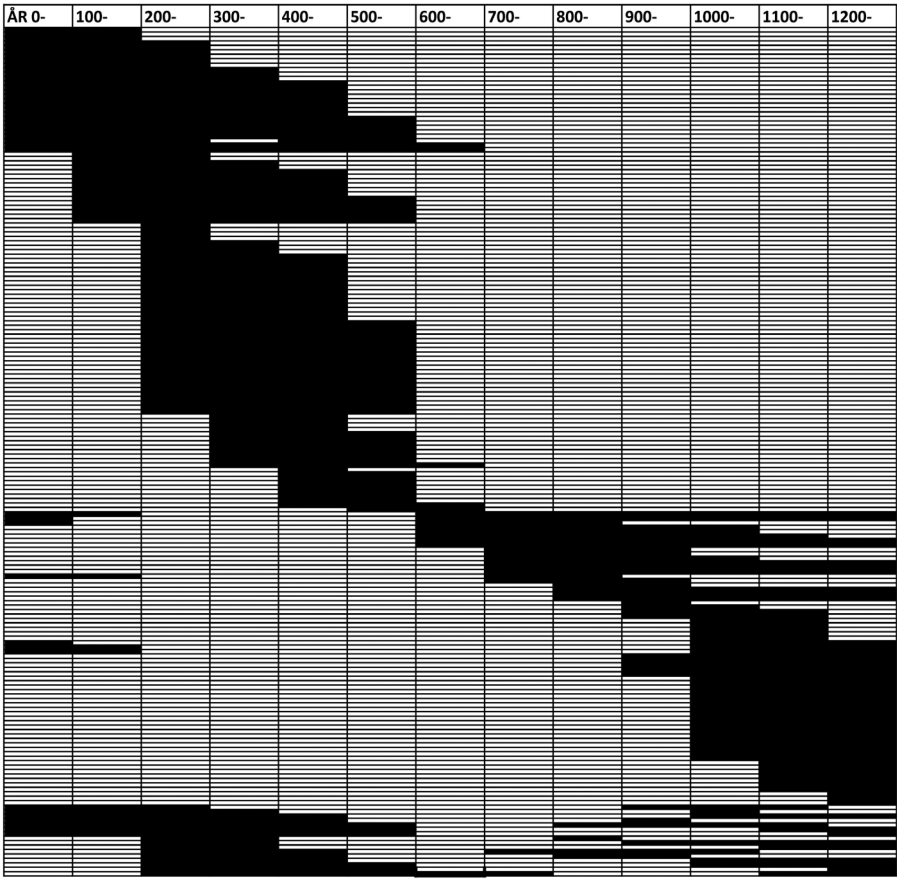

Fig. 3: Diagram showing all Funen sites with houses dating from the period AD 200-1200 and specified site continuity (black) (© Jesper Hansen).

that the distribution of the metal-detector finds remains the same through time, with only the number of finds fluctuating notably (*e.g. Jørgensen 1994*, Fig. 2).

This suggests that previous interpretations based on the metal-detector finds may have been wrong. For example, 'the smaller number of finds indicates that the old settlement area was abandoned and moved to present-day Gudme' (*Jørgensen 2011*, 86, Figs 9, 10). Instead of changes to the settlement patterns in the late Viking Age, the current distributions of the finds in the 9th-10th centuries AD and the 11th century AD, respectively, seem to indicate a structural continuum, with the only notable change being the lower number of finds towards the end of the period. In other words, the distribution patterns do not support a relocation of Gudme, or changes to the use of the plots, during the 9th-11th centuries AD.

Presently, the excavated settlement remains from the Late Germanic Iron Age and Viking Age periods do not support an interpretation suggesting that Gudme was located outside the historical village at this time. Instead, Gudme III (*e.g. Sørensen 2001*, Figs 4, 9) suggests that during the Late Germanic Iron Age and Viking Age periods the settlement developed within the framework of the historical village with spatial structures and architectural developments mirroring the developments at Rynkeby and on Funen in general. The western part of Gudme III is located on the periphery of the historical farm plots (*e.g. Sørensen 2001*, 31), and is characterised by the presence of a variety of one-aisled structures, including small characteristic north-south orientated houses, which at Rynkeby, Skrillinge, and Lumby have been radiocarbon dated to the Late Germanic Iron Age and Viking Age periods (*Hansen 2011*; *2015a*, 87; *2015b*, 29). This means that there is no discrepancy between the Gudme evidence and the development suggested for Rynkeby. The discrepancy between classic Gudme presentations and the models presented in this paper are therefore simply different interpretations of the same data.

