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## The Genesis of the Battle Axe Culture

*On Klaus Ebbesen's doctoral thesis. A critique and an alternative conclusion.*

Lately we have seen little general discussion of how to interpret new cultures when they appear in the archaeological record. The genesis of the Battle Axe Culture is a case in point. It has hardly been touched upon in Denmark since 1991, when Kristian Kristiansen argued in *Journal of Danish Archaeology* (the issue for 1989) that migration must be the explanation. This had been the opinion of the big names of the previous generation in Danish archaeology—Brøndsted, Glob and Becker—but it disagreed with what most of Kristiansen's colleagues believed at the time. Some were impressed by the strength of his arguments, but many stuck to the beliefs of their youth. See for example Jørgen Jensen's (2001, pp. 450–503) depiction of the period in the Stone Age volume of his great work on the prehistory of Denmark. No notable discussion of Kristiansen's paper appeared in print.

It is therefore a very welcome event when Klaus Ebbesen—one of the old hard liners of the no-immigration school—publishes his thesis, *The Battle Axe Period*. This work was accepted as a doctoral thesis in 1992, and has now been made available in print after almost 15 years. Lars Larsson reviewed the book in detail in the previous issue of *Fornvännen*, from a critical perspective that I share.

I feel that it would be conducive to further debate with some additional analysis of Ebbesen's arguments and a discussion of the likely alternative to one of his main conclusions. In the following, I shall as far as possible avoid repeating points made already by Lars Larsson.

### *Summary of Ebbesen's investigations and arguments*

As a start, here is a brief, yet hopefully fair, summary of Ebbesen's account of the period's characteristics, which has been rendered difficult by the absence of any real summary in the book. His arguments and conclusions regarding the question of an autochthonous culture versus the

alternative—immigration—will then be discussed. In Denmark the new culture appeared mainly in south-west Jutland. The most common battle axe types of the bottom-grave phase (types PV A and PV B) found in Jutish graves occur mainly in the valleys of rivers Ribeå and Skjernå (p. 168). A total of 137 graves with these axe types are known from all of Europe; half of them from the area of the two Jutish rivers, a third from other parts of Jutland, and almost all of the remaining sixth from Northern Germany and the Netherlands. Other cultural traits are also characteristic for the area, such as the abundant finds of amber rings and discs in male graves, and the so-called “circular graves” of which a few have also been found in Northern Germany and the Netherlands. Ebbesen draws the conclusion that the early Battle Axe Culture in Jutland did not receive impulses from other parts of Europe. (What he actually writes is “The archaeological complex which the early Single Graves represent”, p. 169). This is one of the most important arguments for Ebbesen's opinion that south-west Denmark was one of the spawning grounds of this culture: “the Single Grave Culture as traditionally understood arose in the southern part of Mid- and West Jutland”. The words “as traditionally understood” alludes to the fact that the Battle Axe Culture is known among Danish archaeologists as *enkeltgravskulturen*, “the Single Grave Culture”<sup>1</sup>.

The Saale river valley in Central Germany was another important centre where many faceted battle axes have been found. The earliest ones are known as Type I. Radiocarbon dates from the Netherlands, where such axes have been found in closed contexts, suggest, according to Ebbesen, that Type I developed at the same time as the PV A-B axes of south-west Jutland (p. 187).

A third centre with its own battle axe types is found in the Fatjanovo Culture in Eastern Europe (near Moscow and Yaroslavl, but extending all the way to the Urals), whose crouch-

ed burials are seen as evidence of a stratified society already in the Third Millennium BC. The Fatjanovo axes show some similarity to—as well as differences from—types found in central and north-western Europe and are assumed by Ebbesen to have been developed at about the same time. No reason is given for this assumption. Ebbesen categorically discounts (p. 212) the possibility that the new cultural traits that appear to the west with the beginning of the Battle Axe Period might have originated with the Fatjanovo Culture. The Saale and Fatjanovo type axes are both widely distributed outside their central areas (p. 215).

