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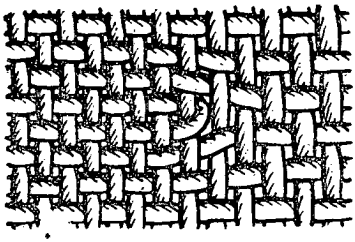

FIG. 21.—Textile on bronze bowl: returning weft to even up shed. Scale $\frac{5}{1}$.

APPENDIX A: TEXTILE

by Elisabeth Crowfoot

The pieces of the bowl had many fragments of textile adhering, as well as patches where the fibres of the threads had been replaced by the metal oxide. The remains were mostly on the outside and rim, though in the largest area, with scraps and replacements spread over 12·5 × 6·0 cm, the textile came from outside over the rim and fell inside the top of the bowl wall. Other sizeable areas measured *c.* 6·0 × 3·5 and 2·6 × 1·7 cm – the best-preserved fragment. All the traces clearly came from the same fabric.

Threads from the weave, some detached brown scraps with a crushed leather-like appearance, and a small lump of wood adhering to the textile, were submitted to Dr. D. F. Cutler at the Jodrell Laboratory, Royal Botanic Gardens, Kew, who reports that the weave fibres have the appearance and structure of flax, *Linum usitatissimum.* L., the leather-like material is from deteriorated textile, the wood structure is mostly obliterated but somewhat resembles oak.

The yarn of the linen cloth is Z spun in both systems, noticeably uneven, the warp generally coarser than the weft, plain weave (tabby), with thread counts per cm. varying from 25-6/18, 23/17 and 19/16 in different places in the better preserved areas. The lower count is certainly the weft since, although no selvedge is preserved, in three places a thread in this system can be seen to travel halfway across the fragment, turn, and pass back through the following shed (Fig. 21). This device, used to straighten up an

uneven shed, occurs in many early Scandinavian textiles, particularly those from the Danish Bronze Age [10] and some probably of Iron Age date [11]; it has been found in linen from Near Eastern sites of the late centuries B.C. and early centuries A.D.[12], and two much later Scottish finds, the Orkney hood (Viking) and the Rogart shirt (possibly medieval) also show the same practice.[13] The Z spinning of our linen makes a local or European origin more likely than one further east.

Dr. Margrethe Hald considers that the warping is probably accountable for these uneven sheds. If the warp threads lie close together, or the shed becomes obviously oblique or waving, the 'trough' can be filled either by single weft turns or groups forming gores. It has been suggested that, as textiles with these gores come from areas where the warp-weighted loom is known to have been in use, their presence is due to the use of this loom. However, such warping problems also occur on other looms, and Dr. Hald suggests they should 'rather be regarded as the result of weaving on a primitive tool, or of a badly prepared warp in the general'.[14]

The position of the fragments and the absence of string under the rim of the bowl suggest that the cloth was completely wrapped round it rather than tied over the mouth. Both methods of covering have been found on bronze bowls in Anglo-Saxon burials, whether they contain cremations, like this one and others at Brightwell Heath, Martlesham, and Sutton Hoo Mound 4 (1938 excavations) (Suffolk), Coombe (Kent) and Loveden Hill (Lincs.),[15] or are placed with inhumations and perhaps contained liquid, as at Finglesham (Kent, graves 203, 204) and Banstead Down (Surrey). With the exception of those from Coombe (a woollen diamond twill) and Finglesham grave 203 (flax rosette twill) the coverings of bowls so far examined have been flax plain weaves, Z spun, and very similar in quality of yarn and count to this latest textile from Snape.

[10] H. C. Broholm and Margrethe Hald, *Costumes of the Bronze Age in Denmark* (Copenhagen 1940), pp. 16, 39, 41, 51, 55, 68, 96.
[11] Margrethe Hald, *Olddanske Tekstiler* (Copenhagen 1950), Peat-bog Finds nos. 8, 28, 34-36; p. 154, figs. 145-7.
[12] G. M. Crowfoot in Barthelemy and Milik, *Qumran Cave I*, (Oxford 1955), p. 19, pl. VII. 26, 14 examples: Wadi ed Daliyeh, 331 B.C., nos. 13, 15, ASOR excavations; a linen fragment from a Cilician monastery site (excavated by John Harrison, 1956) may be either from the 5th century A.D. or 9th-11th century occupations.
[13] A. S. Henshall, S. Maxwell *et al.*, 'Early Textiles found in Scotland', *Proc. Soc. Ant. Scot.*, LXXXVI (1951-52), pp. 3, 10, 19-20.
[14] Hald, *op. cit.* pp. 427, 448.
[15] Hilda R. E. Davidson and Leslie Webster, 'The Anglo-Saxon Burial at Coombe (Woodnesbrough) Kent', *Med. Arch.* XI (1967), pp. 1, 12-13, and appendix, textiles, Elisabeth Crowfoot, pp. 37-39.