Microscale changes in a macroscale perspective

Detailed analysis of the collected data from Funen reveals that, prior to the later part of the 6th century, the individually fenced farms were relocated at intervals of 30-400 years, without displaying any uniformity of duration or direct ties with neighbouring farms (*Hansen – Lundø 2015*; *Hansen 2015a*, 105). Coincident with this absence of microscale coherence on a farm level, the archaeological record displays remarkably temporal macroscale uniformity. It is clear that the settlements can

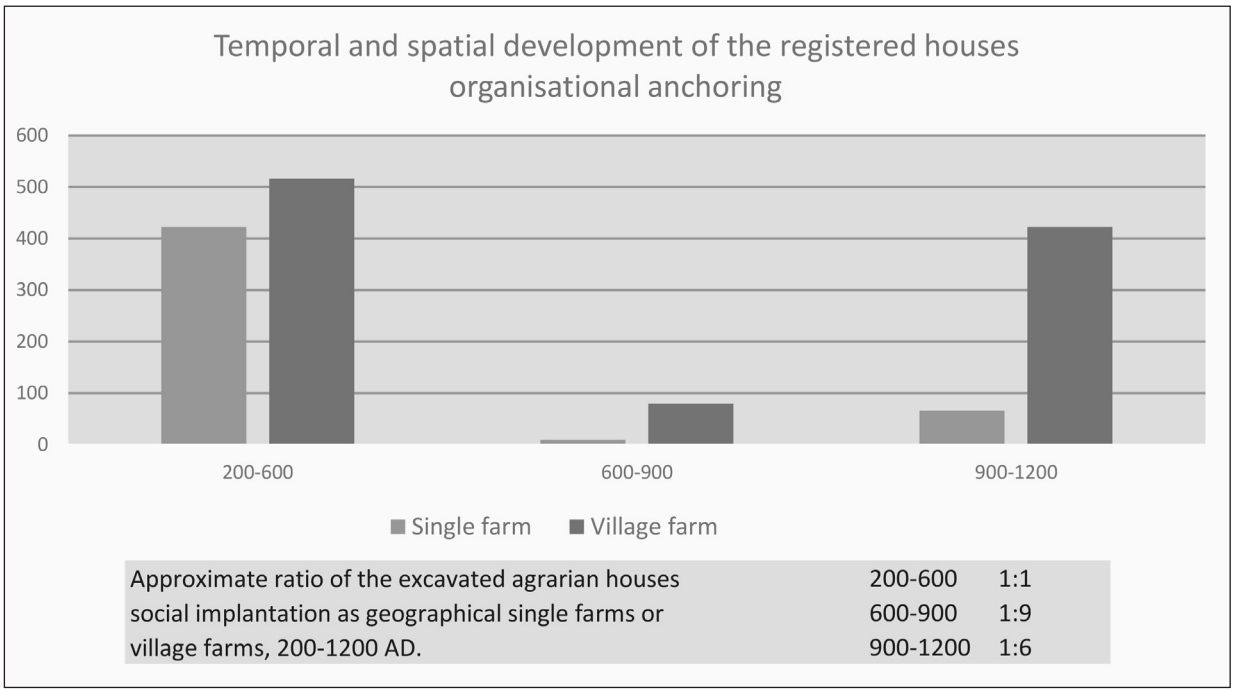

Fig. 4: Bar chart illustrating the geographical distribution of Funen farms dated to the period AD 200-1200 (© Jesper Hansen).

be divided into two consecutive groups, characterised by the crucial observation that the settlement plots dated to the 6th century never persisted beyond the 7th century, regardless of when the specific settlement areas were taken into use (Figs. 1 and 3).

