The weaving of a tapestry with Migration Period elements at Eketorp Fort, Sweden

This article reports the weaving of a wall hanging at Eketorp fort on the island of Öland in Sweden during the summer of 2006.

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Background
The small Swedish island of Öland in the Baltic sea has in total 19 pre-historic ring forts. Only one of them, the southernmost one called Eketorp fort, has been totally excavated and to a large extent reconstructed. The reconstructions, inside the limestone curtain wall, show the two latest versions of the fort, Eketorp II (Iron Age: 400-650 AD) and Eketorp III (Middle Ages 1170-1240 AD). (Borg, Näsman & Wegraeus 1976 and Borg 2000: 22pp).

The reconstructions at Eketorp started in 1978 and are regarded as an ongoing undertaking in order to achieve a better understanding of the conditions under which humans lived during the periods the fort was in use. This article deals with further reconstructions of the Iron Age, that is Eketorp II, when the fort was a fortified settlement of farmers.

The EU-project “Eketorp-historical centre on southern Öland” provided funding to making reconstructions more vivid to the visitors. Priority was given to the internal fittings of a dwelling house from the Iron Age. The prerequisites for and work with the furnishing of the actual house will be accounted for in forthcoming articles and reports. Here, it is sufficient to mention that the reconstruction work is meant to mirror primarily the finds made in the actual house and takes its point of departure in the most well-preserved of the two floor levels, namely the one from the late Migration Period and the early Vendel Period, that is the 6th century. Furthermore, the interpretation of the finds in the house indicates that a rather well-off farmer’s family inhabited the house. (Prof. Näsman & Prof. Herschend, verbally, 6th of February, 2006). That is our goal to reconstruct.

Furthermore, the tapestry reconstruction, accounted for in this article, is meant to be a part of the house reconstruction experiment, but not an experiment itself, though carried out with pre-historic techniques and tools.
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The seat of honour

One part of the house reconstruction is the seat of honour, belonging to the owner of the house. The oldest name for this seems to be öndvegi, a word meaning the seat straight opposite (of something). It was placed in the middle of the wall on the right long side. The thing that it was meant to be opposite to was probably the fireplace (Edblom 2004: 133-137).

The sources for this assumption are Icelandic sagas which are, of course, too late to give any certain evidence. However, öndvegi is the oldest name for this seat of honour and it is associated with the common household. Between AD 1000-1100, the öndvegi was gradually replaced by the hásæti, the high seat, which was placed on the gable wall. The hásæti is, contrary to the öndvegi, never mentioned in the oldest poems. The öndvegi is, in total, mentioned 51 times in Icelandic sagas and poems (Edblom 2004: 133-134).

Since öndvegi seems to be the best suggestion available for this place in the house, that is the name we use for this phenomenon.

Textiles on the walls?

One part of the reconstruction is the discussion on how the house might have been insulated. Different suggestions were put forward, for example inner walls of wood, insulation solely with cow dung, woven mats of reed and straw hanging from the stone walls etc. And, of course, textiles. There is a quite strong case for textiles being used for covering the walls of dwelling houses during the Iron Age. These would have both an insulating and a decorative effect.

First, there are written indications in the form of Icelandic sagas and we will give here just a few examples. In the saga of Harald Finehair, king of Norway, the powerful farmer Åke from the present Swedish province of Värmland, built a new hall for holding feasts. The new hall was decorated with new tapestries, while the old one was decorated with old tapestries (Sturlason, translated by K. G. Johansson, 1992: 97).

In Flateyjarbók, there are two passages where poets are requested to make poetry out of motifs on tapestries (Salvén 1923: 12). Queen Gunnhilds hall in Njals saga is decorated with the “most beautiful tapestry” (Njals saga, translated by H. Alving, 1995: 12).

There is also evidence in Hakon Hakonssons saga where it is written that the house was decorated with painted textiles and fine tablecloths (Franzén & Nockert 1992: 87).