Ebbesen concedes that there are a number of common traits among the cultures that appeared in Europe, around 2850 cal BC in his view (p. 213–215). Firstly, the battle axes themselves, that became standard male grave goods over much of the area; then the economy with extensive agriculture emphasising cattle breeding; and then burial under small mounds, which is known from south-west Jutland as well as much of Germany and the Netherlands. Other grave types—such as unmarked inhumations—were however also common. Ebbesen explains the appearance of small mounds in south-west Jutland with the fact that this area has few of the megalithic tombs that were re-used for burials in other parts of Denmark. Thus the adoption of the international fashion with small burial mounds (p. 169). The Corded Ware pottery in Denmark, much of Germany and the Netherlands and also Eastern Europe (e.g. the Fatjanovo Culture) show international similarities, and burial follows the same rules throughout north-western Europe: crouched inhumation, both genders facing south, men with their heads to the west and women with theirs to the east (p. 153). Crouched burial also occurs elsewhere, as mentioned above.

Sweden has a Battle Axe Culture different from the one in south-west Jutland. The battle axes are different, and early Jutish ones are very uncommon. No burial mounds are found. The dead were placed facing east, in Scania mainly crouched. The changes in the archaeological record do not give the impression of any massive influence from a new culture. According to

Ebbesen, communications in Europe were very good at the time, and he assumes that the traits that Sweden has in common with other areas are due to information exchange. People paid attention to international fashions (p. 172). The Swedish Battle Axe Culture is assumed to coincide chronologically with the Jutish one (p. 150). Ebbesen emphasises (p. 172) that Swedish scholars see no evidence in this context of any innovation wave moving north from Scania across Sweden.

He states (p. 244) that there is no apparent reason for the new economy's appearance—in his view fairly simultaneously—over much of Europe. "We have to reckon with a parallel development in a series of centres all over Europe, of which the area around the Ribe and Skjern River systems was only one".

He offers a survey of what is known about the period in other parts of Europe where similar cultural traits appear, and points out the many differences. They concern the economy, burial customs, battle axe design, pottery etc. Ebbesen's conclusion (p. 213) is that there was no unified "Corded Ware horizon". It only exists in the minds of archaeologists. The common traits that can be seen were in his opinion fashion-related.

Northern and eastern Jutland was hardly touched at all by the changes, although pots and battle axes did develop new designs with time. Traits of the Jutish Battle Axe Culture are found on Funen among other Danish islands, but hardly at all on Zealand. Ebbesen emphasises that the demarcation line is sharp between the Battle Axe Culture in south-west Jutland and the parts of the peninsula where little influence was felt. He believes that the "changes proceeded very quickly, probable in the course of just a few years" (p. 244). Ebbesen mentions that communication between the two areas was cut off for a long time, and that this is probably the reason that the central area in south-west Jutland displays a marked deterioration in the quality of flint knapping (p. 229). There was a dearth of good flint, because of interrupted trade, and the level of workmanship sank.

The first wagon wheels found in the area date from this period, as does the first evidence of milk processing (strainer pots).

*Critique of Ebbesen's model***The question of synchronicity**

A number of Ebbesen's views are not well founded, viz. that:

- The Jutish Battle Axe Culture appeared at the same time as the culture in central Germany that developed faceted battle axes, and probably as the Fatjanovo Culture,
- The new cultural traits appeared all around Europe about 2850 cal BC,
- The Jutish culture was born very swiftly, and
- The Swedish Battle Axe Culture was born at the same time as the Jutish one.

According to Ebbesen, the Battle Axe Period lasted from about 2850 to 2400 cal BC. During the first half of this interval there are dramatic wiggles on the calibration curve. This means, for instance, that a single uncalibrated radiocarbon date of 4120 BP translates into a number of calibrated ones between c. 2850 and 2640 cal BC. Because of the wiggles, there is thus a special margin of error built into all radiocarbon dates from c. 4280 to 4080 BP. To this must be added the standard deviations of the individual analyses, which in the case of Ebbesen's material were large, often approaching a century. Radiocarbon thus cannot by far be used for fine dating within the period under study.

This issue was discussed by Henrik Tauber at a symposium in Vejle in 1985. Ebbesen co-edited the proceedings and also contributed a paper (1986) with the characteristic heading "Peace in the time of the Single Graves". Tauber devotes the last page of his paper (1986, p. 204) to explaining and emphasising that wiggles make it impossible to date the transition from the Middle Neolithic phase V to the Battle Axe Culture any closer than to within the interval from 2850 to 2670 cal BC. He does not exclude that the interval may have been somewhat longer.

