

could be easily recognized. But on reaching Sind, it was humanized, and the mouflon horns were replaced by those of a bull.\*

The facial features—beard, eyes and the nose—are well defined, as in the Iranian, but the ears droop down instead of being raised up, as in the original. In Kutch and Saurashtra this particular species of bull is at home today, and has been at least from Harappan times (c. 2300 BC).

The next stage was the representation of this deity on the seal, as at Mohenjo-daro (Marshall, 1931; Mackay, 1938). Thus a gradual Indianization of the motif, first seen in Iran for some millennia, is witnessed. While this small piece of evidence helps in understanding the Iranian or Western Asiatic cultural traits in the Harappan, it also helps in dating the third cultural phase at Hissar. Gordon (1951) rejected the dating of McCown, which ranged between 2700–2300 BC or 2300–2100 BC, and suggested a much lower date of 2000–1500 BC. This was also the view of Piggott (1943, 180), who equated Hissar III with the Jhukar Culture (Chanhu-daro II).

At Kot Diji, the pre-Harappan or Kot Diji Culture has four C14 dates (Khan, 1965, 85): 1975 BC, 2211 BC, 2133 BC, and 2471 BC. Thus the Iranian motif, with the other Iranian traits, should have reached Kot Diji by at least

\* Though in our present knowledge a bull with such long, incurving horns appears in Period II at Rana Ghundai, in what is called the Bull Vase phase (Ross, 1946).

2000 BC. If so, at the type site, Hissar, it should be a century or two earlier, that is 2200 BC.

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1: Ghirshman, 1939, pl. LXXXI, B.5.  
 2: Ibid, pl. LXXI, S.1800.  
 3: Walter A. Fairservis, *Archaeological Surveys in the Zhob and Loralai Districts, West Pakistan* (New York, 1959), 377, fig. 68, b.  
 4: Schmidt, 1937, 189, fig. III, and pl. XLVI, H.3210.  
 5-7: *Iraq*, III, 19, fig. 26; 1, 7, 9.  
 8: Khan, 1965, fig. 16 and pl. XVIIb.

Radiocarbon Dates for the South Street Long Barrow, Wiltshire

Four radiocarbon dates have been obtained for the South Street Long Barrow, North Wiltshire [1]. The measurements were made by the British Museum Research Laboratory.

They are as follows:

Charcoal on the surface of the buried soil beneath the barrow mound:

BM-356 2810 ± 130 BC

Bone (*Bos* sp. vertebrae) on the bottom of the north ditch:

BM-357 2750 ± 135 BC

Red deer antler on the bottom of the north ditch:

BM-358a 2670 ± 140 BC

Red deer antler embedded in the mound:

BM-358b 2580 ± 110 BC

These dates are of interest for several reasons. First, they place the construction of the barrow in the first half of the 3rd millennium BC. They compare well with the dates for two other long barrows in the area, Wayland's Smithy II, 2820 ± 130 BC (I-1468 [2]), and Nutbane,

2730 ± 150 BC (BM-49) [3]. Second, they provide a minimum age for the Neolithic ploughmarks on the site [4]. These are associated with a phase of forest clearance. As similar evidence [5] has been obtained from the Windmill Hill Long Barrow, 3240 ± 150 BC (BM-180) [6], and Wayland's Smithy (date above) it appears that forest clearance was taking place on the Chalk of North Wiltshire and Berkshire early in the 3rd millennium BC. Third, the dates provide a maximum age for an assemblage of Middle Neolithic pottery stratified in the upper levels of the primary fill of the ditches. This is of Ebbsfleet/Mortlake tradition. Its stratigraphical position makes it unlikely that its age is significantly younger than the dates quoted. These can be compared with dates for similar assemblages from Windmill Hill causewayed enclosure, 2570 ± 150 BC (BM-74) [7] and from Northfleet, Kent,

2710 ± 150 BC (BM-113) [8]. Finally, the dates provide a comparison of three kinds of sample material—charcoal, bone and antler—which were stratigraphically contemporary. Only the protein fractions of the bone and antler were used [9]. The dates are indistinguishable within the limits of their probable errors.

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[1] *ANTIQUITY*, 1968, 138.

[2] *ANTIQUITY*, 1965, 126.

[3] *Radiocarbon*, 2, 1960, 26.

[4] *ANTIQUITY*, 1967, 289.

[5] Evidence from land molluscan analysis. Windmill Hill Long Barrow, Evans, unpublished; Wayland's Smithy, information from M. P. Kerney.

[6] *ANTIQUITY*, 1966, 299.

[7] I. F. Smith, *Windmill Hill and Avebury: Excavations by Alexander Keiller, 1925-1936* (Oxford, 1965), 11.

[8] *Radiocarbon*, 5, 1963, 104.

[9] *Nature*, 213, 1967, 415.

## Neolithic Pottery Production in Cornwall

Recent petrological work on pre-Roman Iron Age pottery (Peacock, 1968, and forthcoming) has shown that the examination of potsherds in thin section under the petrological microscope can provide information of value in assessing the organization of pottery production in prehistoric Britain. Unfortunately, studies of this kind have not been so extensive with material of earlier periods, but nevertheless there is a growing body of data about Neolithic pottery from which it is possible to make some preliminary deductions.

Undoubtedly, the bulk of Neolithic pottery was produced and used locally: Hodges's work on the Neolithic wares from Windmill Hill points to a local clay source for about 69 per cent of the vessels (Smith, 1965, 43), while Thomas's study of the Hembury pottery showed that the predominant, coarse, 'a' ware contains fragments of flint, chert and quartz all of which could have been obtained in the vicinity of the site (Liddle, 1935, 162). Further evidence is provided by the heavy mineral analysis of a Middle Neolithic sherd from Warwick, which yielded a suite of minerals comparable with that from the Triassic rocks

of the area (Peacock, 1967, 98). To this we could perhaps add Zeuner's analysis of shell fragments in late Neolithic grooved ware found near Cambridge (Frere, 1943, 41), and Sandford's opinion on the origins of the shells in pottery from the Abingdon causewayed camp (Case, 1956, 19), both of which are in accordance with a local origin.

However, for some time, it has been apparent that the materials for several types of pottery common in south and south-western England were obtained at some distance from their find-sites. Most abundant are the vessels containing fossil shell and oolite derived from the Jurassic outcrop, perhaps in the Bath-Frome region. These constitute about 30 per cent of the pottery at Windmill Hill (Smith, 1965, 46), 17 per cent of the vessels from Robin Hood's Ball, near Shrewton (Thomas, 1964, 14), and are known from other sites in Wiltshire such as Whitesheet Hill, Knap Hill and the West Kennet long barrow.

Shell in the late Neolithic grooved ware from Woodhenge, was examined by Davy (Cunnington, 1929, 75) but this is apparently of marine origin.