When it comes to archaeological evidence, there are only a few. The oldest preserved tapestry comes from the Oseberg burial, dated to AD 829, and therefore representing the early Viking Age (Nockert & Possnert 2002: 69). The tapestries from Overhogdal have been radiocarbon dated to, as a whole, AD 900-1100, that is, the Viking Age. There are two more tapestries that derive from the Viking Age, the textiles from Revsund church (AD 780-980) and Kyrkås old church (AD 990-1160), both from the Swedish province of Jämtland. The Skog tapestry is a little later, dating from the late 13th century (Nockert & Possnert 2002: 68-79).

Several graves in Birka also contain fragments which could derive from tapestries, (for further reading please see Geijer 1938: 51-57).

Evidence of older tapestries than the one from Oseberg is however difficult to find. There are traces of textiles reminiscent of the Oseberg tapestry in two graves in Valsgärde, Valsgärde 8 from the 7th century and the somewhat younger Valsgärde 6 (Geijer 1994: 276).

There is also one known find from Öland of textiles found in association with a wall. During excavations of a burnt down hall dated to the 6th or 7th centuries AD, textiles on the inside of an incinerated inner wall were found (Fallgren 1994: 4).

With this background, it was decided that textiles on the walls of the reconstructed house were to be tested in order to find out their insulative effect. As an accentuation of the öndvegi, it was decided that a decorative tapestry was also to be made.
Tools, techniques, material and ... weavers

No textiles have been found at the Eketorp excavations, but there are plenty of finds of textile tools, for instance loom weights from warp weighted looms, spindles and needles (Rydhberg 1995).

Therefore, we decided to use the warp-weighted loom for production of the tapestry. The measurements of the tapestry was decided at 240 (length) × 60 cm, dependent on the measurements of the visible wall behind the öndvegi.

In January 2006, a cooperation was started with Bäckedals Folkhögskola in Sveg, Sweden. Bäckedal is a school specialised in ancient techniques and handicrafts such as tanning, pottery, woodworking, forging and textile work (see www.backedal.fhsk.se and the article in this magazine at pages 49-51). The contact with Ellinor Sydberg, head of the traditional textile education at Bäckedal, was very important since she has, as an experiment, reconstructed the whole Överhogdal tapestry mentioned above. The reconstruction and the process can be seen at the museum of Överhogdals Forngård. (see www.overhogdal.se/english/tapestry-e.htm) Through Ellinor Sydberg, the archaeologists and weavers Jan Rodina and Katerina Brunova became involved in the project. They have studied traditional textile techniques for two years at Bäckedal. The time for the work was decided as the summer of 2006.

Before the summer, Ellinor Sydberg and the authors started researching weaving techniques and motifs used during the Iron Age in Scandinavia. Our decision was to use the weaving technique called soumak (sw. snärjvävning). The oldest textile fragments woven by soumak technique are known from Switzerland and they are dated to the Neolithic (Vogt 1937, p.76f). In the Nordic countries, the oldest examples of the soumak technique are connected with a group of tablet-woven bands from the 5th century and beginning of the 6th century. Traces of fabric woven by soumak are also known from graves in Valsgärde, Sweden, which are dated between AD 625 – 650 (Franzén & Nockert 1992: 16; Nockert & Possnert 2002: 69).

The soumak technique was thus present in 6th century AD Scandinavia and we know that, at least later, it was used for tapestries. Both the Oseberg tapestry as well as the Viking Age tapestry from Överhogdal and the younger tapestry from Skog are woven by the soumak technique (Nockert & Possnert 2002: 69).

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We also decided that tablet-woven borders should frame the tapestry, which seems to be common on cloaks during the Migration Period (Nockert 1991: 123).

Simultaneously with the choice of technique, we started thinking about the material. The wall hangings from Överhogdal and Skog, as well as others, are made of linen and wool, linen was used for the warp and the figures were woven with woollen yarns of yellow, green, red and blue. (Nockert & Possnert 2002: 69-71, 75).