Ebbesen (p. 29) refers to Tauber's paper, but he has disregarded Tauber's caution. Even if uncalibrated dates for e.g. the earliest Battle Axe Culture in south-west Jutland are identical to uncalibrated dates for a similar culture in central Germany, it is still fully possible that the

German finds are more than two centuries older than the Jutish ones. This deprives Ebbesen's argument for a simultaneous birth of cultures all over Europe of its support. And this is one of his main arguments against the immigration hypothesis.

Another consequence is that the general date 2850–2400 cal BC for the Battle Axe Period or enkeltgravskulturen in Denmark is highly uncertain, at least the start date. And no number of radiocarbon analyses can dispel that uncertainty. To solve this problem with current methods, we would need dendro dates for the earliest Battle Axe graves. But preservation conditions in south-west Jutland are such that no good wood finds are likely to be forthcoming. We will most likely have to live with the uncertainty, and it should be pointed out in future surveys of the periodisation of Danish prehistory.

A similar mistake has been made repeatedly in research on the appearance of the first Neolithic culture in south Scandinavia, more than 1000 years earlier. The calibration curve wiggles dramatically for this era too, which has led scholars to suggest that the TRB culture arrived in Denmark and the Lake Mälaren area at the same time (Skak-Nielsen 2003b; 2004).

**Insufficient discussion**

The work's main weakness appears to be that it lacks a balanced comparison of the strength and weaknesses of the two explanations: autochthony vs. immigration. As mentioned above, it used to be generally accepted among Scandinavian scholars that the cultural changes, dramatic as they were in parts of Jutland, must have been due to immigration. Ebbesen never really discusses the issue. He simply feels that he has disproved the immigration hypothesis. Kristiansen's 1991 paper is commented on in a footnote (note 5, p. 174), where Ebbesen concedes that the sudden appearance of the little mounds might suggest immigration, but he feels that the further analyses in his thesis falsify this hypothesis for Jutland as well as for the western Baltic area in its entirety. Immigration would presuppose that the culture was born elsewhere, and no such donor area exists in Ebbesen's view.

A number of facts cannot be explained un-

der Ebbesen's model: the sharp demarcation line between the two areas in Denmark, the long break in communications between them and the unmotivated change to a pastoral economy in Denmark and elsewhere (p. 244). Emigration from the densest areas of Neolithic settlement in eastern Denmark to the sparsely populated and less fertile south-west where the Battle Axe Culture appeared cannot be the explanation if we, as does Ebbesen (p. 170), discount any overpopulation in the east. Such an interpretation would also make the sharp demarcation and long lack of interregional communication incomprehensible.

On the basis of his studies of Continental European areas, Ebbesen emphasises the many interregional differences. He stresses that he has not found any uniform archaeological complex in Europe in this period. However, this is far from a conclusive argument against migration having taken place to central and north-west Europe, including Denmark.

People may have migrated to certain areas in small numbers and over a brief period. We must assume that the locals generally resisted them. In other places, immigrants may have settled in desolate or thinly settled areas, where their pastoral economy worked well and where they could fill a niche and attain a position of power. Denmark, where only the thinly settled and least fertile areas show any strong presence of the new culture, is a case in point.

Tribal societies developing characteristic designs for axes and pottery, possibly to emphasise their separate identity, demands no explanation. The fact that certain characteristics of the south-west Jutish Battle Axe Culture are largely confined to this area is thus no argument against immigration. Cultures have melded. The economy may have been adapted to local conditions with time.

Immigration therefore seems to provide the answer to the problems posed by the cultural changes that took place in Early Third Millennium BC Europe.

The fact that the economy of the immigrants was not optimal for the previously settled regions sets this era apart from the conditions during the millennia when the Neolithic spread

over Europe (Skak-Nielsen 2003a; 2003b; 2004). At that time, rapidly expanding populations with a higher productivity based on farming took over areas previously occupied by hunter-fisher-gatherers. They were either displaced or assimilated. A slow, non-migratory spread of Neolithic technologies to certain Mesolithic areas can also be seen.

Translated from the Danish by Martin Rundkvist.

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Note 1. Some of the topics covered by Ebbesen have subsequently been treated by Eva Hübner in her thesis *Jungneolithische Gräber auf der Jütischen Halbinsel*, cf. Lars Larsson's review elsewhere in this issue. Hübner has found that the battle axe types upon which Ebbesen bases his opinion that the two Jutish river valleys spawned the Danish Battle Axe Culture are not in fact among the earliest. There are thus further reasons to question Ebbesen's views in addition to the ones pointed out here.