In other words, all the settlements were reorganised and relocated during a relatively short period of time, roughly corresponding to the decades leading up to AD 600. Presentation of all the relevant data in a single diagram, specifying the approximated site continuity for the individual settlement areas, clearly demonstrates the latter point. Something general and fundamental happened in terms of land organisation in the late 6th century AD.

Apart from this general reorganisation, a further distinction should be pointed out with regard to settlement organisation before and after the late 6th century. The focal point here is the physical aspect of *living together/living apart* (*e.g. Riddersporre 1999*). When the excavated farm sites are assembled in a diagram and classified in terms of single farms or village farms, it is obvious that an organisational system fundamentally based on the labile farm was replaced by a system based on actual villages during the later decades of the 6th century (Fig. 4). In fact, single farms dating from the 7th-8th centuries have yet to be found on Funen, although they are common in the preceding centuries. The fixed village structure recorded from the 7th-9th centuries helps to further underline that the shift observed in the late 6th century represents a genuine and profound organisational change in the settlement system. A further aspect, which follows on directly from the recognition of the new model of settlement organisation, is whether this change was, as such, also rooted in a fundamental reorganisation of the village resource areas and village boundaries. If so, it would indicate that the observed changes involved an organisational level that extended significantly beyond the individual settlement and its 'jurisdiction'.

Village resource area

The formation processes for historically known village resource borders constitute another classic area of research to which I have paid renewed attention (*e.g. Callmer 1991*). Analyses addressing the formation of fixed resource areas require an evaluation of the spatial synchronisation between the actual settlements and the limits of the individual settlement resource area in terms of an economically reasonable relationship. My working hypothesis is as follows: if the analysis reveals a period when the settlement displays a particularly prominent central position within the village resource area, this is assumed to be the time of establishment for the oldest existing layer of borders under village jurisdiction (*Hansen 2015a*).

A microscale/farm perspective on the early Roman Iron Age repeatedly reveals asynchronous relationships between the farms and the organisational village borders

evident from 18th-19th-century cadastral maps. This is reflected by different phases of a farm being located on each side of the historical boundary. Changing to a macroscale perspective reinforces the impression of there being no strict correlation between the 3rd-6th-century settlements and the organisational structures evident from historical times. Settlements from the 7th-9th centuries, on the other hand, display a very different and remarkable feature. When combined with the cartographic evidence showing the outer boundaries of present-day villages, there is a striking tendency towards a simple correlation. The 7th-9th-century agrarian settlements are systematically placed centrally, with the surrounding land well suited to agrarian production. This means that reorganisation of the settlements and establishment of a permanent fixed division of land over large areas constitute two sides of one process. Put another way, the settlement structure reflects a shift from being geographically labile and bound to personal relationships to being fixed and bound to stable divisions of resource areas/vills that are measurable and independent of changing social relations.

Behind the change

The acquisition of an overall structural picture of first-generation village organisation from the 7th-9th centuries is fundamental to an understanding of the reasons behind the change. Reconstruction of original village resource areas prior to the parcelling out of magnate farms and -thorps is one well-known method (*Porsmose 1987*, 66). Through a combination of geometrical methodology and the distribution of pre-Viking Age place names, it is possible to produce an approximate sketch map representing Late Iron Age organisational divisions and macrosettlement structures that can form a basis for theories (*Hansen 2015a*, 151). These analyses reveal a rather coherent geographical village structure on Funen. Permitting myself to scale up these results to Denmark in general, I would argue that the fixed landscape organisation that still defines the structure of rural Denmark was established around AD 600. I would further conclude that it was initially part of a deliberate and centrally initiated reorganisation of Late Iron Age society, which implemented a system based on services and fiscal obligations that were bound to a division of land resources in fixed vills. Such obligations most likely included duties of campaign service, bridge building, and fortress defence, as are evident in Britain at that time, and from written documents and 12th-13th-century laws relating to the situation in Denmark (*Hansen 2015a*; *Russo 1998*, 197; *Sawyer 2002*, 304). A system of this kind would have had obvious administrative advantages, as it was based on simple and stabile measurements of resources well-suited to thorough, effective, and wise decision making.