The bones of sheep have been found at Eketorp. The sheep was also, when it comes to amount of animals, the most common. Production of wool seems to have been important, since a great many of the sheep had been allowed to reach maturity to judge from the bones (Edgren & Weigarth 1987: 13).
ning and dyeing. Instead, we decided to buy finished yarn which also was dyed. 1-plied yarn (Nm 0.85 m/1 / 850 m/kg) was used for the warp and the ground weave. The material we used for the figures was 2-plied yarns (Nm 1.75/2 / 875 m/kg) of colours which could have been produced in Scandinavia in the 6th century and which were also used on the oldest known tapestries. These colours are white, green, yellow, red and blue (Welinder, Pedersen & Widgren 1998: 410). The same yarns, except for the green one, were used for tablet weaving of borders. All the woollen yarns came from Wästledst Ullspinneri at Dalafloda (Sweden). They were developed for project UllMa, where the colours should be similar to the colours obtained by natural plant-dyeing and the yarn looks like handspun yarn and is also produced from wool from old breeds of sheep (see www.walstedts.se).

Another practical adjustment we made was that we decided to use a slightly thicker woolen yarn than the one found in the preserved tapestries for the warp and ground weft. This saves time in weaving and we had difficulties estimating how much time would be needed. We gave priority to making a tapestry that would cover a whole wall section instead of making it a little shorter. The tapestry thus perhaps looks a little ‘rough and rustic’.

Motifs and composition

The tapestry has 21 figures in comparison to some hundred(s) on the Överhogdal tapestry. This is mainly because it is supposed to hang in a farmer’s house, so we did not want to overdo it when it came to motifs.

Since there are no preserved Migration Period tapestries in Scandinavia which we could use as prefiguration, we got most inspiration from other places. As a starting point, we decided that the choice of motives should be subordinate to what the soumak technique could manage, the chosen technique is for instance not applicable for soft, curved figures.

We gathered inspiration, mainly from different metal objects from the 5th and 6th centuries AD with just one or two exceptions, which are mentioned below. The most inspiration, we got from the famous golden neck collars of which one is found on Öland (Färjestaden) and the others in western Sweden (Ålleberg and Möne), gold bracteates found on Öland, a silver fibula found on Öland, a mounting from Eketorp Fort and picture stones from Gotland. However, we wanted the overall composition to look like the picture scenes on the golden horns from Gallehus in southern Denmark, dated to the 5th century AD, where we see human-like figures, animals and geometrical figures in different combinations and orientation (Jensen 2004: 113-124). In Migration Period animal ornamentation, there seems to be a general horror vacui, but if we study picture stones or the mentioned Gallehus horns we see that parts of the surface could be left empty. This separates our tapestry from, for example, the Överhogdal tapestry which is filled with figures, made at a time when, for example, picture stones were also crowded with ornamentation.

The development of the animal ornamentation during the Migration Period should most probably be seen in relation to the development of textile techniques (Welinder, Pedersen & Widgren 1998: 412) and therefore, animals dominate on our tapestry.

The central figure of the tapestry is an adorant as depicted on the gold neck collar from Ålleberg in Västergötland, Sweden (Bender-Jørgensen 2003: 69; Holmqvist 1980: 43-44).

Around him are several animals of different kinds. There are lizards and snakes below the adorant’s legs and birds fly around his head. The snakes are inspired from a picture stone in Sandegårda on Gotland, dated to AD 500-700 (Nylén 1978: 47) while the lizard derives from the Ålleberg colar (Holmqvist 1980: 73). The birds heads come from a find of a fibula (Inv. No. SHM 1297) made just a kilometre south east of Eketorp Fort, in Össby (Gansum 2003: 211).

The horses, "goat- or moosehorses", boars and moose/deer stay beside the adorant. The original for the horse is partly a horse shaped mounting for sewing onto clothes. This was found during the Eketorp excavations and is dated to the 7th century. Some inspiration was also found in horse figures on the Ålleberg gold collar. Pictures of deer can be seen on other picture stones from Gotland, for example the fragment from Endre skog (Lindqvist 1941: 89), also dated to AD 500-700.

The term "goat- or moosehorse" is our own and stands for the strange, amalgamated animal depicted on so many bracteates, showing traits of both horse (tail and general shape of body) and hegoat or moose (goatee and horns). The ones we looked at are...
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five bracteates found on Öland, three in Bostorp (Inv. No. KLM 23575), one in Holmetorp (Inv. No. SHM 1085) and one in Lilla Istad (Inv. No SHM 3714) (Olofsson 2001: 24). The boar is also originally found on a bracteate from Holmetorp, Öland (Inv. No. SHM 504) (Aldestam 2000: 25).

Apart from the animals and the adorant, two geometrical ornaments dominate, a large swastika to the left and a triskele to the right. They were both very common in Migration Period art. The swastika was in general a symbol of good luck but its exact meaning to Iron Age people in Scandinavia is not clear. It is interpreted as a symbol for the eternal rotation of the celestial bodies and the self-generating forces of nature. It could also be a symbol of the sun (Nationalencyklopedien). The swastika we copied is found on one of the Bostorp bracteates mentioned above (Olofsson 2001: 24). The triskele we took from the fibula from Össby (Gansum 2003: 211). This symbol was also very common in classical and oriental art and in those areas it carried the meaning of movement (Nationalencyklopedien).

Our overall picture of the motifs are the three worlds: the underworld (snakes et cetera), the surface of the earth with four legged animals, mythological creatures, people and gods live and the heavens where birds fly and gods travel. There is good evidence that according to the oldest sources, the gods were considered to live on the earth (Schødt 2004: 124p). The adorant in the middle is summoning all good forces in order to find out the will of the gods. This was done through the use of seid, a sort of operative magic where helping spirits came to his aid, telling him the destiny or advising him on, for example, the future fertility of the land (Soll 2004: 259). Several animals in Migration Period art are probably helping spirits (Hedeager 2004: 228) We know that seid was practised during the Viking Age, but it was probably present already during the Migration Period when Odin became the supreme god, probably depicted on bracteates. He was the master of seid (Hedeager 2004: 234).

The tablet-woven border which runs around the tapestry, is decorated with a spiral pattern, similar to the one found on picture stones from Gotland, for example Bro I and II (Lindqvist 1941: Fig. 11, 13), both dated to AD 400-500 (Lindqvist 1941: 110). The spiral pattern is also found on fibulae found on Öland, see for example the embossed fibula from Mossberga fort, Inv. No. SHM 7571: 494 (Olofsson 2001: 31).

The work process

For warping, a warping frame was used that rests on the floor, used up to the present by Sami people (Hoffman 1991: 141 pp). We started by warping the tablet woven band, which frames the tapestry, a process that took three days. Shuttles were made of small sticks on which we wound the weft yarn. This fitted very well for the shed of the tablet weave, and also for weaving the tapestry itself. We used two shuttles simultaneously during warping.

The next step, which also took three days, involved primarily warping the actual tapestry, having 6,4 warp threads per cm which fitted very well with these thick threads. After that, the warp was arranged on the loom and the loom weights were attached. For test weaving, we started with clay weights like the ones found at Eketorp with a weight of 600 grams /10 threads.

Knitting the heddles took two days. We used three shed rods, apart from the shed made by the loom’s lower beam – one for the basic tabby (one thread up, one down) and two shed rods for making the figures (two up, two down and two down, two up). The heddles for the tabby were knitted according to Springe & Sydberg (1986: 18-21) while the heddles for the pattern was knitted according to Hoffman (1964: 136) so that the heddle does not impede changing the shed of the tabby. A chained spacing cord was fastened at the bottom, through the warp threads and tied around the uprights.

The first couple of cm were regarded as test weaving. We discovered...
early on that it was difficult to beat in the weft, so the weights had to be replaced. Since there was no time to make new clay weights, we used stones with a weight of 350 g for ten warp-threads. We used 32 loom-weights for the warp threads only, and 10 more stones for the tablet weaving.

Weaving of figures took place between every weft thread. According to the soumak technique, the 2-plied coloured yarns were "embroidered" into the warp above six warp threads and around two, above six around two etc. Then the white weft was inserted in the tabby shed and sheds were changed and tablets turned. Due to the thickness of the white weft yarn too much white colour was visible between the coloured figure yarns. To reduce this problem, we decided to weave the vertical borders of the figures in the same way as diagonal borders are woven on preserved tapestries.