Conclusion

Summing up these insights into a simplified model, which presents the longue durée perspective from AD 200-1200, makes it possible to divide the settlement historical development into four main stages (Fig. 5).

Until the 3rd century AD, settlement organisation was characterised by small labile jurisdictional units, organised

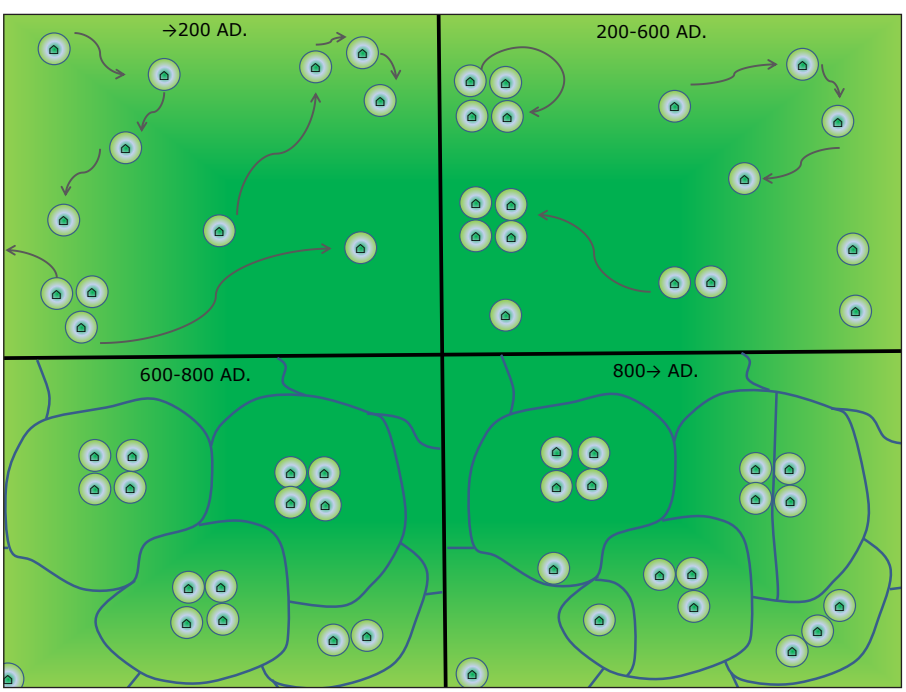

Fig. 5: Model illustrating the general development of Funen villages in a longue durée perspective (© Jesper Hansen).

primarily as single farms or villages typically consisting of three to four units. This settlement organisation displays no fixed long-term geographical borders that can be related to the vills depicted on cadastral maps of modern times. The organisation reflects a loose structure, where the jurisdiction appears to have been closely linked to the individual settlement. This leaves plenty of geographical and organisational space to move around and, therefore, displays an ever-changing economic structure that is hard to control.

From the 3rd to the 6th century AD, village organisation can generally be perceived as resembling that of the previous centuries. However, significantly larger settlements arose and this period is characterised by general growth and increased diversity in terms of settlement size.

In the 7th and 8th centuries, settlement organisation was marked by a significant change. This is initially reflected by farms moving together to central positions within fixed geographical structures that are defined by the settlement resource boundaries evident from historical cadastral maps. During these centuries, ordinary single farms seem to be virtually absent and the settlements' jurisdictional units appear to radiate out from the villages as an overall organisational entity. In large parts of the Funen plain the landscape appears to have been fully divided up. This organisational system counteracts the previously dominant labile and farm-based settlement structure and, at the same time, supports the possibility of exercising actual administrative control.

From the 9th century onwards, the archaeological record once again contains single farms and the settlement organisation as a whole is characterised by expansion leading to a wide range of adjustments. In this process, thorps and manors were parcelled out from existing villages, while other villages were divided up. All this was, however, based on the geographical structure established in the decades around 600 AD.

The analysis presented here strongly indicates the need for revision of the settlement-historical model to accommodate the fact that modern village distribution and organisation are, in general, not to be perceived as products of the 11th-century Viking Age. They arose from much earlier developments, around AD 600, which operated as preconditions for future Viking Age societies and the transformation of prehistoric Denmark into an actual kingdom.

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