The following week, the swastika, one of the Migration Period elements at Eketorp, was finished at a speed of 13 cm per day. The speed also depended on the motif, of course. In total, it took a little more than six weeks to weave the tapestry. It is however important to keep in mind that many times only one could weave while the other explained and discussed with the visitors. The swastika was especially discussed all the time, in museum where we had our work place.

Some problems occurred while weaving the tapestry. Change of loom weights, boarder weaving of figures and the uneven beam have already been mentioned. Furthermore, the tapestry became a little uneven which was regulated with additionally inserted warp threads. The tapestry was ended with a tablet woven band in which the tapestry’s warp threads became the weft threads of the band. This band shrank after the tapestry was taken off of the loom so it had to be stretched with a stick on the back-side.

**Summing up**

The weaving of this wall hanging was not an archaeological experiment in a strict sense. It was rather a gathering of practical experiences. These experiences we have tried to account for in this article and they will be the base for further reconstructions and perhaps experiments. Our hope is also that the tapestry will result in enriching discussions about life, symbols, technology and textiles during the Migration Period.

**Thanks to**

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**Bibliography**


Fig. 18
A close-up on one of the deer inspired by hewn picture stones.

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Summary

Le tissage d’une tapisserie avec des éléments de la période des migrations au fort d’Eketor en Suède

Au fort reconstruit d’Eketorp en Suède, la reconstitution complète d’un ensemble d’habitation d’un lieu de vie a été l’occasion d’un débat sur l’isolation intérieure qui a débouché sur la reconstitution d’une tapisserie murale. Cette opération n’a pas été menée comme une réelle expérience scientifique mais comme une démonstration fidèle en présence des visiteurs. L’authenticité historique n’en a pas moins été une préoccupation : les matériaux, les couleurs et les motifs ont été définis suivant les rares sources écrites, l’exemple des plus anciennes tapisseries viking connues (celle de la tombe d’Oseberg, datée de l’an 829 et celui d’objets du VIe siècle. L’expérience a été décidée en janvier 2006 en partenariat avec une école suédoise spécialisée dans les artisans anciens et la tapisserie a été réalisée l’été suivant.

La technique retenue est la même identifiée dès le Néolithique, le soumak (tapis tisse). Le lin et la laine sont utilisés et des galons ornés de spirale délimitent les bords. Les couleurs utilisées sont le blanc, le vert, le jaune, le rouge et le bleu. Pour le décor, 21 figures variées ont été inspirées d’objets contemporains. Elles représentent les trois niveaux du monde : le monde souterrain, la surface et les ciels. La figure centrale est un dieu, entouré de figures animales flanquées de deux motifs géométriques traditionnels : une swastika et un triskel.

La première opération fut l’ourdissage des galons (3 jours) suivi de la préparation des fils de tisse de la tapisserie proprement dite. L’ensemble fut ensuite fixé sur le métier à tisser et lesté avec des pesons. Le tissage de la tapisserie prit deux jours avec beaucoup de difficultés posées par les pesons. La broderie des figures se fait sur la trame selon la technique de soumak. Cette opération a permis de comprendre à quel point il était difficile de travailler sur la symétrie.

L’expérience a prit en tout six semaines, dont beaucoup de temps passé pour la méditation et le dialogue avec les visiteurs. Malgré de progrès évidents à force de pratique, le problème des figures n’a jamais pu être résolu et le résultat final est quelque peu inégal. L’aventure s’est révélée toutefois très intéressante et instructive, soulévant de nouvelles interrogations autour de la symbolique des motifs, les techniques et du travail des textiles des Vikings au VIe siècle.

Zur Herstellung eines Wandteppichs mit völkerwanderungszeitlichen Elementen in der Burg von Eketorp, Schweden


Ein Teil der Rekonstruktion befasst sich dabei mit der Diskussion über die räumliche Unterteilung des Hauses. Es gibt eindeutige Hinweise auf Wandtextilien, die sowohl eine räumunterscheidende als auch dekorative Funktion gehabt haben mögen.
